

MONTHLY REVIEW

September

Federal Reserve Bank of Atlanta - 1973

In this issue:

**Comparative Advantage and the
Changing Composition of
U. S. Output, Exports, and Imports**

The Paradox of Bank "Reserves"

District Business Conditions



Comparative Advantage and the Changing Composition of U. S. Output, Exports, and Imports

by John E. Leimone

In 1971, the United States experienced a merchandise trade deficit for the first time in this century, greatly intensifying concern over the deterioration in the merchandise trade position. This concern stems from widespread belief that the United States needs a large merchandise trade surplus to achieve balance of payments equilibrium.

Economists and policymakers have pointed to the U. S. inflationary surge since 1965 and the overvaluation of the dollar as major culprits in the disappearance of the trade surplus. But recently, some economists have begun to suspect that structural changes in the economy have also contributed to this situation. Some adherents of this view have even begun to question the need for a large, permanent U. S. merchandise trade surplus.¹

In citing structural changes, they note that the share of national output originating in goods-producing sectors—agriculture, mining, and manufacturing—has been shrinking, but the share of service activities has been expanding. From this they hypothesize that the U. S. may be losing its comparative advantage in goods but gaining one in services. Consequently, one would expect the merchandise trade balance, over the long run, to trend from surplus to deficit and the surplus on services trade to expand unless inflationary pressures or controls on trade and capital distort these long-run tendencies.

The idea that services may provide a growing trade surplus may surprise those who think of barber shops and laundries as typical service industries. But the share of such labor-intensive services in national output has been declining.² Instead, services' share of total output has expanded because of the growth of private and governmental services heavily dependent upon educators, scientists, administrators, and other highly skilled and educated persons. It is the growth of these services, which provide major sources of new knowledge and technology for increasing productivity, that some economists have begun to associate with the possibility of an expanding surplus on services trade.

Yet goods whose production is heavily dependent upon technology and highly skilled personnel have also increased their output share even as the share of total goods output has shrunk. Such goods have maintained a

Monthly Review, Vol. LVIII, No. 9. Free subscription and additional copies available upon request to the Research Department, Federal Reserve Bank of Atlanta, Atlanta, Georgia 30303.

substantial trade surplus despite deterioration in the overall merchandise trade position.³ Therefore, broad structural shifts from goods to services within output and trade cloak complex structural changes in many smaller components of goods and services.

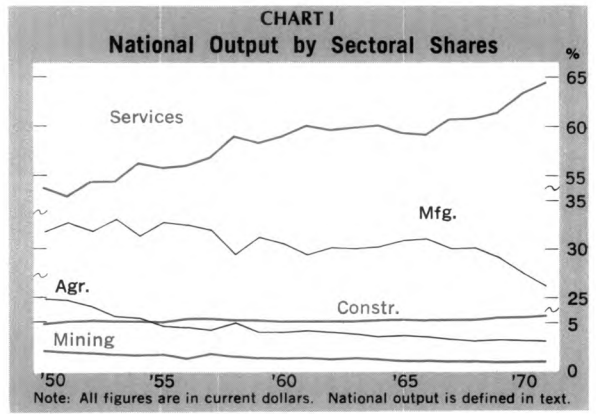
To appraise the hypothesis of changing comparative advantage, this article examines the structural changes in U. S. exports and imports of goods and services and their inter-relationship with structural changes in U. S. output between 1958 and 1971. This time frame permits a comparison of trends during the relatively noninflationary 1958-1964 environment with 1965-1971, marked by strong inflationary pressures and increasing overvaluation of the dollar. The article first analyzes broad structural changes, highlighting the role of services in output and trade. It then proposes a hypothetical framework combining elements of comparative advantage and economic development theories to explain structural changes and linkages between output and trade. Finally, the article analyzes detailed sectoral trends within the context of this framework to uncover some major influences underlying the structural changes in U. S. output and trade.

Structural Trends

Services' share in national output rose from approximately 54 percent in 1950 to 64 percent in 1971.⁴ In contrast, output shares originating in manufacturing, agriculture, and mining have trended downward, and that of construction has remained stable (Chart I).⁵

Services account for approximately one-third of total imports and exports.⁶ Moreover, between 1958 and 1965, the net balance on service trade moved steadily from a deficit equal to .15 percent of national output to a surplus equal to .43 percent. Thus, in 1965, services constituted nearly one-third of the total surplus on goods and services (Chart II). In contrast, the surplus on merchandise trade (agricultural, mineral, and manufactured goods) followed no discernible trend during this period. After 1965, however, the balances of both merchandise and service trade dropped off sharply relative to output.

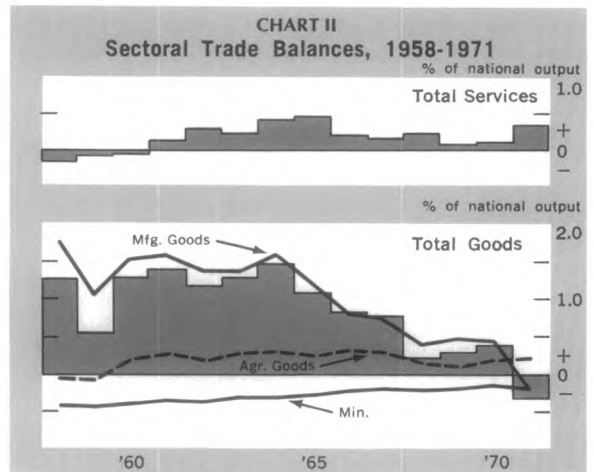
These comparisons suggest that the traditional focus on merchandise trade alone has been too narrow to adequately interpret the forces underlying U. S. trading strength. Furthermore, the upsurge in net service exports through 1965, in contrast to the erratic trend of net merchandise exports, supports the hypothesis that the U. S. trade balance is becoming more service-oriented. The sharp declines in both merchandise and service trade positions after 1965, as imports surged, suggest that inflationary pressures and overvaluation of the dollar severely distorted these long-run trends.



Despite parallel shifts from goods to services in both output and trade, trends in trade have not paralleled trends in output shares. For instance, the balance of agricultural trade moved from deficit to surplus and the minerals trade deficit narrowed, relative to national output, between 1958 and 1971, although the output shares of both sectors declined. These diverse trends suggest that linkages between output and trade are too complex to be derived from comparing trends in broad sectors of output and trade. Hence, forces underlying structural changes in both output and trade must be analyzed before the hypothesis that the U. S. trade position is becoming more service-oriented can be fully evaluated.

