



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

**Give to AgEcon Search**

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

USDA's Economic Research Service  
has provided this report for historical  
research purposes.

Current reports are available in  
***AgEcon Search***

(<http://ageconsearch.umn.edu>)

and on <https://www.ers.usda.gov>.



United States Department of Agriculture  
Economic Research Service  
<https://www.ers.usda.gov>



---

# ***ERS Staff Paper***

---

Economic  
Research  
Service

Resource  
Economics  
Division

AGES 00-03

## **U.S. Agriculture, 1960-96**

### **A Multilateral Comparison of Total Factor Productivity**

Waite Library  
Dept. Of Applied Economics  
University of Minnesota  
1994 Buford Ave - 232 ClaOff  
St. Paul MN 55108-6040

V. Eldon Ball  
Jean-Pierre Butault  
Richard Nehring

This report was reproduced for limited  
distribution to the research community  
outside the U.S. Department of Agriculture  
and does not reflect an official position  
of the Department



The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Ave., SW, Washington, DC 20250-9410, or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U. S . Agriculture, 1960-96: A Multilateral Comparison of Total Factor Productivity.** By V. Eldon Ball, Jean-Pierre Butault, and Richard Nehring. Resource Economics Division, Economic Research Service, U.S. Department of Agriculture. Staff Paper No. AGES 00-03.

A  
93.44  
AGES  
60-03

## Abstract

[ This study provides estimates of 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 wide disparity in growth rates resulted in substantial changes in the rank order of States. 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 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 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.

**This report was reproduced for limited distribution to the research community outside the U.S. Department of Agriculture and does not reflect an official position of the Department.**



## Contents

Introduction .....	1
Methodology .....	2
Production Accounts .....	3
Output .....	3
Intermediate Input .....	4
Capital Input .....	4
Land Input .....	7
Labor Input .....	8
Total Factor Productivity .....	8
Analysis of Differences in Productivity .....	9
Summary and Conclusion .....	10
References .....	11
Footnotes .....	13

## Figures

Figure Number		<i>Page</i>
1	Coefficients of Variation of State Productivity .....	15

## Tables

Table Number		
1	Crop Output Relative to 1996 Level for Alabama, by State, 1960-96 .....	16
2	Livestock Output Relative to 1996 Level for Alabama, by State, 1960-96.....	19
3	Intermediate Input Relative to 1996 Level for Alabama, by State, 1960-96.....	22
4	Capital Input Relative to 1996 Level for Alabama, by State, 1960-96 .....	25
5	Land Input Relative to 1996 Level for Alabama, by State, 1960-96.....	28
6	Labor Input Relative to 1996 Level for Alabama, by State, 1960-96 .....	31
7	Total Output Relative to 1996 Level for Alabama, by State, 1960-96.....	34
8	Total Input Relative to 1996 Level for Alabama, by State, 1960-96 .....	37
9	Total Factor Productivity Relative to 1996 Level for Alabama, by State, 1960-96..	40
10	States Ranked by 1996 Level of Productivity .....	43
11	Regressions of Total Factor Productivity Growth on Relative Productivity Level and Growth in Factor Intensities, 1960-96.....	44

# U.S. Agriculture, 1960-96

## A Multilateral Comparison of Total Factor Productivity

V. Eldon Ball  
Jean-Pierre Butault\*  
Richard Nehring

### Introduction

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

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

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

---

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



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

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

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

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

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

## Methodology

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

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

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

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

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

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

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

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

## Production Accounts

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

## Output

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

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

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

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

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

## Capital Input

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



## Capital Stocks

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

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

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

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

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

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

where the weights are the mortality rates.

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

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

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

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

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

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

Little empirical evidence is available to suggest a precise value of  $\beta$ . However, two studies provide evidence suggesting that efficiency decay occurs more rapidly in the later years of service. Utilizing data on expenditures for maintenance and repairs of farm tractors covering the period 1958-74, Penson, Hughes, and Nelson (1977) found that efficiency loss was, in fact, very small in the early years of service and increased rapidly as the end of the asset's service life approached. More recently, Romain, Penson, and Lambert (1987) compared the explanatory power of alternative capacity depreciation patterns for farm tractors in a model of investment behavior that also included the price of capital services. They observed that the concave depreciation pattern better reflected actual investment decisions.

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

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

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

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

### *Prices of Capital Services*

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

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

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

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

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

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

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

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

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

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

and

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

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

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

## 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 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 are formed implicitly as the ratio of the value of service flows to the price index.

## **Labor Input**

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

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

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

Indexes of labor input are constructed for each State and the aggregate farm sector over the 1960-96 period using the demographically cross-classified hours and compensation data. Labor hours having higher marginal productivity (wages) are given higher weights in forming the index of labor input than are hours having lower marginal productivities. Doing so explicitly adjusts State and aggregate farm sector indexes of labor input for quality change in hours as originally defined by Jorgenson and Griliches (1967).<sup>16</sup> We present indexes of labor input for each State in table 6.

## **Total Factor Productivity**

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

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

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

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

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

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

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

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.

## **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:

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

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

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

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 insignificant. We conclude that the input indexes fully reflect the improvements in their quality.

## 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.



## 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 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," *Przegląd 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. *Agricultural Land Values Survey*. annual.

\_\_\_\_\_. *Agricultural Prices*. Washington, DC, 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 Energy, Energy Information Administration. *Monthly Energy Review*. monthly.

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

## 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  $\hat{\delta}_i$  is not an unbiased estimate of  $\delta_i$ , which means that price indexes based on the dummy variable method are biased. A standard bias correction is to add one-half of the coefficient's standard error to the estimated coefficient. See Teekens and Koerts (1972).
9. The decay function defined by equation 8 incorporates many of the commonly used forms of capacity depreciation as special cases. The upper limit of  $\beta$  is unity. This corresponds to the one-hoss shay form of depreciation. As the value of  $\beta$  approaches zero, decay occurs at an increasing rate over time. If  $\beta$  is zero, the function corresponds to the formula for straight-line depreciation. Finally, if  $\beta$  is negative, decay occurs most rapidly in the early years of service, corresponding to accelerated forms of depreciation such as geometric decay.
10. Mean service lives for each asset type are taken from *Fixed Reproducible Tangible Wealth in the United States, 1925-94* (U.S. Department of Commerce).
11. Net additions to inventory during the calendar year are considered a component of output.
12. The nominal rate was taken to be the average yield on Moody's BAA bonds over all maturities.
13. Observed real rates are expressed as an AR(1) process. We use this specification after examining the correlation coefficients for auto correlation, partial and inverse auto correlation, and performing the unit root and white noise tests. We centered each time series by subtracting its sample mean. The analysis was performed on the centered data.
14. See Ball et al. (1997).