Relationships Between Production and Trade

Economists have traditionally linked output and trade through the theory of comparative advantage. According to this theory, each area or nation tends to specialize in the production of those goods and services that it can create with greatest efficiency



(i.e., in which it has a comparative advantage). In the modern version of the theory, differences in comparative advantage stem from differences between regions or nations in their mix of productive inputs. For example, if a nation possesses a higher capital to labor ratio than other countries, it (1) tends to specialize in producing capital-intensive goods and services and (2) exports these products for labor-intensive imports.

In recent years, economists have attempted to expand the traditional categories of capital and labor to include physical capital (e.g., machinery), unskilled labor, human capital (investment in education and training in specialized skills), technology (i.e., application of new knowledge to create new products or to produce old goods and services more efficiently), economies of scale,⁷ and natural resources.

Demand patterns also play an essential role in determining the equilibrium mix of production, exports, and imports among nations. In fact, large differences in demand patterns, more typically present between nations of widely differing per capita income levels, may occasion trade patterns opposite to those predicted by comparative advantage.⁸

Over time, national economies experience continuous and broadly similar shifts in the structure of output that are related to changes in both demand patterns and the mix of productive inputs.⁹ These changes, in turn, bring about changes in a nation's trade pattern.¹⁰ (Differences among nations in timing and pace make specialization and trade possible.)

Thus, nations at early stages of economic development are strongly oriented toward agriculture, manufacture of simple consumption goods, and retail trade, which satisfy basic demands for food, shelter, and clothing. These first two activities depend heavily upon natural resources, and all three use relatively unskilled labor. As countries develop, trade becomes more extensive and more roundabout production methods emerge. Consequently, mining, transportation, and industries processing raw materials for other industries begin to expand their share of output. These sectors typically require heavy investment in physical capital and experience increasing economies of scale.

At more advanced levels of development, consumers—finding it easier to satisfy basic needs in terms of food, shelter, and clothing—demand a wider variety of more sophisticated goods and services. Producing sectors also search for increasing efficiency through more modern equipment and improved organization. Thus, business and professional services and manufacturing industries producing new, highly sophisticated goods contribute an increasing proportion to total output. These sectors use highly skilled and

educated workers and technology and produce these inputs for other sectors of the economy.

In sum, changes in the mix of productive inputs play a significant role in changing the structure of output. Thus, national economies typically move from production using raw materials and unskilled labor toward production characterized by economies of scale and intensive use of physical capital and, finally, toward activities that use human capital and technology intensively and produce them for other sectors. Changes in the composition of demand as per capita incomes rise also interact with changes in the mix of productive inputs to produce changes in the structure of output. However, the importance of demand shifts versus input shifts in bringing about structural output changes are not well understood. Even less appreciated is the role demand shifts play in bringing about changes in the mix of productive inputs themselves (e.g., changes in the saving rate on capital formation, changes in the demand for education on the development of human capital and technology, and changes in the demand for leisure on the supply of labor).

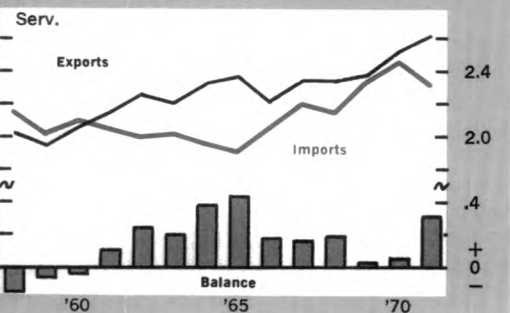
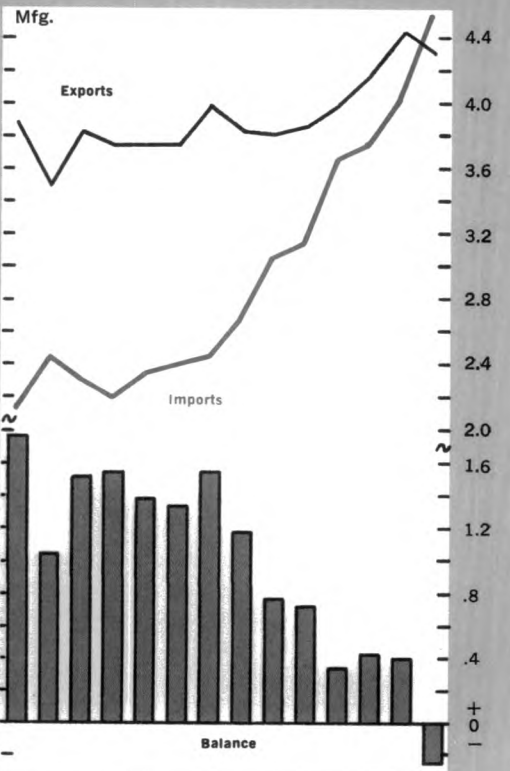
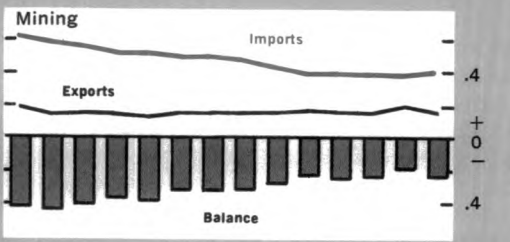
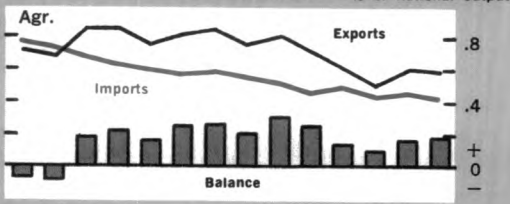
This framework suggests that the highly developed U. S. economy should be increasingly oriented toward the production and export of business and professional services and toward sophisticated consumer goods and capital equipment produced by technology-intensive manufacturing industries. Similarly, goods and services heavily dependent upon natural resources or unskilled labor should decline in *relative importance* within output and exports. But imports may also become more service- and less goods-oriented because of shifts in the composition of demand. Hence, while the theory of comparative advantage implies that sectors increasing their output shares should trend toward a trade surplus and contracting sectors should trend toward deficit, the uneven pace of shifts in the composition of demand may contradict this expectation for some sectors. Change in the mix of productive inputs and composition of demand in U. S. trading partners may also strongly influence trends in U. S. trading patterns.

Input Mix, Demand Composition, and Structural Change

Let us now analyze trends of U. S. output and trade in individual sectors within the context of changes in mix of productive inputs and in composition of demand. (All trends are expressed relative to output in order to abstract from the influence of the total economy's growth. For example, although a sector's imports may be growing in absolute terms, these imports will exhibit a declining trend relative to national output if the rate of growth is less than that of total domestic output.)

CHART III

Sectoral Trends in Exports, Imports, and Trade Balances % of national output



Agriculture

Agriculture's share of total output has declined largely because consumers spend a shrinking proportion of their incomes on food as their incomes rise. The downtrend in agricultural imports also reflects this behavior, although U. S. barriers against imports of certain agricultural products (e.g., beef and tomatoes), may have contributed. But the shrinking importance of noncompetitive commodities (especially coffee and cocoa) within total agricultural imports suggests that demand shifts outweighed trade barriers in determining this trend.

The growing relative scarcity of the traditional agricultural inputs, labor and land, within the mix of U. S. productive inputs has also contributed to agriculture's declining share in total output and has undoubtedly dampened agricultural exports. (Significantly, the United States has agricultural deficits with Latin America, Australia and New Zealand, and Africa, areas with a relatively greater abundance of land and/or labor.) Moreover, land and labor used in agriculture have been attracted to other sectors paying higher returns on their use. U. S. farmers have adopted new production methods that substitute technologically advanced equipment and techniques, improved management, and large scale operations for labor and land.¹¹ These changes have slowed the relative downtrend in agricultural exports and, helped by sales of agricultural products under various governmental programs (e.g., PL 480 sales to less-developed nations), eventually permitted a surplus in agricultural trade to emerge.¹²

Minerals

The depletion of many mineral deposits during economic growth and, in recent years, environmental concerns have raised costs and restrained U. S. mineral production. Yet mineral export growth has kept up with growth in total output because of the very large U. S. share in global deposits of copper, phosphate rock, sulfur, and coal. These four commodities account for the bulk of U. S. mineral exports.

Mining of these commodities, especially coal and sulfur, is technology-intensive. In recent years, coal has also benefited from increasing economies of scale. Nevertheless, mineral exports have consistently fallen short of mineral imports because of the depletion of other U. S. natural resources and the large domestic demand for petroleum and natural gas, which dominate total U. S. mineral production.

Import quotas, particularly on petroleum, have undoubtedly suppressed mineral imports, although recent and prospective changes in U. S. energy policies may reverse this

trend. Yet shifts in the composition of demand may have also dampened mineral imports and production. Thus, sophisticated goods and services, the most rapidly growing output sectors, rely less heavily upon raw materials in creating value added than some of the older goods sectors. Moreover, energy consumption, which is heavily dependent upon mineral fuels, has trended downward relative to GNP since 1947.¹³ The decline in output shares of utilities and transportation services, accounting for about one-half of gross energy consumption,¹⁴ also implies that demand for mineral fuels has been declining relative to total demand.

Manufacturing

Trends in manufacturing can be better understood by grouping together manufactured goods of similar production and demand characteristics—simple consumer goods, intermediate goods, and fabricated metal goods. Simple consumer goods¹⁵ industries process raw materials satisfying basic consumer needs of food, clothing, and shelter. Their output normally depends heavily upon low-skilled labor but only to a limited extent upon economies of scale or new technology.¹⁶ Intermediate industries also process raw materials but sell the bulk of their output to other producers. They typically require heavy investments in plant and equipment (physical capital) and tend to benefit from substantial internal economies of scale. Metal-fabricating industries produce sophisticated goods that satisfy rapidly rising demands for recreation, travel, education, and leisure or provide capital inputs to other industries. The manufacture of these

goods requires large inputs of human capital and technology and relies less on physical capital and economies of scale than intermediate industries.

The steadily declining trend in simple consumer goods' share of national output (Chart IV) and their persistent trade deficit (Chart V) suggest a comparative disadvantage stemming from relatively intensive use of raw materials and unskilled labor. The tendency for consumers to spend less of their budget on simple consumer goods as incomes rise has undoubtedly dampened output growth and accounted for a stable trend in simple consumer goods imports until the outbreak of inflation in 1965. Thereafter, such imports accelerated in response to excess domestic demand, substantially widening the trade deficit for these goods.

The share of intermediate goods in output has also declined, though more irregularly than simple consumer goods. Imports and exports from 1958 to 1964 fluctuated around a flat trend and were roughly in balance. This pattern suggests a slowly emerging comparative disadvantage stemming from a rising scarcity of domestic raw materials partially offset by economies of scale and intensive use of physical capital. In addition, the stable level of imports until 1965 and the slowly declining share of output suggest that demand for intermediate goods has grown moderately less than total demand. The sharp rise in imports and equally sharp decline in output share after 1965 reflect an increasing substitution of imports for domestic production in response to surging excess demand in the economy.

The trade surplus and rising trends for exports and output shares (except during recessions) for metal-fabricated products suggest a strong U. S. comparative advantage in these goods, whose productive processes depend heavily upon human capital and technology. The rising trends for imports and output also imply above-average growth of demand for these products. But accelerating imports after 1965 resulted in a decline in the trade balance of fabricated metal products. Moreover, accelerating imports, by substituting for domestic production, may have contributed to the sharp downturn in this sector's share of domestic output after 1968.

Services

Evaluating the forces underlying trends in service output and trade present numerous difficulties. Problems of measuring output are compounded by substantial differences between service output and service trade classification schemes. Nevertheless, we have attempted a breakout and comparison of service components which, though crude, suggest that service output and trade patterns change in response to common supply and demand influences much like goods-producing sectors.