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

Figure 1. Coefficients of Variation of State Productivity

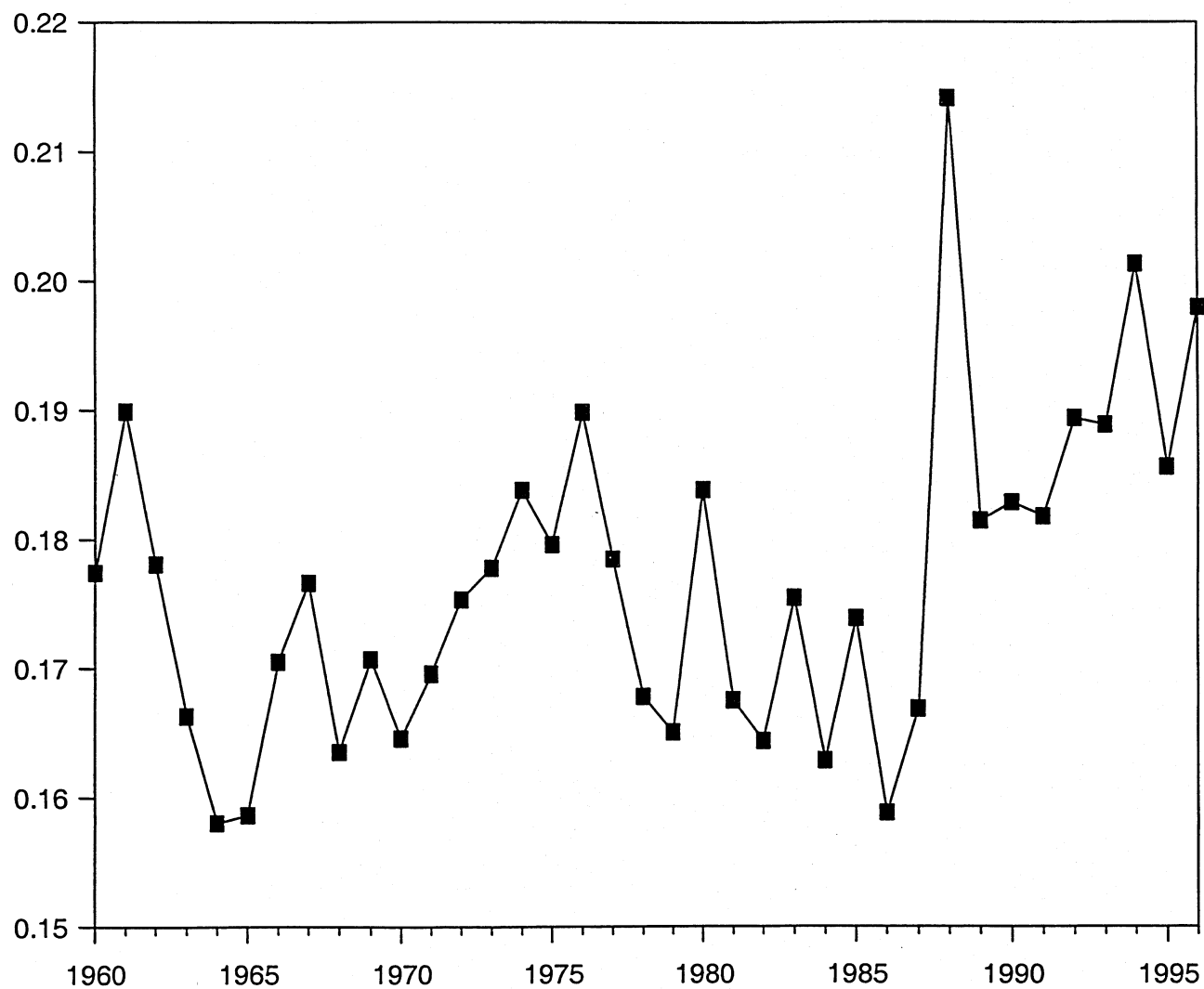


Table 1. Crop Output Relative to 1996 Level for Alabama

Year	AL	AR	AZ	CA	CO	CT	DE	FL	GA	IA	ID	IL	IN	KS	KY	LA	MA	MD
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	0.627	0.224	0.319
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	0.656	0.221	0.319
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	0.686	0.223	0.302
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	0.830	0.220	0.291
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	0.792	0.209	0.309
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	0.814	0.205	0.356
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	0.853	0.208	0.279
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	0.956	0.188	0.383
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	1.075	0.183	0.347
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	0.908	0.181	0.377
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	1.003	0.196	0.372
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	0.996	0.202	0.359
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	1.043	0.188	0.346
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	0.989	0.197	0.381
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	1.034	0.197	0.413
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	1.115	0.212	0.437
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	1.241	0.209	0.431
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	1.190	0.208	0.399
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	1.290	0.210	0.473
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	1.423	0.182	0.480
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	1.193	0.182	0.404
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	1.426	0.209	0.507
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	1.579	0.201	0.512
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	1.297	0.208	0.434
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	1.484	0.226	0.560
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	1.299	0.230	0.567
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	1.230	0.239	0.451
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	1.276	0.242	0.450
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	1.603	0.246	0.440
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	1.351	0.256	0.487
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	1.535	0.239	0.566
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	1.407	0.283	0.536
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	1.756	0.262	0.587
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	1.443	0.273	0.489
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	1.682	0.248	0.570
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	1.557	0.231	0.512
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	1.825	0.253	0.607
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	0.030	0.003	0.018
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	0.051	-0.012	-0.023
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	0.021	-0.047	0.101
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	0.021	0.021	0.003
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	0.061	-0.013	0.038
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	-0.005	0.035	0.002
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	0.043	-0.002	0.031

Table 1. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA
1960	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	1.280	1.815	1.336	0.823	1.134
1961	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	1.332	1.715	1.199	0.823	1.169
1962	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	1.238	1.696	0.926	0.893	0.969
1963	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	1.297	1.797	0.955	0.908	1.041
1964	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	1.213	1.669	1.055	0.934	1.058
1965	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	1.261	1.801	1.379	0.989	1.097
1966	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	1.285	1.977	1.095	0.971	0.939
1967	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	1.373	1.870	1.072	1.002	1.210
1968	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	1.280	2.041	1.260	0.924	1.142
1969	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	1.243	1.891	1.291	1.070	1.194
1970	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	1.312	1.954	1.175	1.046	1.261
1971	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	1.313	2.331	1.031	1.109	1.256
1972	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	1.030	2.164	1.133	1.075	1.119
1973	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	1.169	2.031	1.673	1.200	1.265
1974	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	1.288	2.255	1.356	1.254	1.369
1975	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	1.327	2.630	1.561	1.322	1.401
1976	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	1.293	2.805	1.413	1.369	1.418
1977	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	2.966	1.656	1.329	1.445
1978	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	1.358	2.916	1.468	1.378	1.531
1979	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	1.456	3.212	2.029	1.494	1.551
1980	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	1.503	3.240	1.576	1.692	1.464
1981	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	1.449	2.705	1.601	1.771	1.663
1982	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	1.460	3.192	1.928	1.634	1.678
1983	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	1.412	2.323	1.456	1.639	1.456
1984	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	1.468	3.290	1.615	1.769	1.838
1985	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	1.491	3.745	1.653	1.664	1.915
1986	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	1.442	3.461	1.571	1.754	1.828
1987	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	1.443	3.165	1.487	1.867	1.753
1988	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	1.291	2.399	1.739	2.006	1.570
1989	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	1.332	3.048	1.704	2.032	1.761
1990	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	1.377	3.414	1.855	2.118	1.830
1991	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	1.401	2.907	1.581	2.089	1.611
1992	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	1.192	3.664	1.829	2.006	1.978
1993	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	1.203	3.212	1.698	2.264	1.815
1994	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	1.290	3.809	1.664	2.241	1.900
1995	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	1.218	3.312	1.361	2.324	1.808
1996	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	1.187	3.011	1.427	2.425	1.968
Average annual growth rates:																		
1960-96	-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	-0.002	0.014	0.002	0.030	0.015
1960-66	-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	0.001	0.014	-0.033	0.028	-0.031
1966-69	-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	-0.011	-0.015	0.055	0.032	0.080
1969-73	-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	-0.015	0.018	0.065	0.029	0.015
1973-79	-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	0.037	0.076	0.032	0.037	0.034
1979-89	-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	-0.009	-0.005	-0.017	0.031	0.013
1989-96	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	-0.016	-0.002	-0.025	0.025	0.016

Table 1. Continued

Year	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	0.025	0.917	1.219	0.898	3.718	0.199	0.840	0.141	1.277	1.524	0.160	0.183
1961	0.025	0.938	0.959	0.945	3.647	0.187	0.874	0.142	1.287	1.628	0.159	0.197
1962	0.026	0.998	1.156	0.888	3.428	0.220	0.898	0.136	1.385	1.685	0.148	0.199
1963	0.025	0.988	1.193	0.975	3.838	0.216	0.682	0.136	1.507	1.504	0.141	0.226
1964	0.025	0.992	0.933	1.072	3.553	0.213	0.834	0.129	1.563	1.474	0.142	0.216
1965	0.024	0.998	1.135	1.024	3.998	0.232	0.823	0.115	1.543	1.611	0.135	0.195
1966	0.025	0.858	1.114	0.874	3.989	0.217	0.718	0.130	1.675	1.721	0.105	0.199
1967	0.022	0.962	1.294	0.883	3.657	0.255	0.819	0.127	1.828	1.768	0.146	0.263
1968	0.022	0.792	1.344	0.857	4.146	0.241	0.800	0.115	1.714	1.911	0.143	0.257
1969	0.021	0.890	1.325	0.915	3.829	0.238	0.832	0.106	1.744	1.798	0.144	0.250
1970	0.023	0.855	1.188	0.895	3.846	0.241	0.811	0.102	1.769	1.831	0.147	0.253
1971	0.023	0.965	1.471	0.993	3.373	0.246	0.798	0.112	1.932	2.139	0.151	0.274
1972	0.020	0.867	1.578	0.963	3.883	0.221	0.811	0.098	1.974	1.983	0.149	0.269
1973	0.022	0.926	1.549	0.999	5.101	0.246	0.895	0.104	1.842	1.874	0.159	0.262
1974	0.020	1.014	1.166	0.912	3.956	0.259	0.904	0.100	2.061	1.883	0.156	0.247
1975	0.028	1.112	1.294	1.057	4.785	0.259	0.917	0.095	2.412	2.070	0.162	0.277
1976	0.025	0.960	0.669	1.132	4.796	0.272	0.869	0.103	2.485	1.663	0.142	0.300
1977	0.023	0.901	1.652	1.178	5.092	0.260	0.753	0.089	2.221	2.531	0.134	0.250
1978	0.025	1.003	1.865	1.224	4.591	0.286	0.919	0.105	2.543	2.476	0.157	0.299
1979	0.024	1.074	1.979	1.293	5.777	0.305	0.903	0.101	2.462	2.675	0.143	0.294
1980	0.024	0.831	1.534	1.073	4.630	0.304	0.742	0.104	2.799	2.792	0.158	0.295
1981	0.022	1.108	1.919	1.487	5.887	0.331	1.023	0.111	2.916	2.840	0.144	0.331
1982	0.032	1.118	2.335	1.527	5.672	0.331	0.992	0.111	2.809	3.014	0.156	0.322
1983	0.035	0.774	1.855	1.000	4.655	0.319	0.732	0.115	3.034	2.443	0.149	0.318
1984	0.036	1.040	2.482	1.470	4.572	0.329	1.024	0.110	3.000	2.963	0.180	0.314
1985	0.045	0.965	2.484	1.558	5.459	0.327	0.919	0.111	2.732	2.869	0.195	0.274
1986	0.043	0.708	2.613	1.219	4.744	0.334	0.724	0.108	2.750	2.854	0.160	0.350
1987	0.042	0.821	2.478	1.266	4.437	0.350	0.778	0.098	3.027	2.610	0.160	0.325
1988	0.042	0.868	1.385	1.227	4.742	0.334	0.863	0.090	3.241	1.487	0.142	0.282
1989	0.035	0.968	1.963	1.304	5.246	0.317	0.992	0.098	3.193	2.576	0.162	0.279
1990	0.032	0.798	2.578	1.353	4.894	0.330	1.033	0.104	3.541	2.852	0.175	0.322
1991	0.034	0.901	2.597	1.339	5.458	0.344	0.983	0.099	3.264	3.019	0.153	0.375
1992	0.037	0.958	2.799	1.661	5.912	0.367	1.104	0.127	3.344	2.521	0.188	0.305
1993	0.032	0.807	2.253	1.479	5.867	0.374	0.905	0.109	3.823	2.158	0.182	0.351
1994	0.033	1.073	3.264	1.674	5.695	0.371	1.040	0.115	3.771	3.018	0.177	0.295
1995	0.031	0.963	2.590	1.574	4.825	0.378	1.025	0.103	3.977	2.693	0.175	0.374
1996	0.031	1.002	3.498	1.655	5.429	0.368	1.096	0.103	3.998	2.573	0.166	0.328
Average annual growth rates:												
1960-96	0.006	0.002	0.029	0.017	0.011	0.017	0.007	-0.009	0.032	0.015	0.001	0.016
1960-66	-0.003	-0.011	-0.015	-0.005	0.012	0.015	-0.026	-0.013	0.045	0.020	-0.069	0.014
1966-69	-0.054	0.012	0.058	0.016	-0.014	0.031	0.049	-0.069	0.013	0.015	0.103	0.077
1969-73	0.018	0.010	0.039	0.022	0.072	0.009	0.018	-0.005	0.014	0.010	0.025	0.011
1973-79	0.012	0.025	0.041	0.043	0.021	0.036	0.001	-0.004	0.048	0.059	-0.017	0.019
1979-89	0.038	-0.010	-0.001	0.001	-0.010	0.004	0.009	-0.003	0.026	-0.004	0.012	-0.005
1989-96	-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	LA	MA	MD
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	0.225	0.117	0.195
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	0.238	0.115	0.198
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	0.241	0.113	0.209
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	0.252	0.112	0.213
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	0.265	0.110	0.211
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	0.277	0.106	0.221
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	0.284	0.102	0.225
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	0.298	0.101	0.221
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	0.297	0.097	0.227
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	0.296	0.090	0.240
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	0.314	0.087	0.245
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	0.329	0.086	0.249
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	0.342	0.081	0.241
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	0.304	0.075	0.242
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	0.305	0.075	0.243
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	0.304	0.077	0.244
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	0.321	0.074	0.256
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	0.311	0.074	0.255
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	0.288	0.071	0.276
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	0.280	0.068	0.288
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	0.285	0.068	0.298
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	0.282	0.068	0.314
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	0.288	0.068	0.312
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	0.289	0.067	0.320
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	0.277	0.063	0.322
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	0.295	0.066	0.335
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	0.300	0.064	0.327
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	0.276	0.058	0.335
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	0.300	0.054	0.319
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	0.246	0.053	0.322
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	0.276	0.056	0.325
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	0.275	0.057	0.333
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	0.304	0.058	0.346
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	0.330	0.056	0.357
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	0.338	0.056	0.350
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	0.349	0.053	0.359
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	0.353	0.053	0.360
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	0.013	-0.022	0.017
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	0.039	-0.022	0.023
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	0.014	-0.043	0.022
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	0.007	-0.044	0.002
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	-0.014	-0.017	0.029
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	-0.013	-0.025	0.011
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	0.052	-0.000	0.016