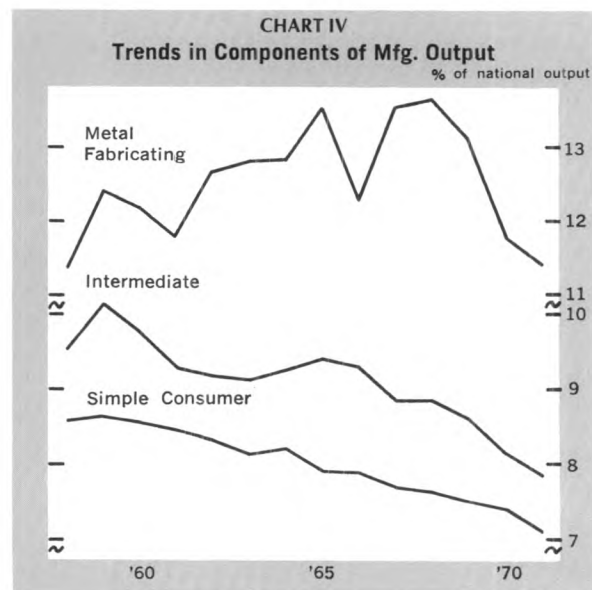
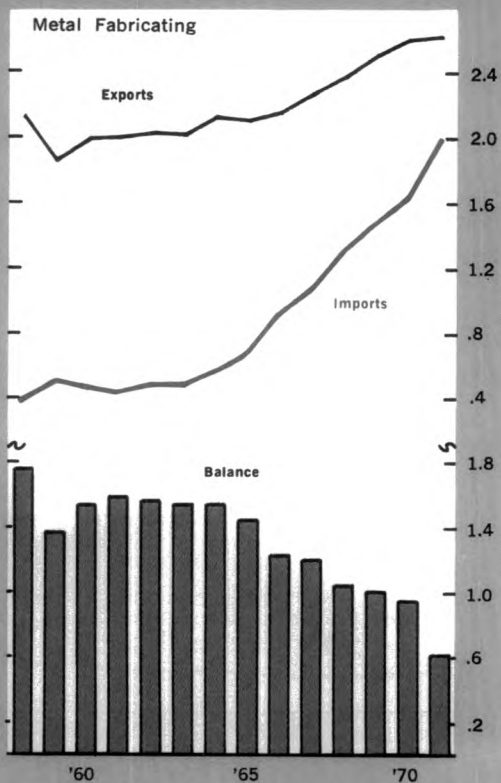
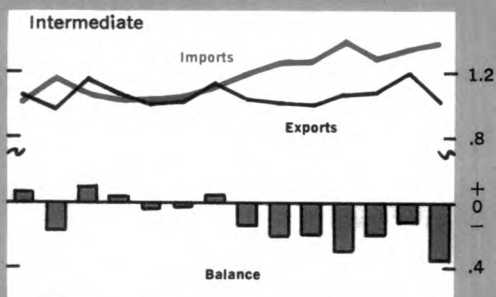
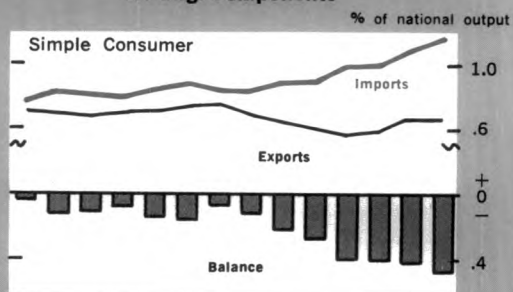


CHART V
Trends in Exports, Imports, and Trade Balances
for Mfg. Components

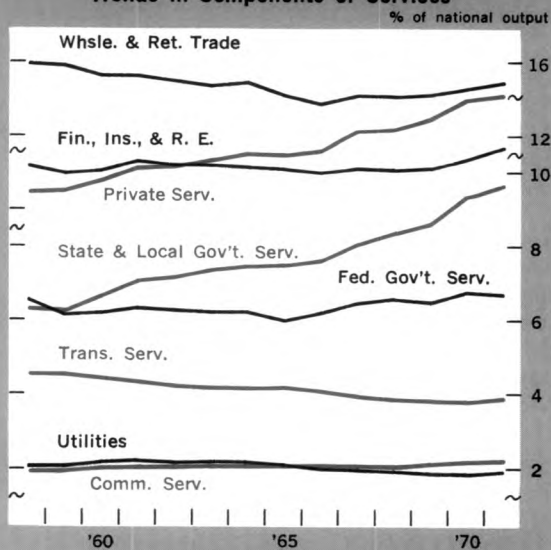


The expansion in services' domestic output share from 1958 onward stems from growth in both private and state and local services, plus an upsurge in Federal services after 1965 (Chart VI). The expansion in private services derives entirely from professional and technical services (i.e., educational, legal, miscellaneous professional, miscellaneous business, medical and health, and nonprofit organizations). Output shares of other private services (i.e., repair, personal, private household, lodging, and entertainment services) remained stable or declined. These latter are very labor-intensive but utilize relatively little human capital.¹⁷

Educational services account for approximately two-thirds of the expansion in state and local output¹⁸ and, currently, for more than 40 percent of state and local expenditures. General government, civilian safety, welfare administration, and health and medical services make up most of the remaining expansion in that sector. In sum, the expansion of both private and state and local governments' services stems from services that use human capital and/or technology intensively in their production processes and provide the main source for adding to the stock of these inputs.

A growing body of opinion, supported by limited evidence, holds that fees and royalties and direct investment earnings in trade accounts include payments for a wide variety of services similar to professional and technical services which swell the services' output share.¹⁹ (Some service exports only incorporate indirectly domestically produced services. For example, educational

CHART VI
Trends in Components of Services



services provide the human capital and technology essential for generating fees and royalties and returns on direct investment, but educational services directly exported are probably quite small.) The large and growing surplus on these services (classified here as technical services) was responsible for the bulk of the overall surplus on services trade from 1960 onward (Chart VII).

Hence, the contribution of technical services to the growth of service output and exports and the large trade surplus for this sector strongly support the hypothesis that the United States has a significant and growing comparative advantage in services utilizing large proportions of human capital and technology in their mix of productive inputs.

Governmental restraints on foreign direct investment of U. S. corporations may have dampened this comparative advantage. Thus, technical services exports flattened out during the mid-Sixties when such controls were first imposed. The renewed uptrend of these exports in the early Seventies is consistent with some relaxation of restraints.

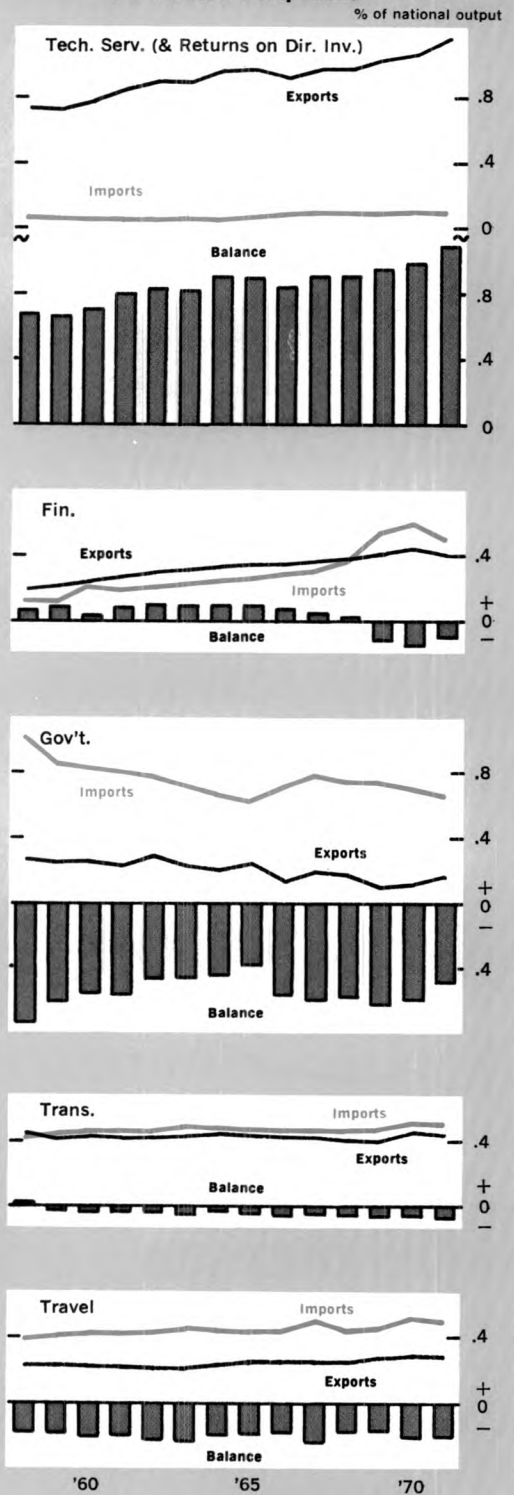
The pattern of Federal services in output and trade overwhelmingly reflects the vagaries in the demand for military services (i.e., these trends are relatively independent of the mix of productive inputs used to produce military services). Military expenditures declined relative to output from 1958 to 1965 as "cold war" hostilities abated but began rising after 1965 in response to the Vietnam conflict. The Federal Government's share of output moved correspondingly. Military expenditures have ranged from 80 to 85 percent of Federal expenditures on goods and services and dominate exports and imports of governmental services as well. The proportion of Federal nonmilitary expenditures to domestic output has remained stable, although their composition has changed.

The trend in military spending abroad (imports) and consequently the deficit for this sector closely paralleled the pattern of the Government's share in total output (i.e., declining from 1958 through 1965, then rising in response to the acceleration of Vietnam hostilities).

In this article, we have assumed that returns on foreign financial assets and payments on financial liabilities to foreigners implicitly include a substantial component of payments for financial services and, therefore, respond to the same demand and supply forces influencing domestic output of such services. (Governmental receipts and payments on foreign assets and liabilities are included in these services.)

Financial services are relatively labor-intensive and use relatively less physical capital (excluding real estate) and human capital than manufacturing. However, the U. S. reputation for possessing one of the largest, most efficient financial systems

CHART VII
Trends in Exports, Imports, and Trade Balances for Service Components



in the world implies substantial external economies of scale.

The net surplus of financial services until the late Sixties suggests a U. S. comparative advantage, perhaps based on external economies of scale. The sudden contraction of this surplus after 1965 and the appearance of a deficit in 1969 largely reflect the inflationary boom after 1965 which swelled U. S. credit demands and induced substantial capital inflows from abroad. As a result of payments to foreigners for use of these funds, financial service imports surged dramatically. Recycling of U. S. domestic funds via the Eurodollar market because of Regulation Q interest ceilings added to payments to foreigners. In essence, Regulation Q frustrated the domestic production of financial intermediation services and further expanded domestic demand for such services from abroad.²⁰

By constraining exports, governmental regulations may have also contributed to the deterioration of the balance of financial services. Thus, coinciding with the imposition of the Interest Equalization Tax on U. S. purchases of foreign securities and the Voluntary Foreign Credit Restraint Program, which constrained the increase of U. S. commercial bank financial claims on foreigners in the mid-Sixties, the growth rate of returns on foreign portfolio investments (exports) slowed.

Transportation services claim a small and shrinking share of domestic output. Exports have maintained a flat trend relative to output, but a slowly rising import level has opened up a small deficit suggesting a slowly emerging U. S. comparative disadvantage in transportation services. The sector is characterized by heavy investments in physical capital, economies of scale, and an indirect dependence on mineral resources via fuel consumption. The contraction in share of total output and the limited rise of imports also imply that domestic demand for transportation services has grown relatively slowly.

The rising level of travel imports reflects growing American expenditures on travel abroad as incomes rise. The nearly equal rise in travel exports indicates that foreign demand for travel in the United States has also grown more rapidly than domestic output. Nevertheless, the deficit in this component in relation to the overall level of trade implies a strong U. S. comparative disadvantage rooted in the labor intensity of travel-related services. The contraction of the output share of travel-related services—hotels, retail trade, and personal services—tends to bear out this inference.²¹

Conclusions and Implications

Taking into account distortions introduced by cumulative inflation and overvaluation of the dollar

from the mid-Sixties onward, the analysis of patterns of change in the structure of U. S. output and trade in this study supports the hypothesis of a long-run shift in U. S. comparative advantage from goods to services. Nevertheless, this conclusion by itself is misleading since it overlooks the complex set of changes in patterns of output and trade that have resulted from a changing mix of productive factors and, to a lesser extent, shifts in the composition of total demand.

Thus, services that utilize and reproduce human capital and technology account for the growing surplus in service trade and the expansion of services within domestic output. Goods relying heavily upon the use of human capital and technology, mainly metal-using manufactured goods, have also increased their share of domestic output and maintained a strong trade surplus.

In contrast, goods and services relying heavily upon inputs of raw materials or labor have tended to dwindle in relative importance within domestic output and to register trade deficits. Minerals, simple manufactured consumption goods, wholesale and retail trade, and some private services fall into this group. Sectors characterized by heavy investments in physical capital and economies of scale, especially intermediate manufactured goods and transportation services, have declined somewhat more slowly in relative importance within domestic output and have tended to develop small trade deficits.²²

On the other hand, demand for military services rather than comparative advantage has determined trends in the share of Federal Government services in total output and the trade deficit in government services. Moreover, after 1965, the acceleration in U. S. demand for military services simultaneously exaggerated the expansion of output and imports of services, thereby distorting the longer-run positive relationship between the expansion of service output and of the trade surplus in services.

Trends in agricultural output and trade meanwhile have reflected shifts in both demand and comparative advantage. Changes in demand away from raw agricultural products have resulted in the declining relative importance of agricultural output and imports. But a substitution of physical capital, technology, and economies of scale for traditional inputs of land and labor has slowed the relative decline of agricultural exports and resulted in a persistent surplus position in the Sixties for the first time since the early Twentieth Century.