Table 2. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA
1960	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	0.936	0.962	0.584	0.302	0.828
1961	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	0.954	1.013	0.624	0.318	0.834
1962	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	0.964	1.038	0.629	0.321	0.840
1963	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	0.973	1.036	0.659	0.324	0.839
1964	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	1.001	1.064	0.690	0.329	0.843
1965	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	1.005	1.000	0.735	0.323	0.846
1966	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	0.971	1.002	0.761	0.330	0.834
1967	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	0.962	0.989	0.781	0.330	0.834
1968	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	0.945	0.964	0.814	0.331	0.826
1969	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	0.946	0.957	0.853	0.319	0.843
1970	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	0.943	0.969	0.947	0.325	0.846
1971	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	0.948	0.995	0.994	0.323	0.865
1972	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	0.937	0.967	1.105	0.338	0.843
1973	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	0.887	0.857	1.168	0.328	0.815
1974	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	0.914	0.851	1.183	0.315	0.842
1975	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	0.917	0.868	1.104	0.314	0.867
1976	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	0.914	0.899	1.032	0.326	0.912
1977	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	0.913	0.858	1.164	0.319	0.950
1978	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	0.934	0.808	0.991	0.322	0.983
1979	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	0.989	0.870	1.115	0.370	1.031
1980	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	1.039	0.848	1.191	0.359	1.112
1981	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	1.054	0.847	1.153	0.381	1.179
1982	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	1.058	0.878	1.178	0.381	1.179
1983	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	1.055	0.919	1.125	0.378	1.223
1984	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	1.040	0.910	1.108	0.379	1.187
1985	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	1.087	0.947	1.132	0.395	1.264
1986	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	1.047	0.949	1.218	0.394	1.305
1987	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	1.023	0.975	1.200	0.385	1.320
1988	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	1.018	0.975	1.184	0.390	1.325
1989	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	1.013	0.929	1.224	0.400	1.323
1990	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	0.994	1.024	1.172	0.411	1.316
1991	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	1.007	0.925	1.197	0.409	1.331
1992	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	1.064	0.923	1.159	0.401	1.353
1993	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	1.038	0.955	1.184	0.399	1.348
1994	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	1.014	0.939	1.363	0.401	1.369
1995	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	1.071	0.953	1.310	0.397	1.395
1996	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	1.101	0.988	1.315	0.388	1.407
Average annual growth rates:																		
1960-96	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	0.004	0.001	0.023	0.007	0.015
1960-66	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	0.006	0.007	0.044	0.015	0.001
1966-69	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	-0.009	-0.016	0.038	-0.011	0.004
1969-73	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	-0.016	-0.028	0.079	0.007	-0.008
1973-79	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	0.018	0.003	-0.008	0.020	0.039
1979-89	-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	0.002	0.007	0.009	0.008	0.025
1989-96	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	0.012	0.009	0.010	-0.005	0.009

Table 2. Continued

Year	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	0.015	0.141	0.818	0.450	1.790	0.208	0.370	0.162	0.334	1.922	0.121	0.220
1961	0.014	0.148	0.896	0.460	1.872	0.215	0.373	0.170	0.341	1.949	0.117	0.208
1962	0.014	0.150	0.928	0.470	1.970	0.213	0.368	0.171	0.349	1.991	0.112	0.221
1963	0.014	0.154	0.983	0.478	1.991	0.216	0.378	0.172	0.350	2.009	0.109	0.249
1964	0.014	0.152	1.056	0.480	1.983	0.217	0.365	0.173	0.358	2.079	0.109	0.250
1965	0.013	0.157	1.018	0.484	1.997	0.212	0.367	0.175	0.371	1.991	0.106	0.258
1966	0.013	0.167	1.057	0.499	2.075	0.226	0.371	0.163	0.374	1.934	0.102	0.261
1967	0.012	0.183	1.122	0.518	2.133	0.224	0.377	0.158	0.361	1.942	0.099	0.282
1968	0.011	0.181	1.116	0.521	2.178	0.224	0.385	0.159	0.371	1.938	0.098	0.279
1969	0.011	0.193	1.047	0.520	2.381	0.225	0.396	0.164	0.355	1.874	0.094	0.266
1970	0.010	0.201	1.076	0.542	2.506	0.233	0.410	0.169	0.372	1.941	0.095	0.269
1971	0.009	0.218	1.141	0.546	2.692	0.231	0.421	0.172	0.375	1.971	0.099	0.294
1972	0.008	0.218	1.119	0.562	3.083	0.232	0.425	0.173	0.399	1.961	0.097	0.289
1973	0.008	0.207	1.197	0.558	3.154	0.224	0.408	0.166	0.420	1.874	0.095	0.278
1974	0.008	0.204	1.235	0.541	3.061	0.224	0.429	0.166	0.427	1.924	0.100	0.293
1975	0.008	0.206	1.052	0.565	3.031	0.232	0.428	0.174	0.418	1.903	0.099	0.284
1976	0.008	0.210	1.057	0.588	3.075	0.228	0.433	0.183	0.453	2.011	0.094	0.305
1977	0.007	0.209	1.071	0.579	3.158	0.222	0.454	0.185	0.444	2.068	0.097	0.295
1978	0.007	0.219	1.040	0.573	3.162	0.232	0.471	0.187	0.499	2.122	0.095	0.311
1979	0.007	0.224	1.027	0.581	3.064	0.224	0.537	0.185	0.520	2.176	0.108	0.295
1980	0.008	0.237	1.118	0.579	2.922	0.232	0.564	0.185	0.467	2.214	0.109	0.289
1981	0.007	0.243	1.098	0.585	3.006	0.265	0.549	0.188	0.550	2.309	0.108	0.298
1982	0.007	0.230	1.026	0.595	3.445	0.263	0.556	0.201	0.551	2.284	0.102	0.289
1983	0.007	0.233	1.078	0.609	3.045	0.251	0.591	0.199	0.534	2.269	0.122	0.296
1984	0.007	0.247	1.080	0.634	3.207	0.233	0.604	0.187	0.550	2.264	0.117	0.294
1985	0.007	0.252	1.090	0.657	3.219	0.245	0.639	0.194	0.566	2.400	0.112	0.307
1986	0.006	0.260	0.970	0.660	3.354	0.260	0.666	0.192	0.572	2.393	0.125	0.297
1987	0.007	0.266	1.095	0.653	3.421	0.269	0.670	0.197	0.585	2.484	0.124	0.301
1988	0.007	0.280	1.135	0.614	3.476	0.294	0.665	0.193	0.654	2.469	0.112	0.304
1989	0.006	0.281	1.130	0.560	3.369	0.288	0.673	0.188	0.651	2.361	0.118	0.287
1990	0.006	0.294	1.139	0.532	3.673	0.292	0.667	0.190	0.711	2.367	0.129	0.276
1991	0.006	0.287	1.132	0.543	3.923	0.289	0.689	0.191	0.734	2.335	0.132	0.351
1992	0.007	0.312	1.130	0.575	3.912	0.313	0.702	0.194	0.782	2.304	0.134	0.306
1993	0.007	0.314	1.001	0.553	4.126	0.308	0.714	0.202	0.817	2.312	0.153	0.316
1994	0.006	0.319	1.000	0.542	4.295	0.329	0.734	0.199	0.852	2.248	0.165	0.293
1995	0.006	0.335	0.982	0.545	4.683	0.341	0.754	0.207	0.885	2.269	0.173	0.305
1996	0.006	0.363	0.927	0.531	4.100	0.370	0.773	0.213	0.900	2.223	0.162	0.313
Average annual growth rates:												
1960-96	-0.026	0.026	0.003	0.005	0.023	0.016	0.020	0.008	0.028	0.004	0.008	0.010
1960-66	-0.026	0.029	0.043	0.017	0.025	0.014	0.001	0.001	0.019	0.001	-0.028	0.029
1966-69	-0.053	0.048	-0.003	0.014	0.046	-0.001	0.022	0.001	-0.017	-0.010	-0.027	0.006
1969-73	-0.081	0.017	0.033	0.018	0.070	-0.002	0.007	0.003	0.042	-0.000	0.002	0.011
1973-79	-0.018	0.014	-0.026	0.007	-0.005	0.000	0.046	0.018	0.036	0.025	0.021	0.010
1979-89	-0.015	0.022	0.010	-0.004	0.009	0.025	0.023	0.002	0.023	0.008	0.009	-0.003
1989-96	-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	LA	MA
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	0.429	0.149
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	0.433	0.135
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	0.435	0.131
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	0.473	0.128
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	0.471	0.122
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	0.486	0.110
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	0.515	0.109
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	0.552	0.111
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	0.567	0.102
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	0.565	0.099
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	0.583	0.093
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	0.593	0.088
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	0.607	0.084
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	0.573	0.078
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	0.594	0.093
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	0.550	0.089
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	0.630	0.089
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	0.577	0.087
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	0.669	0.089
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	0.681	0.090
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	0.701	0.087
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	0.638	0.084
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	0.635	0.084
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	0.632	0.087
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	0.644	0.083
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	0.594	0.080
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	0.604	0.080
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	0.616	0.076
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	0.666	0.070
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	0.730	0.073
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	0.732	0.074
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	0.751	0.075
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	0.741	0.070
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	0.750	0.070
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	0.731	0.075
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	0.701	0.077
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	0.712	0.070
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	0.014	-0.021
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	0.031	-0.051
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	0.031	-0.034
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	0.003	-0.057
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	0.029	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	0.007	-0.021
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	-0.004	-0.007