However, serious distortions in these long-run trends after 1965 resulted in a deterioration in the overall trade balance, affecting primarily the balances for manufacturing and services. First, the acceleration in Vietnam-related military expenditures swelled service imports dramatically. Second, inflationary credit demands generated in

the U. S. by the sudden expansion of military expenditures and retention of Regulation Q further expanded service imports through an ensuing rise of interest payments to foreigners. Finally, U. S. exchange controls dampened the export growth of financial, technical, and professional service exports. The diminishing surplus on manufacturing trade, reflecting a sharp deterioration in the trade balance for all three components, apparently stemmed from the cumulative impact of inflationary pressures after 1965 and the overvaluation of the dollar.

Realignments of exchange rates in the past three years and the prospective termination of U. S. restrictions on capital outflows should help reduce these distortions and permit long-run trends to

reassert themselves. However, since economic adjustments from these realignments are far from complete, several years must pass before the explanatory hypothesis put forth in this article can be fully tested.

The patterns of output and trade examined here imply that international adjustment involves more than monetary and fiscal policies to control aggregate demand. Economic policies must also accommodate structural adjustments in trade that stem from ongoing shifts in the patterns of demand for *goods and services* and in the mix of productive factors within domestic economies. Thus, international adjustment cannot be achieved independently of measures that facilitate internal resource adjustment to these shifts. ■

FOOTNOTES

¹See Lawrence B. Krause, "Trade Policy for the Seventies," *Columbia Journal of World Business*, January-February 1971; Robert A. Bennett, "Roosa Sees U. S. Economy in Major Shift," *American Banker*, November 18, 1971; and Robert E. Lipsey, "The Current International Competitive Position of the United States," *The Conference Board Record*, April, 1972.

²Throughout this article, national output is defined as total national income less the rest of the world component as shown in relevant issues of the U. S. Department of Commerce, *Survey of Current Business*. National income is the value of final goods and services, less capital depreciation, indirect business taxes, and certain other "nonincome" charges. To obtain the contribution to national income from a specific economic sector, we must add what is left after deducting from the total value of sales of each firm in that sector the amount of the above charges, plus purchases of goods and services from other firms. In contrast, exports and imports are classified according to the total value of output actually sold in international commerce by a specific industry. For example, in addition to the value added by the textile firms themselves, the value of textiles exported includes the value of fibers, transportation, etc., purchased by the textile industry in order to produce the exported product.

³Peter G. Peterson, *The United States in the Changing World Economy*, Council on International Economic Policy, December 27, 1971, Washington, D. C.

⁴In contrast, services claimed only 42 percent of GNP in final demand terms in 1971. These figures differ because a large portion of net output of service industries becomes input to goods-producing industries and is included in the value of goods reaching final demand.

⁵It should be pointed out that national income and its components deflated by the GNP deflator show that the share of national output originating in manufacturing has increased during the Sixties. Nevertheless, the presumption of underestimation of real product in the services sector, stemming from very difficult methodological and data problems involved in measuring many types of services, raises serious doubts about the validity of using deflated rather than current dollar measures as a better indicator of the trend in manufacturing's share of total output. (See Martin L. Marimont, "Measuring Real Output for Industries Providing Services: OBE Concepts and Methods," in *Production and Productivity in the Service Industries*, Victor R. Fuchs, ed., National Bureau of Economic Research [New York and London, 1969].) Moreover, the increasing proportion of white-collar workers in total manufacturing employment (many of whom perform tasks similar to those performed by workers in the business and professional service industries) suggests that a growing proportion of manufacturing output, whether measured on a deflated or current dollar basis, incorporates indirectly an expanding volume of services.

⁶Commodity exports and imports are classified according to the U. S. Standard Industrial Classification basis as are the detailed industry sectors for national income. Commodity trade figures on this basis are only available from 1958 onward, although

commodity trade on the Standard International Trade Classification goes back for many years. For the years 1958 through 1970, data were taken from the U. S. Department of Commerce, *U. S. Commodity Exports and Imports as Related to Output*, for selected years. Data for 1971 were taken from the U. S. Bureau of the Census *U. S. Exports of Domestic Merchandise, SIC-Based Products and Area*, Report FT 610, 1971 Annual, and *U. S. Imports for Consumption and General Imports, SIC-Based Products and Area*, Report FT 210, 1971 Annual. Service exports and imports are derived from U. S. Department of Commerce balance of payments data in relevant issues of the *Survey of Current Business* and do not conform to the Standard Industrial Classification.

⁷Economies of scale may be of several types. Internal economies result when a plant or firm is able to reduce unit costs of production by expanding output. External economies result when costs are reduced because of an expansion of the industry, the reduction in transport costs associated with the spatial concentration of producers and markets, or the growth of specialized services accompanying local expansion of output. External economies of scale tend to be closely associated with urbanization. Most empirical studies that take into account scalar economies only attempt measurement of internal economies of scale.

⁸See H. Robert Heller, *International Trade: Theory and Empirical Evidence* (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1968), chapters 4 and 5.

⁹See, for example, the works of Simon Kuznets, especially "Quantitative Aspects of the Economic Growth of Nations," Part II, Part III, and Part VII in selected issues of *Economic Development and Cultural Change* and Hollis B. Chenery, "Patterns of Industrial Growth," *American Economic Review*, September, 1960, pp. 624-654.

¹⁰Evidence relating changes in goods output to changes in the composition of merchandise trade may be found in Simon Kuznets, "Quantitative Aspects of the Economic Growth of Nations: Part X. Level and Structure of Foreign Trade: Long-Term Trends," *Economic Development and Cultural Change*, Vol. 15, No. 2, Part II, January, 1967, and Alfred Maizels, *Industrial Growth and World Trade* (Cambridge, England: The University Press, 1963).

¹¹For a description of this complex process in selected regions of the southern United States, see William H. Nicholls, "Industrialization, Factor Markets, and Agricultural Development," *Journal of Political Economy*, Vol. 69 (August, 1961), pp. 319-340, and references cited therein.

¹²The balance on crude foodstuffs began registering persistent deficits in 1909. See John M. Letiche, *Balance of Payments and Economic Growth* (New York, Augustine M. Kelly, 1967). The concept of agricultural trade in this article, while predominantly consisting of crude foodstuffs, also includes nonfood, raw agricultural commodities. By way of comparison, the Department of Commerce end use classification of agricultural trade, which includes some processed food products, shows a mostly negative

tendency from 1923 until 1960, followed by a persistent surplus thereafter. See William H. Branson and Helen B. Junz, "Trends in U. S. Trade and Comparative Advantage," *Brookings Paper on Economic Activity*, No. 2, 1971.