Table 3. Continued

Year	MD	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK
1960	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	1.076	1.226	0.696
1961	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	1.020	1.237	0.705
1962	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	1.028	1.179	0.723
1963	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	0.990	1.168	0.756
1964	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	1.027	1.168	0.767
1965	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	0.939	1.147	0.814
1966	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	0.970	1.202	0.874
1967	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	1.003	1.183	0.848
1968	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	0.974	1.136	0.904
1969	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	0.964	1.157	1.006
1970	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	0.957	1.157	1.036
1971	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	0.918	1.164	1.097
1972	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	0.893	1.156	1.193
1973	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	0.851	1.141	1.308
1974	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	1.009	1.209	1.262
1975	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	0.951	1.202	1.137
1976	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	0.972	1.323	1.125
1977	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	0.975	1.277	1.256
1978	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	1.006	1.310	1.293
1979	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	1.034	1.380	1.492
1980	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	1.088	1.479	1.504
1981	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	1.065	1.382	1.288
1982	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	0.953	1.304	1.218
1983	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	1.074	1.342	1.228
1984	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	1.005	1.293	1.192
1985	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	0.922	1.255	1.195
1986	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	0.890	1.290	1.248
1987	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	0.876	1.293	1.335
1988	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	0.834	1.207	1.389
1989	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	0.833	1.174	1.413
1990	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	0.863	1.242	1.408
1991	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	0.886	1.286	1.428
1992	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	0.816	1.257	1.377
1993	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	0.780	1.315	1.390
1994	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	0.840	1.289	1.522
1995	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	0.862	1.319	1.576
1996	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	0.789	1.252	1.516
Average annual growth rates:																	
1960-96	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	-0.009	0.001	0.022
1960-66	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	-0.017	-0.003	0.038
1966-69	-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	-0.002	-0.013	0.047
1969-73	-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	-0.031	-0.004	0.066
1973-79	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	0.032	0.032	0.022
1979-89	-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	-0.022	-0.016	-0.005
1989-96	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	-0.008	0.009	0.010



Table 3. Continued

Year	OR	PA	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	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
1961	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
1962	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
1963	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
1964	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
1965	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
1966	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
1967	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
1968	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
1969	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
1970	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
1971	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
1972	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
1973	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
1974	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
1975	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
1976	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
1977	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
1978	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
1979	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
1980	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
1981	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
1982	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
1983	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
1984	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
1985	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
1986	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
1987	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
1988	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
1989	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
1990	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
1991	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
1992	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
1993	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
1994	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
1995	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
1996	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
Average annual growth rates:														
1960-96	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
1960-66	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
1966-69	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
1969-73	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
1973-79	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
1979-89	-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
1989-96	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	LA	MA	MD
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	0.744	0.316	0.566
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	0.745	0.308	0.558
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	0.747	0.300	0.547
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	0.761	0.295	0.540
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	0.796	0.292	0.536
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	0.829	0.289	0.536
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	0.859	0.289	0.544
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	0.908	0.291	0.548
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	0.964	0.292	0.565
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	1.004	0.290	0.566
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	1.012	0.286	0.569
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	1.051	0.284	0.579
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	1.065	0.281	0.580
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	1.100	0.277	0.585
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	1.147	0.278	0.610
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	1.235	0.279	0.639
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	1.255	0.280	0.658
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	1.272	0.284	0.684
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	1.281	0.286	0.699
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	1.310	0.292	0.728
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	1.353	0.300	0.754
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	1.361	0.301	0.759
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	1.356	0.297	0.766
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	1.304	0.291	0.753
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	1.263	0.283	0.730
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	1.227	0.276	0.719
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	1.157	0.264	0.695
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	1.091	0.251	0.660
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	1.045	0.242	0.646
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	0.999	0.236	0.636
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	0.973	0.232	0.630
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	0.945	0.229	0.628
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	0.903	0.224	0.615
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	0.870	0.220	0.610
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	0.836	0.215	0.599
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	0.813	0.211	0.595
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	0.787	0.206	0.582
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	0.002	-0.012	0.001
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	0.024	-0.015	-0.007
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	0.052	0.001	0.013
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	0.023	-0.011	0.008
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	0.029	0.009	0.037
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	-0.027	-0.021	-0.014
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	-0.034	-0.020	-0.013

Table 4. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA
1960	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	2.106	2.997	1.573	0.884	2.134
1961	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	2.061	2.975	1.557	0.861	2.091
1962	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	2.024	2.937	1.543	0.843	2.053
1963	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	1.991	2.928	1.537	0.839	2.012
1964	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	1.995	2.954	1.541	0.845	2.009
1965	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	1.988	2.963	1.562	0.851	2.007
1966	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	2.007	3.027	1.588	0.854	2.023
1967	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	2.050	3.138	1.609	0.863	2.031
1968	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	2.095	3.215	1.657	0.872	2.102
1969	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	2.096	3.267	1.704	0.871	2.105
1970	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	2.090	3.277	1.727	0.864	2.108
1971	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	2.109	3.338	1.714	0.864	2.128
1972	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	2.109	3.410	1.725	0.860	2.131
1973	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	2.113	3.454	1.740	0.865	2.140
1974	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	2.201	3.565	1.851	0.897	2.240
1975	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	2.305	3.727	1.953	0.938	2.349
1976	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	2.369	3.841	1.988	0.975	2.421
1977	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	2.428	3.978	2.008	1.006	2.508
1978	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	2.460	4.057	2.066	1.029	2.585
1979	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	2.518	4.199	2.079	1.072	2.690
1980	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	2.600	4.395	2.170	1.113	2.806
1981	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	2.620	4.330	2.114	1.151	2.844
1982	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	2.610	4.278	2.094	1.156	2.871
1983	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	2.557	4.176	2.043	1.114	2.813
1984	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	2.475	3.977	1.989	1.100	2.720
1985	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	2.403	3.938	1.953	1.077	2.690
1986	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	2.306	3.744	1.868	1.038	2.590
1987	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	2.193	3.560	1.804	1.002	2.484
1988	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	2.102	3.415	1.743	0.992	2.418
1989	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	2.027	3.293	1.717	0.986	2.356
1990	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	1.995	3.260	1.719	0.993	2.336
1991	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	1.969	3.225	1.725	1.013	2.315
1992	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	1.918	3.107	1.675	1.005	2.266
1993	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	1.874	3.065	1.652	1.004	2.244
1994	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	1.837	2.955	1.621	1.015	2.203
1995	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	1.805	2.918	1.637	1.023	2.177
1996	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	1.769	2.838	1.620	1.029	2.137
Average annual growth rates:																		
1960-96	-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	-0.005	-0.002	0.001	0.004	0.000
1960-66	-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	-0.008	0.002	0.002	-0.006	-0.009
1966-69	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	0.015	0.025	0.023	0.007	0.013
1969-73	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	0.002	0.014	0.005	-0.002	0.004
1973-79	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	0.029	0.033	0.030	0.036	0.038
1979-89	-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	-0.022	-0.024	-0.019	-0.008	-0.013
1989-96	-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	-0.019	-0.021	-0.008	0.006	-0.014

Table 4. Continued

Year	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	0.044	0.700	1.906	1.262	4.036	0.369	1.194	0.285	1.080	3.433	0.393	0.413
1961	0.043	0.692	1.917	1.254	3.987	0.364	1.182	0.281	1.059	3.373	0.386	0.402
1962	0.042	0.687	1.886	1.253	3.967	0.361	1.175	0.276	1.048	3.330	0.380	0.399
1963	0.042	0.691	1.908	1.266	3.993	0.364	1.177	0.272	1.054	3.321	0.375	0.402
1964	0.041	0.700	1.935	1.295	4.032	0.368	1.157	0.270	1.064	3.305	0.373	0.410
1965	0.041	0.712	1.917	1.327	4.095	0.372	1.173	0.268	1.078	3.292	0.372	0.414
1966	0.041	0.731	1.951	1.364	4.234	0.383	1.190	0.266	1.085	3.313	0.372	0.417
1967	0.041	0.749	1.986	1.412	4.387	0.389	1.198	0.271	1.107	3.373	0.370	0.422
1968	0.041	0.777	2.047	1.459	4.558	0.406	1.234	0.274	1.132	3.432	0.380	0.440
1969	0.040	0.772	2.090	1.509	4.670	0.408	1.243	0.275	1.140	3.461	0.379	0.443
1970	0.039	0.776	2.088	1.503	4.779	0.411	1.254	0.271	1.131	3.453	0.378	0.447
1971	0.038	0.782	2.089	1.564	4.831	0.414	1.260	0.274	1.133	3.475	0.374	0.451
1972	0.037	0.795	2.094	1.565	4.900	0.414	1.264	0.275	1.146	3.516	0.374	0.461
1973	0.037	0.800	2.109	1.590	5.102	0.416	1.280	0.275	1.143	3.522	0.373	0.463
1974	0.036	0.833	2.180	1.657	5.402	0.429	1.329	0.283	1.180	3.618	0.385	0.477
1975	0.037	0.863	2.182	1.737	5.617	0.448	1.375	0.292	1.249	3.739	0.397	0.498
1976	0.037	0.884	2.215	1.772	5.728	0.458	1.407	0.300	1.289	3.836	0.402	0.507
1977	0.037	0.905	2.147	1.839	5.896	0.472	1.437	0.311	1.317	3.863	0.408	0.521
1978	0.037	0.928	2.271	1.878	5.974	0.485	1.470	0.316	1.337	4.057	0.415	0.513
1979	0.037	0.957	2.256	1.942	6.058	0.498	1.528	0.326	1.394	4.177	0.424	0.530
1980	0.038	1.008	2.386	2.008	6.202	0.517	1.604	0.337	1.463	4.361	0.435	0.551
1981	0.038	0.986	2.338	2.005	6.138	0.527	1.603	0.340	1.464	4.458	0.444	0.550
1982	0.037	0.988	2.276	2.016	6.025	0.531	1.620	0.344	1.486	4.419	0.445	0.558
1983	0.035	0.964	2.256	1.985	6.012	0.519	1.576	0.339	1.436	4.376	0.433	0.553
1984	0.034	0.912	2.191	1.914	5.760	0.497	1.535	0.329	1.425	4.248	0.422	0.533
1985	0.033	0.882	2.169	1.883	5.617	0.483	1.507	0.320	1.384	4.216	0.414	0.516
1986	0.030	0.838	1.992	1.815	5.410	0.466	1.461	0.310	1.333	4.016	0.396	0.487
1987	0.029	0.785	1.901	1.732	5.163	0.451	1.398	0.298	1.281	3.865	0.384	0.476
1988	0.028	0.757	1.855	1.702	5.104	0.447	1.368	0.290	1.269	3.758	0.375	0.470
1989	0.027	0.732	1.789	1.672	4.966	0.437	1.347	0.284	1.258	3.671	0.368	0.460
1990	0.027	0.713	1.772	1.665	4.927	0.430	1.349	0.282	1.253	3.713	0.368	0.438
1991	0.026	0.692	1.794	1.648	4.903	0.434	1.346	0.278	1.277	3.741	0.368	0.439
1992	0.026	0.666	1.779	1.621	4.859	0.431	1.321	0.273	1.267	3.695	0.356	0.442
1993	0.025	0.647	1.776	1.599	4.857	0.429	1.308	0.272	1.262	3.634	0.352	0.445
1994	0.025	0.627	1.753	1.581	4.839	0.427	1.286	0.267	1.269	3.588	0.346	0.446
1995	0.024	0.618	1.760	1.570	4.817	0.426	1.285	0.263	1.255	3.608	0.343	0.435
1996	0.024	0.601	1.713	1.551	4.749	0.424	1.277	0.260	1.246	3.564	0.337	0.441
Average annual growth rates:												
1960-96	-0.018	-0.004	-0.003	0.006	0.005	0.004	0.002	-0.003	0.004	0.001	-0.004	0.002
1960-66	-0.013	0.007	0.004	0.013	0.008	0.006	-0.001	-0.011	0.001	-0.006	-0.009	0.002
1966-69	-0.009	0.018	0.023	0.034	0.033	0.021	0.015	0.011	0.017	0.015	0.006	0.019
1969-73	-0.021	0.009	0.002	0.013	0.022	0.005	0.007	0.001	0.001	0.004	-0.004	0.011
1973-79	0.003	0.030	0.011	0.033	0.029	0.030	0.029	0.028	0.033	0.028	0.022	0.022
1979-89	-0.031	-0.027	-0.023	-0.015	-0.020	-0.013	-0.013	-0.014	-0.010	-0.013	-0.014	-0.014
1989-96	-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	LA	MA
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	1.160	0.183
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	1.133	0.183
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	1.130	0.168
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	1.155	0.168
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	1.175	0.153
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	1.196	0.137
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	1.201	0.137
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	1.204	0.137
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	1.234	0.122
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	1.243	0.122
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	1.244	0.122
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	1.246	0.107
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	1.251	0.107
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	1.247	0.107
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	1.250	0.107
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	1.111	0.107
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	1.100	0.107
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	1.069	0.107
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	1.091	0.107
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	1.080	0.107
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	1.080	0.107
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	1.079	0.107
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	1.081	0.107
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	1.020	0.107
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	1.041	0.107
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	1.021	0.107
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	1.003	0.107
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	0.932	0.107
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	0.923	0.107
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	0.928	0.107
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	0.907	0.107
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	0.898	0.107
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	0.886	0.107
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	0.864	0.092
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	0.853	0.092
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	0.870	0.092
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	0.916	0.092
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	-0.007	-0.019
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	0.006	-0.048
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	0.011	-0.040
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	0.001	-0.033
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	-0.024	-0.000
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	-0.015	-0.000
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	-0.002	-0.022



Table 5. Continued

Year	MD	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK
1960	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	1.105	2.204	3.965
1961	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	1.040	2.055	3.905
1962	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	1.032	2.025	3.780
1963	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	1.013	2.048	3.802
1964	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	0.998	2.013	3.802
1965	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	0.978	1.965	3.784
1966	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	0.946	1.927	3.756
1967	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	0.913	2.001	3.860
1968	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	0.871	1.947	3.839
1969	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	0.836	1.897	3.713
1970	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	0.834	1.890	3.647
1971	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	0.836	1.960	3.712
1972	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	0.844	1.899	3.593
1973	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	0.880	2.015	3.816
1974	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	0.902	2.039	3.857
1975	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	0.817	1.977	3.709
1976	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	0.786	1.952	3.686
1977	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	0.770	1.938	3.652
1978	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	0.746	1.903	3.551
1979	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	0.734	1.914	3.519
1980	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	0.723	1.910	3.608
1981	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	0.747	1.897	3.545
1982	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	0.729	1.874	3.435
1983	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	0.699	1.637	3.102
1984	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	0.719	1.830	3.209
1985	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	0.693	1.818	3.222
1986	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	0.670	1.772	3.181
1987	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	0.641	1.674	3.113
1988	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	0.631	1.684	3.106
1989	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	0.619	1.756	3.247
1990	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	0.620	1.769	3.271
1991	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	0.616	1.773	3.143
1992	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	0.609	1.756	3.374
1993	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	0.593	1.707	3.373
1994	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	0.588	1.747	3.391
1995	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	0.572	1.729	3.402
1996	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	0.583	1.759	3.470
Average annual growth rates:																	
1960-96	-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	-0.018	-0.006	-0.004
1960-66	-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	-0.026	-0.022	-0.009
1966-69	-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	-0.041	-0.005	-0.004
1969-73	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	0.013	0.015	0.007
1973-79	-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	-0.030	-0.009	-0.013
1979-89	-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	-0.017	-0.009	-0.008
1989-96	-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	-0.009	0.000	0.009

Table 5. Continued

	Year	OR	PA	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
30	1960	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
	1961	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
	1962	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
	1963	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
	1964	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
	1965	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
	1966	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
	1967	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
	1968	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
	1969	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
	1970	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
	1971	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
	1972	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
	1973	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
	1974	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
	1975	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
	1976	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
	1977	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
	1978	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
	1979	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
	1980	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
	1981	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
	1982	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
	1983	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
	1984	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
	1985	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
	1986	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
	1987	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
	1988	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
	1989	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
	1990	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
	1991	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
	1992	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
	1993	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
	1994	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
	1995	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
	1996	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
Average annual growth rates:															
1960-96		-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
1960-66		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
1966-69		-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
1969-73		-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
1973-79		-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
1979-89		-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
1989-96		-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	LA	MA	MD
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	3.316	1.429	1.578
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	3.222	1.297	1.514
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	3.056	1.225	1.547
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	2.947	1.112	1.511
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	2.806	1.044	1.421
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	2.693	1.047	1.444
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	2.521	0.928	1.226
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	2.282	0.759	1.127
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	2.167	0.741	1.077
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	1.940	0.653	1.030
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	1.693	0.613	1.029
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	1.736	0.627	1.026
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	1.808	0.620	1.005
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	1.690	0.666	1.057
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	1.717	0.511	1.026
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	1.441	0.541	0.967
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	1.666	0.588	0.989
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	1.402	0.590	0.951
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	1.422	0.565	0.923
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	1.335	0.513	1.005
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	1.499	0.544	1.101
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	1.678	0.562	1.259
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	1.434	0.591	0.980
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	1.153	0.544	0.938
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	0.975	0.530	0.802
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	1.222	0.485	0.722
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	0.967	0.389	0.619
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	1.050	0.346	0.637
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	1.283	0.308	0.590
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	1.137	0.291	0.705
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	0.989	0.299	0.759
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	0.886	0.339	0.672
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	1.186	0.392	0.784
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	1.120	0.389	0.661
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	0.933	0.413	0.615
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	1.077	0.323	0.662
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	0.904	0.278	0.605
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	-0.036	-0.045	-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	-0.046	-0.072	-0.042
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	-0.087	-0.117	-0.058
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	-0.034	0.005	0.007
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	-0.039	-0.043	-0.009
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	-0.016	-0.057	-0.035
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	-0.033	-0.006	-0.022

Table 6. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA
1960	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	5.757	8.527	4.348	3.086	6.438
1961	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	5.571	8.019	4.189	2.979	6.034
1962	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	5.396	7.756	3.960	3.025	5.616
1963	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	5.055	7.357	3.785	2.871	5.319
1964	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	4.720	6.969	3.401	2.861	5.074
1965	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	4.667	6.711	3.340	2.719	4.819
1966	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	4.293	6.309	3.359	2.323	4.511
1967	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	4.037	5.981	3.610	2.171	4.444
1968	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	3.887	5.435	3.427	2.010	4.196
1969	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	3.872	5.160	3.409	2.012	3.996
1970	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	3.717	4.865	3.502	1.925	3.946
1971	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	3.719	5.018	3.472	1.855	3.805
1972	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	3.630	4.924	3.583	1.625	3.736
1973	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	3.788	5.175	3.603	1.688	4.095
1974	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	3.696	4.450	2.760	1.478	4.543
1975	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	3.776	4.324	2.860	1.736	4.555
1976	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	4.015	4.436	2.748	1.624	4.338
1977	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	3.542	4.876	2.394	1.804	4.450
1978	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	3.710	4.765	2.593	1.831	4.074
1979	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	3.734	3.987	2.407	1.907	3.810
1980	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	4.084	4.680	2.216	1.942	4.534
1981	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	4.106	3.138	2.602	2.454	4.104
1982	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	3.477	4.395	1.994	2.212	4.531
1983	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	3.562	5.066	1.874	2.074	4.449
1984	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	4.735	3.254	2.443	1.852	3.973
1985	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	3.613	3.724	2.240	1.728	3.484
1986	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	3.223	3.917	2.084	1.645	3.420
1987	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	2.887	3.361	1.830	1.676	3.404
1988	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	2.803	3.350	2.270	1.848	3.548
1989	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	2.924	4.033	2.175	2.098	3.732
1990	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	2.619	3.924	2.460	2.117	3.588
1991	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	2.518	3.835	2.410	2.029	3.878
1992	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	2.462	3.304	2.456	1.849	3.519
1993	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	2.577	3.430	2.440	1.729	3.393
1994	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	2.426	3.340	2.278	1.944	3.080
1995	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	2.555	3.885	2.543	2.293	3.023
1996	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	2.478	3.706	2.628	2.585	3.104
Average annual growth rates:																		
1960-96	-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	-0.023	-0.023	-0.014	-0.005	-0.020
1960-66	-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	-0.049	-0.050	-0.043	-0.047	-0.059
1966-69	-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	-0.067	0.005	-0.048	-0.040
1969-73	-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	-0.005	0.001	0.014	-0.044	0.006
1973-79	-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	-0.002	-0.043	-0.067	0.020	-0.012
1979-89	-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	-0.024	0.001	-0.010	0.010	-0.002
1989-96	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	-0.024	-0.012	0.027	0.030	-0.026