¹³This downtrend is measured by the ratio of gross energy consumption (in thousands of B.T.U.'s) per dollar of 1958 Gross National Product. Actually, this downtrend was interrupted by a sharp increase in energy consumption between 1967 and 1970. However, the ratio dropped again in 1971 and is projected to continue dropping until the year 2000. See Walter G. Dupree, Jr., and James A. West, *United States Energy Through the Year 2000*, U. S. Department of the Interior, December, 1972, pp. 6 and 13.

¹⁴*Ibid.*, p. 7.

¹⁵**Simple consumer goods** consist of the two-digit SIC categories of food, tobacco, textiles, apparel, furniture, printing, rubber, and miscellaneous manufacturing. **Intermediate goods** consist of lumber and wood, paper, chemicals, petroleum refining, stone, clay and glass, and rubber and plastics. **Fabricated metal goods** consist of metal fabricating, nonelectrical machinery, electrical machinery and equipment, transportation equipment and ordnance, and instrument industries.

¹⁶Evidence on the consumer orientation and relative factor intensities with regard to capital, human capital, technology, and internal economies of scale of manufacturing industries for two- and three-digit SIC-based categories of manufacturing may be found in G. C. Hufbauer, "The Impact of National Characteristics & Technology on the Commodity Composition of Trade in Manufactured Goods" and in *The Technology Factor in International Trade*, Raymond Vernon, ed., National Bureau of Economic Research, (New York, 1970), pp. 212-223.

¹⁷This assertion is based upon the proportion of professional, technical, and kindred workers to total employed workers for these industries. These data may be obtained from the U. S. Bureau of the Census, *Occupation by Industry 1970*, Table 1. In this article, all references to human capital intensity for service industries are based on these data.

¹⁸National income statistics do not provide a breakout of the different component services that make up either Federal or

state and local governments' shares in national income. However, we have made inferences about the composition of these services from the functional distribution of governmental expenditures on goods and services.

¹⁹The nature of fees and royalties strongly suggests an intensive use of human capital. Thus, they include payments for sale of intangible property rights (patents, techniques, processes, formulae, designs, trademarks, copyrights, franchises, manufacturing rights, etc.) and professional, administrative, and management services, and rental of tangible property. (This description is from the U. S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, June, 1971, pp. 51-52.) Earnings on direct investments may well include disguised payments for many of these same or related services. Thus, a recent U. S. Tariff Commission study points out that numerous factors may distort a rational allocation of foreign investment related revenues between technical services and earnings on investments. The study also provides evidence of a positive relationship between the rate of growth of foreign direct investment and the technological intensity of U. S. multinational corporations. See U. S. Senate, Committee on Finance, *Implications of Multinational Firms for World Trade and Investment and for U. S. Trade and Labor*, (Washington, 1973), Chapter VI, "Technology, R & D, and the Multinational Firms," pp. 550-604.

²⁰Private payments on financial instruments (imports) declined dramatically in 1971 but were partially offset by skyrocketing payments on U. S. Government liabilities to foreigners. This shift basically reflects the movement of dollars from private to central bank hands as speculative pressures against the dollar mounted in foreign exchange markets.

²¹Other private services show a small but rising trade surplus. However, the heterogeneity of services in this component (which includes insurance, communications, and consulting services as well as payments related to diplomatic and other miscellaneous services) precludes any meaningful inferences about underlying demand and supply forces.

²²Evidence of a negative relationship between net commodity exports and the ratio of physical capital to labor may be found in Branson and Junz, *op. cit.*, p. 328.

Bank Announcements

August 1, 1973

FIRST GEORGIA BANK

Atlanta, Georgia

Admitted to membership in the Federal Reserve System as a merger of the First Georgia Bank, Atlanta, Georgia, and the Bank of Fulton County, East Point, Georgia.

August 1, 1973

NORTHWOOD BANK OF WEST PALM BEACH

West Palm Beach, Florida

Opened for business as a par-remitting nonmember. Officers: C. Robert Stock, president; William A. Lord, vice president; Betty Jean Kidder, cashier. Capital, \$960,000; surplus and other funds, \$484,000.

August 15, 1973

BANK OF ST. JOHN AND BRANCHES

Reserve, Louisiana

Began to remit at par.

August 21, 1973

CENTRAL BANK OF SOUTH DAYTONA

South Daytona, Florida

Opened for business as a par-remitting nonmember. Officers: Fred Sinclair, president; Walter D. Compton, vice president and cashier. Capital, \$600,000; surplus and other funds, \$400,000.

August 22, 1973

THE GULF NATIONAL BANK

Tallahassee, Florida

Opened for business as a member. Officers: Edward K. Walker, chairman; Jerry L. McDaniel, Jr., president; Michael M. Fields, vice president; Lucy J. Tacot, cashier.

August 22, 1973

BROWARD NATIONAL BANK OF PLANTATION

Plantation, Florida

Opened for business as a member. Officers: Robert B. Lochrie, chairman; Terrence E. Reilly, president; Carl W. Cross, cashier. Capital, \$300,000; surplus and other funds, \$300,000.

The Paradox of Bank "Reserves"

by William N. Cox, III

In accounting, "reserves" are funds set aside for future use, as a corporation typically sets aside funds for paying taxes or replacing worn-out equipment.

In military tactics, "reserves" are troops deliberately held out of the front line to meet a break-through or exploit an opening.

In national defense, "reserves" are trained civilians who can be called to military service in an emergency.

In each of these contexts, the meaning of "reserves" is consistent and clear: They constitute a backstop, a stock of additional resources held for contingencies, a precaution against running out. We might expect, therefore, that "reserves" would serve a similar function in the context of modern banking. Like all businesses faced with uncertainty, banks do hold additional resources for contingencies, especially the contingency of widespread withdrawals of customer deposits during a brief period. Whether the deposits are withdrawn by a transfer of currency through the teller's window or a transfer of funds to another bank, the bank still has to make payment. In the extreme and unusual case when payment cannot be made, the bank fails. To provide for the contingency of large unexpected withdrawals, every bank holds additional resources in readiness.

But there is a paradox here. The assets we have come to call "bank reserves" do *not* serve as additional resources held to pay off withdrawals and to protect against bank failure, at least for the most part. On the other side of the paradox, the additional resources banks *do* hold to meet withdrawals—their reserves in a functional sense—are not usually called "bank reserves." So "bank reserves" do not serve as a true reserve, but other resources do. This paradox raises many questions, some of which are answered below.