Table 6. Continued

Year	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	0.162	3.661	3.321	5.460	13.520	0.978	4.887	1.149	3.580	10.336	2.025	0.864
1961	0.144	3.631	3.118	5.098	12.931	0.944	4.723	1.049	3.396	9.785	1.870	0.834
1962	0.125	3.510	3.092	4.763	12.652	0.939	4.437	0.976	3.287	9.558	1.758	0.792
1963	0.098	3.228	2.990	4.780	11.790	0.874	4.189	0.913	3.251	9.256	1.550	0.824
1964	0.085	2.981	2.820	4.628	10.847	0.844	4.040	0.891	3.168	8.573	1.431	0.816
1965	0.093	2.786	2.741	4.313	10.143	0.805	3.854	0.895	2.970	8.781	1.401	0.785
1966	0.086	2.265	2.719	4.313	9.241	0.747	3.489	0.835	2.842	8.173	1.202	0.744
1967	0.085	2.186	2.612	3.676	9.201	0.703	3.342	0.677	2.485	7.569	1.193	0.721
1968	0.088	2.125	2.526	3.510	9.051	0.667	3.253	0.619	2.443	7.479	1.129	0.690
1969	0.070	2.001	2.516	3.249	9.287	0.658	3.131	0.590	2.482	7.291	1.083	0.664
1970	0.066	2.069	2.350	3.286	9.066	0.614	2.972	0.545	2.686	7.000	1.071	0.645
1971	0.062	1.963	2.311	3.277	8.270	0.593	2.894	0.529	2.525	6.862	1.055	0.636
1972	0.064	1.942	2.208	3.395	8.767	0.562	2.805	0.511	2.406	6.617	1.007	0.659
1973	0.059	1.803	2.455	3.308	8.329	0.582	2.807	0.524	2.439	6.571	1.066	0.681
1974	0.063	1.542	2.714	2.491	7.428	0.618	2.274	0.450	2.452	6.759	1.073	0.672
1975	0.063	1.614	2.610	2.375	7.314	0.662	2.329	0.467	2.500	6.942	0.970	0.700
1976	0.078	1.437	2.463	2.698	7.175	0.675	2.135	0.515	2.737	6.830	0.906	0.680
1977	0.075	1.285	2.729	2.349	7.338	0.675	1.674	0.509	2.278	7.781	1.073	0.592
1978	0.067	1.277	2.468	2.416	7.740	0.747	2.077	0.527	2.246	7.597	0.752	0.600
1979	0.062	1.185	2.665	2.190	7.500	0.715	1.867	0.485	2.482	7.928	0.641	0.674
1980	0.065	1.129	2.719	2.357	7.589	0.730	2.035	0.582	2.618	7.679	0.696	0.632
1981	0.066	1.200	2.986	2.329	7.053	0.498	2.270	0.632	2.553	7.600	0.671	0.699
1982	0.049	0.932	2.394	2.518	7.248	0.709	2.364	0.424	2.229	7.545	0.911	0.755
1983	0.068	0.841	3.023	3.355	6.470	0.489	1.659	0.543	2.391	7.154	0.806	0.715
1984	0.066	1.048	2.390	2.519	7.207	0.598	1.942	0.642	2.382	7.182	0.677	0.681
1985	0.065	0.790	2.530	2.183	7.150	0.578	1.793	0.587	2.011	6.872	0.490	0.659
1986	0.057	0.677	2.027	1.701	6.514	0.420	1.568	0.480	1.952	6.580	0.500	0.593
1987	0.044	0.601	2.271	1.388	6.532	0.397	1.436	0.488	2.173	6.089	0.598	0.642
1988	0.033	0.824	2.180	1.626	7.161	0.446	1.069	0.476	2.000	5.989	0.530	0.568
1989	0.033	0.911	2.251	1.949	6.396	0.456	1.232	0.466	2.492	5.886	0.653	0.540
1990	0.032	1.027	2.025	2.018	6.698	0.523	1.636	0.427	2.658	6.164	0.572	0.542
1991	0.043	0.930	2.143	2.089	6.695	0.546	1.770	0.299	2.713	5.293	0.643	0.679
1992	0.047	0.722	1.710	2.313	6.676	0.577	1.605	0.257	2.080	4.887	0.787	0.553
1993	0.047	0.689	1.640	2.076	6.733	0.453	1.377	0.256	2.249	4.638	0.797	0.620
1994	0.053	0.535	1.803	1.680	6.632	0.530	1.316	0.275	2.570	4.722	0.697	0.662
1995	0.034	0.722	1.955	2.054	7.025	0.524	1.731	0.461	2.319	4.732	0.687	0.828
1996	0.029	0.651	1.882	1.940	7.653	0.578	1.637	0.389	2.658	4.150	0.797	0.683
Average annual growth rates:												
1960-96	-0.048	-0.048	-0.016	-0.029	-0.016	-0.015	-0.030	-0.030	-0.008	-0.025	-0.026	-0.007
1960-66	-0.105	-0.080	-0.033	-0.039	-0.063	-0.045	-0.056	-0.053	-0.038	-0.039	-0.087	-0.025
1966-69	-0.070	-0.041	-0.026	-0.094	0.002	-0.043	-0.036	-0.116	-0.045	-0.038	-0.035	-0.038
1969-73	-0.040	-0.026	-0.006	0.004	-0.027	-0.031	-0.027	-0.030	-0.004	-0.026	-0.004	0.006
1973-79	0.006	-0.070	0.014	-0.069	-0.017	0.035	-0.068	-0.013	0.003	0.031	-0.085	-0.002
1979-89	-0.064	-0.026	-0.017	-0.012	-0.016	-0.045	-0.042	-0.004	0.000	-0.030	0.002	-0.022
1989-96	-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	LA	MA	MD
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	0.341	0.152	0.235
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	0.358	0.150	0.237
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	0.370	0.149	0.239
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	0.425	0.147	0.239
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	0.420	0.143	0.243
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	0.434	0.139	0.264
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	0.451	0.137	0.243
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	0.493	0.130	0.272
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	0.531	0.125	0.265
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	0.477	0.120	0.283
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	0.519	0.122	0.286
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	0.527	0.123	0.285
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	0.550	0.115	0.275
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	0.509	0.114	0.286
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	0.525	0.114	0.298
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	0.555	0.119	0.306
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	0.609	0.117	0.312
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	0.585	0.116	0.301
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	0.606	0.115	0.339
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	0.645	0.104	0.350
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	0.573	0.104	0.335
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	0.649	0.112	0.376
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	0.703	0.110	0.376
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	0.610	0.112	0.359
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	0.665	0.115	0.398
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	0.616	0.118	0.409
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	0.596	0.120	0.371
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	0.595	0.117	0.377
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	0.717	0.116	0.362
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	0.599	0.119	0.378
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	0.678	0.115	0.403
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	0.639	0.131	0.400
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	0.768	0.124	0.424
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	0.688	0.127	0.402
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	0.770	0.118	0.422
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	0.736	0.110	0.411
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	0.827	0.118	0.441
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	0.025	-0.007	0.018
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	0.047	-0.017	0.006
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	0.019	-0.045	0.052
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	0.016	-0.013	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	0.040	-0.015	0.033
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	-0.007	0.013	0.008
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	0.046	-0.001	0.022



Table 7. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA
1960	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	1.042	1.179	0.817	0.461	0.926
1961	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	1.070	1.176	0.799	0.472	0.941
1962	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	1.047	1.185	0.713	0.496	0.883
1963	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	1.073	1.219	0.742	0.503	0.906
1964	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	1.062	1.189	0.797	0.515	0.915
1965	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	1.081	1.199	0.935	0.529	0.929
1966	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	1.067	1.261	0.860	0.528	0.869
1967	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	1.088	1.217	0.866	0.538	0.956
1968	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	1.048	1.258	0.947	0.513	0.929
1969	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	1.038	1.206	0.984	0.551	0.957
1970	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	1.056	1.233	1.019	0.547	0.978
1971	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	1.060	1.372	1.013	0.565	0.990
1972	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	0.966	1.301	1.122	0.566	0.933
1973	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	0.975	1.189	1.314	0.597	0.957
1974	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	1.032	1.266	1.216	0.607	1.008
1975	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	1.047	1.411	1.249	0.629	1.035
1976	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	1.034	1.489	1.151	0.652	1.071
1977	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	1.032	1.520	1.320	0.634	1.105
1978	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	1.069	1.472	1.142	0.652	1.155
1979	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	1.137	1.609	1.392	0.723	1.195
1980	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	1.187	1.605	1.321	0.772	1.227
1981	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	1.181	1.423	1.302	0.812	1.335
1982	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	1.187	1.603	1.421	0.770	1.340
1983	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	1.170	1.340	1.235	0.770	1.301
1984	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	1.178	1.664	1.277	0.811	1.397
1985	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	1.217	1.840	1.306	0.788	1.475
1986	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	1.174	1.748	1.334	0.817	1.477
1987	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	1.158	1.669	1.293	0.847	1.465
1988	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	1.105	1.409	1.359	0.894	1.411
1989	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	1.115	1.612	1.378	0.909	1.470
1990	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	1.116	1.794	1.382	0.943	1.487
1991	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	1.133	1.563	1.326	0.932	1.429
1992	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	1.099	1.815	1.364	0.901	1.562
1993	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	1.086	1.683	1.348	0.982	1.507
1994	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	1.101	1.873	1.472	0.976	1.547
1995	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	1.112	1.712	1.342	1.000	1.536
1996	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	1.120	1.629	1.368	1.028	1.596
Average annual growth rates:																		
1960-96	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	0.002	0.009	0.014	0.022	0.015
1960-66	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	0.004	0.011	0.009	0.023	-0.011
1966-69	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	-0.009	-0.015	0.045	0.014	0.032
1969-73	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	-0.015	-0.003	0.072	0.020	0.000
1973-79	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	0.026	0.050	0.010	0.032	0.037
1979-89	-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	-0.002	0.000	-0.001	0.023	0.021
1989-96	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	0.001	0.002	-0.001	0.018	0.012

Table 7. Continued

Year	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	0.018	0.377	0.930	0.586	2.418	0.205	0.523	0.152	0.620	1.787	0.133	0.212
1961	0.018	0.388	0.890	0.608	2.438	0.205	0.536	0.158	0.628	1.842	0.130	0.209
1962	0.018	0.408	0.978	0.594	2.411	0.215	0.541	0.157	0.663	1.890	0.124	0.219
1963	0.018	0.408	1.024	0.630	2.579	0.216	0.474	0.157	0.701	1.833	0.119	0.248
1964	0.018	0.408	0.972	0.666	2.464	0.216	0.519	0.155	0.724	1.865	0.120	0.245
1965	0.017	0.413	1.025	0.651	2.642	0.219	0.516	0.152	0.726	1.867	0.116	0.242
1966	0.017	0.380	1.041	0.609	2.687	0.223	0.483	0.149	0.770	1.874	0.103	0.246
1967	0.016	0.423	1.145	0.625	2.610	0.235	0.521	0.145	0.808	1.896	0.115	0.282
1968	0.015	0.371	1.159	0.618	2.803	0.230	0.520	0.142	0.779	1.943	0.113	0.278
1969	0.014	0.409	1.108	0.636	2.841	0.230	0.538	0.144	0.778	1.863	0.110	0.267
1970	0.015	0.404	1.082	0.645	2.932	0.236	0.540	0.146	0.797	1.919	0.111	0.270
1971	0.014	0.450	1.213	0.678	2.911	0.237	0.543	0.151	0.847	2.037	0.116	0.294
1972	0.012	0.421	1.228	0.680	3.340	0.229	0.550	0.148	0.877	1.982	0.114	0.289
1973	0.013	0.429	1.272	0.688	3.763	0.232	0.566	0.145	0.851	1.887	0.115	0.279
1974	0.012	0.455	1.151	0.648	3.289	0.237	0.583	0.144	0.928	1.923	0.118	0.282
1975	0.015	0.486	1.108	0.715	3.612	0.241	0.587	0.148	1.040	1.981	0.119	0.291
1976	0.013	0.443	0.856	0.755	3.642	0.244	0.573	0.156	1.086	1.897	0.109	0.313
1977	0.013	0.423	1.220	0.766	3.804	0.236	0.546	0.152	0.997	2.252	0.109	0.287
1978	0.013	0.462	1.266	0.778	3.626	0.251	0.614	0.159	1.135	2.271	0.115	0.315
1979	0.013	0.487	1.288	0.807	3.926	0.251	0.652	0.157	1.127	2.368	0.120	0.301
1980	0.013	0.423	1.225	0.733	3.475	0.256	0.619	0.157	1.183	2.429	0.125	0.297
1981	0.012	0.512	1.340	0.876	3.932	0.287	0.703	0.161	1.281	2.511	0.120	0.316
1982	0.015	0.506	1.429	0.896	4.168	0.286	0.697	0.170	1.250	2.548	0.120	0.307
1983	0.016	0.401	1.314	0.727	3.568	0.274	0.630	0.170	1.304	2.354	0.131	0.310
1984	0.016	0.493	1.517	0.905	3.647	0.266	0.739	0.160	1.306	2.525	0.138	0.307
1985	0.020	0.474	1.524	0.949	3.951	0.274	0.727	0.165	1.235	2.585	0.139	0.302
1986	0.018	0.402	1.483	0.838	3.809	0.286	0.679	0.163	1.245	2.575	0.137	0.321
1987	0.018	0.440	1.533	0.848	3.756	0.297	0.700	0.163	1.339	2.563	0.136	0.317
1988	0.018	0.465	1.229	0.809	3.889	0.309	0.726	0.158	1.454	2.183	0.123	0.306
1989	0.016	0.496	1.414	0.798	3.970	0.300	0.774	0.157	1.438	2.495	0.133	0.293
1990	0.015	0.454	1.605	0.793	4.074	0.307	0.784	0.161	1.586	2.587	0.145	0.300
1991	0.015	0.481	1.605	0.797	4.424	0.309	0.782	0.159	1.518	2.615	0.140	0.371
1992	0.017	0.516	1.661	0.918	4.551	0.333	0.831	0.171	1.575	2.434	0.152	0.317
1993	0.015	0.471	1.405	0.847	4.696	0.332	0.774	0.170	1.748	2.318	0.164	0.339
1994	0.015	0.556	1.705	0.900	4.763	0.345	0.831	0.171	1.756	2.557	0.171	0.304
1995	0.014	0.533	1.481	0.869	4.725	0.356	0.840	0.172	1.843	2.463	0.176	0.339
1996	0.014	0.564	1.745	0.888	4.569	0.373	0.876	0.176	1.859	2.391	0.166	0.328
Average annual growth rates:												
1960-96	-0.008	0.011	0.017	0.012	0.018	0.017	0.014	0.004	0.031	0.008	0.006	0.012
1960-66	-0.016	0.001	0.019	0.007	0.018	0.014	-0.013	-0.003	0.036	0.008	-0.043	0.024
1966-69	-0.053	0.024	0.021	0.014	0.019	0.010	0.036	-0.013	0.003	-0.002	0.023	0.028
1969-73	-0.030	0.012	0.034	0.020	0.070	0.002	0.013	0.002	0.023	0.003	0.011	0.011
1973-79	-0.001	0.021	0.002	0.026	0.007	0.013	0.024	0.013	0.047	0.038	0.007	0.013
1979-89	0.021	0.002	0.009	-0.001	0.001	0.018	0.017	0.000	0.024	0.005	0.010	-0.003
1989-96	-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	LA	MA	MD
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	0.882	0.319	0.502
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	0.875	0.293	0.486
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	0.863	0.280	0.498
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	0.890	0.264	0.487
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	0.880	0.250	0.478
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	0.887	0.241	0.487
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	0.895	0.226	0.474
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	0.902	0.206	0.457
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	0.911	0.197	0.451
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	0.891	0.183	0.442
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	0.873	0.175	0.450
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	0.889	0.171	0.444
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	0.907	0.168	0.420
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	0.878	0.169	0.442
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	0.900	0.159	0.458
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	0.832	0.161	0.445
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	0.915	0.166	0.449
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	0.850	0.165	0.443
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	0.914	0.164	0.485
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	0.912	0.161	0.511
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	0.946	0.162	0.546
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	0.929	0.162	0.565
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	0.908	0.164	0.524
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	0.859	0.161	0.525
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	0.849	0.157	0.518
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	0.837	0.150	0.488
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	0.801	0.141	0.457
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	0.794	0.133	0.453
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	0.838	0.125	0.436
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	0.852	0.124	0.458
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	0.822	0.125	0.473
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	0.809	0.130	0.471
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	0.847	0.133	0.479
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	0.834	0.128	0.462
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	0.780	0.133	0.464
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	0.790	0.124	0.483
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	0.770	0.114	0.462

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	-0.004	-0.029	-0.002
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	0.003	-0.058	-0.009
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	-0.002	-0.069	-0.023
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	-0.004	-0.020	-0.000
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	0.006	-0.009	0.024
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	-0.007	-0.026	-0.011
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	-0.014	-0.012	0.001

Table 8. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR	PA
1960	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	1.727	2.563	1.666	0.963	1.854
1961	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	1.656	2.491	1.649	0.947	1.758
1962	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	1.638	2.404	1.629	0.969	1.672
1963	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	1.567	2.340	1.637	0.961	1.593
1964	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	1.558	2.286	1.592	0.948	1.567
1965	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	1.484	2.232	1.624	0.938	1.532
1966	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	1.464	2.218	1.676	0.878	1.502
1967	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	1.459	2.175	1.707	0.878	1.461
1968	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	1.423	2.064	1.722	0.828	1.478
1969	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	1.412	2.035	1.779	0.832	1.443
1970	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	1.387	1.991	1.807	0.819	1.431
1971	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	1.366	2.034	1.846	0.808	1.426
1972	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	1.340	2.014	1.913	0.767	1.376
1973	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	1.336	2.059	2.021	0.788	1.424
1974	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	1.447	2.015	1.890	0.757	1.535
1975	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	1.417	1.999	1.804	0.757	1.556
1976	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	1.464	2.111	1.779	0.795	1.580
1977	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	1.415	2.148	1.819	0.832	1.615
1978	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	1.456	2.160	1.868	0.892	1.607
1979	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	1.483	2.150	1.989	0.966	1.615
1980	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	1.564	2.289	2.004	0.940	1.751
1981	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	1.556	2.105	1.882	1.012	1.701
1982	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	1.425	2.152	1.761	0.964	1.704
1983	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	1.495	2.148	1.691	0.941	1.752
1984	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	1.523	2.011	1.742	0.927	1.650
1985	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	1.369	2.019	1.717	0.901	1.595
1986	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	1.295	2.024	1.709	0.861	1.572
1987	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	1.237	1.924	1.708	0.854	1.549
1988	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	1.188	1.851	1.796	0.876	1.529
1989	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	1.188	1.891	1.805	0.939	1.573
1990	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	1.169	1.924	1.852	0.936	1.578
1991	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	1.168	1.937	1.849	0.922	1.586
1992	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	1.110	1.826	1.830	0.920	1.497
1993	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	1.094	1.870	1.833	0.883	1.486
1994	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	1.108	1.833	1.899	0.927	1.461
1995	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	1.131	1.914	1.983	1.034	1.471
1996	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	1.074	1.843	1.959	1.038	1.436
Average annual growth rates:																		
1960-96	-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	-0.013	-0.009	0.004	0.002	-0.007
1960-66	-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	-0.028	-0.024	0.001	-0.015	-0.035
1966-69	-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	-0.012	-0.029	0.020	-0.018	-0.013
1969-73	-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	-0.014	0.003	0.032	-0.014	-0.003
1973-79	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	0.017	0.007	-0.003	0.034	0.021
1979-89	-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	-0.022	-0.013	-0.010	-0.003	-0.003
1989-96	-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	-0.014	-0.004	0.012	0.014	-0.013

Table 8. Continued

Year	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	0.043	0.826	1.517	1.514	5.062	0.427	1.237	0.271	1.118	2.612	0.537	0.473
1961	0.039	0.816	1.515	1.435	5.061	0.416	1.191	0.252	1.081	2.548	0.506	0.461
1962	0.036	0.793	1.535	1.413	5.106	0.412	1.176	0.249	1.082	2.508	0.492	0.470
1963	0.032	0.760	1.602	1.441	5.086	0.406	1.129	0.237	1.094	2.458	0.457	0.490
1964	0.029	0.750	1.569	1.440	4.881	0.397	1.067	0.232	1.075	2.372	0.439	0.493
1965	0.029	0.720	1.548	1.395	4.935	0.380	1.071	0.229	1.066	2.363	0.423	0.495
1966	0.028	0.674	1.574	1.430	4.989	0.399	1.058	0.218	1.048	2.401	0.391	0.489
1967	0.027	0.680	1.619	1.395	5.037	0.380	1.032	0.203	1.033	2.387	0.386	0.522
1968	0.027	0.685	1.592	1.342	5.056	0.373	1.032	0.190	1.001	2.367	0.382	0.529
1969	0.024	0.676	1.618	1.312	5.322	0.379	1.033	0.189	1.003	2.391	0.369	0.516
1970	0.023	0.690	1.597	1.331	5.209	0.372	1.014	0.181	1.043	2.378	0.366	0.512
1971	0.021	0.678	1.620	1.325	5.349	0.365	0.991	0.180	1.022	2.356	0.358	0.524
1972	0.021	0.682	1.580	1.363	5.743	0.359	0.980	0.178	1.020	2.368	0.354	0.543
1973	0.020	0.670	1.725	1.358	5.840	0.354	1.001	0.170	1.032	2.344	0.365	0.538
1974	0.022	0.704	1.659	1.259	5.417	0.372	0.991	0.179	1.071	2.427	0.373	0.518
1975	0.021	0.614	1.599	1.222	5.383	0.383	0.976	0.177	1.013	2.445	0.357	0.526
1976	0.022	0.631	1.509	1.315	5.633	0.385	0.946	0.185	1.097	2.515	0.348	0.554
1977	0.022	0.606	1.577	1.269	5.592	0.393	0.889	0.187	1.045	2.531	0.358	0.528
1978	0.021	0.639	1.702	1.306	6.026	0.436	0.998	0.191	1.188	2.708	0.330	0.581
1979	0.021	0.655	1.743	1.315	6.172	0.425	1.035	0.196	1.236	2.831	0.331	0.591
1980	0.022	0.658	1.744	1.342	6.007	0.432	1.079	0.209	1.233	2.921	0.338	0.576
1981	0.021	0.639	1.722	1.313	5.834	0.413	1.069	0.212	1.280	2.920	0.338	0.553
1982	0.020	0.578	1.709	1.319	5.941	0.421	1.052	0.198	1.251	2.832	0.353	0.562
1983	0.021	0.554	1.746	1.394	5.627	0.403	0.983	0.209	1.232	2.878	0.343	0.575
1984	0.020	0.568	1.655	1.305	5.794	0.401	0.996	0.205	1.252	2.814	0.326	0.561
1985	0.020	0.529	1.673	1.272	5.610	0.392	0.964	0.193	1.170	2.778	0.300	0.555
1986	0.019	0.501	1.525	1.178	5.549	0.372	0.923	0.189	1.143	2.634	0.291	0.513
1987	0.018	0.480	1.562	1.119	5.538	0.375	0.893	0.181	1.138	2.582	0.300	0.550
1988	0.016	0.493	1.516	1.142	5.638	0.379	0.859	0.167	1.161	2.398	0.285	0.546
1989	0.016	0.526	1.435	1.134	5.375	0.365	0.862	0.171	1.229	2.337	0.294	0.525
1990	0.016	0.519	1.476	1.145	5.650	0.367	0.910	0.174	1.260	2.518	0.297	0.474
1991	0.017	0.509	1.455	1.140	5.648	0.366	0.922	0.162	1.325	2.420	0.304	0.574
1992	0.017	0.477	1.376	1.185	5.591	0.379	0.909	0.153	1.251	2.303	0.307	0.499
1993	0.017	0.492	1.360	1.159	5.742	0.359	0.897	0.152	1.336	2.197	0.335	0.506
1994	0.018	0.469	1.391	1.075	5.599	0.394	0.882	0.154	1.388	2.272	0.330	0.525
1995	0.017	0.522	1.477	1.163	6.074	0.398	0.956	0.173	1.456	2.287	0.328	0.551
1996	0.016	0.513	1.439	1.146	5.875	0.408	0.956	0.159	1.445	2.102	0.342	0.521
Average annual growth rates:												
1960-96	-0.027	-0.013	-0.001	-0.008	0.004	-0.001	-0.007	-0.015	0.007	-0.006	-0.013	0.003
1960-66	-0.073	-0.034	0.006	-0.010	-0.002	-0.011	-0.026	-0.036	-0.011	-0.014	-0.053	0.006
1966-69	-0.054	0.001	0.009	-0.029	0.022	-0.016	-0.008	-0.048	-0.015	-0.001	-0.019	0.018
1969-73	-0.044	-0.002	0.016	0.009	0.023	-0.017	-0.008	-0.026	0.007	-0.005	-0.003	0.010
1973-79	0.009	-0.004	0.002	-0.005	0.009	0.030	0.006	0.023	0.030	0.031	-0.017	0.016
1979-89	-0.028	-0.022	-0.019	-0.015	-0.014	-0.015	-0.018	-0.013	-0.001	-0.019	-0.012	-0.012
1989-96	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	LA	MA	MD
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	0.386	0.477	0.468
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	0.409	0.514	0.487
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	0.429	0.531	0.480
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	0.478	0.558	0.490
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	0.477	0.571	0.509
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	0.489	0.577	0.541
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	0.503	0.608	0.512
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	0.546	0.629	0.594
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	0.583	0.635	0.589
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	0.536	0.654	0.641
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	0.594	0.700	0.636
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	0.593	0.719	0.642
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	0.606	0.685	0.655
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	0.579	0.672	0.648
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	0.583	0.713	0.650
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	0.667	0.742	0.688
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	0.665	0.702	0.695
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	0.688	0.705	0.680
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	0.663	0.698	0.699
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	0.707	0.647	0.684
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	0.606	0.641	0.613
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	0.699	0.694	0.666
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	0.774	0.674	0.718
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	0.710	0.694	0.684
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	0.784	0.736	0.768
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	0.735	0.785	0.838
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	0.744	0.852	0.813
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	0.750	0.882	0.832
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	0.855	0.926	0.831
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	0.703	0.957	0.825
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	0.825	0.921	0.850
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	0.790	1.003	0.848
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	0.906	0.933	0.885
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	0.825	0.989	0.870
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	0.986	0.887	0.908
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	0.932	0.888	0.850
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	1.074	1.033	0.954
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	0.028	0.021	0.020
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	0.044	0.040	0.015
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	0.021	0.025	0.075
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	0.019	0.007	0.003
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	0.033	-0.006	0.009
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	-0.001	0.039	0.019
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	0.061	0.011	0.021



Table 9. Continued

Year	ME	MI	MN	MO	MS	MT	NC	ND	NE	NH	NJ	NM	NV	NY	OH	OK	OR
1960	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	0.603	0.460	0.490	0.479
1961	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	0.646	0.472	0.485	0.498
1962	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	0.639	0.493	0.438	0.512
1963	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	0.684	0.521	0.453	0.523
1964	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	0.681	0.520	0.500	0.543
1965	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	0.729	0.537	0.575	0.564
1966	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	0.729	0.569	0.513	0.601
1967	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	0.746	0.560	0.507	0.612
1968	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	0.737	0.610	0.550	0.620
1969	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	0.735	0.592	0.553	0.662
1970	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	0.761	0.619	0.564	0.669
1971	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	0.776	0.675	0.549	0.700
1972	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	0.720	0.646	0.587	0.738
1973	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	0.730	0.578	0.650	0.757
1974	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	0.713	0.628	0.643	0.802
1975	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	0.739	0.706	0.692	0.831
1976	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	0.706	0.705	0.647	0.820
1977	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	0.729	0.708	0.725	0.763
1978	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	0.734	0.682	0.612	0.731
1979	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	0.767	0.749	0.700	0.748
1980	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	0.759	0.701	0.659	0.822
1981	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	0.759	0.676	0.692	0.802
1982	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	0.833	0.745	0.807	0.798
1983	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	0.783	0.624	0.730	0.819
1984	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	0.773	0.827	0.733	0.875
1985	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	0.889	0.911	0.761	0.875
1986	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	0.907	0.864	0.780	0.948
1987	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	0.936	0.868	0.757	0.991
1988	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	0.930	0.761	0.757	1.020
1989	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	0.939	0.852	0.764	0.967
1990	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	0.955	0.933	0.746	1.007
1991	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	0.970	0.807	0.717	1.011
1992	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	0.991	0.994	0.746	0.979
1993	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	0.993	0.900	0.735	1.112
1994	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	0.994	1.022	0.775	1.053
1995	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	0.983	0.895	0.677	0.968
1996	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	1.042	0.884	0.699	0.990
Average annual growth rates:																	
1960-96	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	0.015	0.018	0.010	0.020
1960-66	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	0.032	0.035	0.008	0.038
1966-69	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	0.003	0.014	0.025	0.032
1969-73	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	-0.002	-0.006	0.040	0.034
1973-79	-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	0.008	0.043	0.012	-0.002
1979-89	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	0.020	0.013	0.009	0.026
1989-96	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	0.015	0.005	-0.013	0.003

Table 9. Continued

Year	PA	RI	SC	SD	TN	TX	UT	VA	VT	WA	WI	WV	WY
1960	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
1961	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
1962	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
1963	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
1964	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
1965	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
1966	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
1967	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
1968	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
1969	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
1970	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
1971	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
1972	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
1973	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
1974	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
1975	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
1976	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
1977	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
1978	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
1979	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
1980	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
1981	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
1982	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
1983	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
1984	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
1985	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
1986	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
1987	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
1988	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
1989	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
1990	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
1991	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
1992	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
1993	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
1994	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
1995	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
1996	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
Average annual growth rates:													
1960-96	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
1960-66	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
1966-69	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
1969-73	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
1973-79	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
1979-89	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
1989-96	0.025	-0.019	0.022	0.030	0.014	0.007	0.015	0.003	0.026	0.014	0.009	0.010	0.017

Table 10. States Ranked by 1996 Level of Productivity

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

Table 11. Regressions of Total Factor Productivity Growth on Relative Productivity Level and Growth in Factor Intensities, 1960-1996

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

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

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



**U.S. Department of Agriculture**  
Economic Research Service  
1301 New York Avenue, NW.  
Washington, DC 20005-4788