If "bank reserves" aren't really reserves in the sense of being extra resources held for use in contingencies, then what are they?

A more descriptive term might be "immobilized assets." By law and regulation, each member bank must deposit enough funds with its regional Federal Reserve Bank to equal specified proportions of the deposits customers hold with the bank itself.¹ The funds deposited at the Fed are thus assets which the bank cannot lend to customers or invest in securities. They are immobilized in the sense that banks cannot invest them elsewhere at a profit.

Does this mean that "reserve" balances deposited with the Fed are useless to the bank except for satisfying the regulatory requirements?

Not necessarily. For instance, banks often settle debts among themselves—debts that arise from interbank clearing of checks, transfers of funds through the Fed's wire system, etc.—by accepting credits to or allowing charges against their "reserve" accounts. This and other considerations imply that banks would maintain working balances at the Fed even in the absence of "reserve" requirements, so that some of the required "reserve" balances serve a dual purpose as far as the depositing bank is concerned.

¹Each bank's currency holdings, or vault cash, also count toward meeting "reserve" requirements. Nonmember banks must meet somewhat similar requirements imposed by state banking authorities, but not in the form of deposits with the Fed.

The “reserve balances” are available, then, in the sense that one bank can pay another by asking the Fed to transfer funds from its “reserve” account to another. Right?

Right. In this sense, the Fed is a bank for banks. For that matter, a member could ask the Fed to clear out the account and deliver the proceeds in currency, if it wanted to.

If the funds a bank deposits with the Fed are available in this way, then why are the funds immobilized? Why cannot a bank use the “reserve” funds as true reserves for contingencies?

The funds are technically available, in the sense that a bank can draw on its “reserve” account. But the funds used to meet Fed reserve requirements are effectively immobilized because if the bank draws them out,² it thereby fails to meet the reserve requirements established under the Federal Reserve Act. This is illegal.³

But the level of each bank’s lawful required reserves varies with the level of the bank’s deposits, does it not?

Yes, that’s correct.

So when a bank’s deposits fall, then the bank’s reserve requirement would fall too, leaving some of the reserve deposits no longer immobilized. True?

True in part. Under our system’s fractional reserve requirements, a member bank would typically be required to immobilize 10 cents at the Fed for each dollar of demand deposits (checking account balances). So if a dollar in deposits is withdrawn by a customer, 10 cents is indeed “freed up” by the reduced reserve requirements. But to pay off a customer, the bank has to come up with more than just 10 cents on the dollar; it has to come up with the whole dollar. “Reserve” balances at the Fed, in this case, are only 10-percent reserves in the sense of being mobilizable to meet such deposit withdrawals. The bank must look somewhere else for the other 90 cents.

Would it be correct to say, then, that bank “reserves” held at the Fed are not there to protect the banking customer, then?

Except for the 10 cents on the dollar, that is correct.⁴

²This is true except in the peculiar case where the bank converts reserve balances into vault cash.

³Very occasionally, a bank fails to meet its reserve requirements at the Fed for a week or two. It then comes under administrative scrutiny and pays a penalty interest rate on the amount of its deficiency.

⁴And except in the eschatological sense. If a bank fails, its assets including “reserves” are distributed among its depositors and other creditors. So “reserves” do not protect much against failure, but they do have some value if failure occurs, similar to a bank’s capital and surplus.

Then what does serve as a true reserve for banks if not the “bank reserves” we have been discussing?

This is the other side of the paradox. What resources does a bank have to meet customer demands for withdrawals? Each bank has three lines of defense. First, the bank can draw on its liquid assets, including reserve-account balances at the Fed held in excess of requirements, including the bank’s own deposits at other banks, and including readily marketable short-term investment securities and loans. Second, each bank has lines of credit against which it can borrow: from other banks in the form of interbank loans, from the public in the form of interest-bearing certificates of deposit, and, in the case of member banks, from the Fed through the so-called discount window. The third line of defense, the most fundamental, is the combination of management prudence, regulatory examinations of that prudence, and, ultimately, deposit insurance from the FDIC.

Now let’s go back a bit. If bank “reserves” held on deposit at the Fed are not truly reserves in the sense of protecting the bank or the bank customer, what do they do?

They serve another function, that of providing the Federal Reserve with the means of controlling the overall level of bank deposits and credit.⁵

But if bank “reserves” aren’t really reserves in the usual sense of that word, then why are they called reserves?

Basically because today’s “reserve” balances at the Fed are the direct institutional descendants of earlier forms of reserves—forms which did indeed function as reserves in the usual sense of the word.

Before the Civil War, for example, bank notes circulated as money much as bank deposits do today. The more reputable banks assured the circulation of their notes as money by standing ready to convert them into gold coin or other well-esteemed notes, much as a bank today stands ready to convert its deposits into currency or credits at another bank. To assure this convertibility, the more reputable antebellum banks, therefore, held in reserve stocks of gold coin (called specie) or notes issued by other banks. The relationship between the level of such reserve stocks and the amount of the bank’s notes outstanding was determined not by law, but by prudence. Safer banks had higher ratios of reserves to bank notes, which tended to make their notes more acceptable to the public.⁶ ■

⁵See “Controlling Money with Bank Reserves,” this **Review**, April 1973. By controlling the amount of reserves available to member banks as a group and by controlling the reserve-to-deposit ratios each member bank must meet, the Fed can limit the total deposits in the banking system. Competition among the banks impels them to issue deposits up to this limit.

⁶This sort of arrangement was not peculiar to pre-Civil War American banking; it has been traced back to European financial institutions in the Fifteenth Century.

Sixth District Statistics

Seasonally Adjusted

(All data are indexes, unless indicated otherwise.)

	Latest Month	One Month Ago	Two Months Ago	One Year Ago		Latest Month	One Month Ago	Two Months Ago	One Year Ago		
SIXTH DISTRICT											
INCOME AND SPENDING					UNEMPLOYMENT RATE						
Manufacturing Payrolls	July	162	160	158	146	(Percent of Work Force)	July	4.3	4.3	4.3	4.4
Farm Cash Receipts	June	180	164	166	135	Avg. Weekly Hrs. in Mfg. (Hrs.)	July	40.6	41.4	40.5	40.8
Crops	June	189	239	153	151	FINANCE AND BANKING					
Livestock	June	191	184	183	138	Member Bank Loans	July	219	214	213	178
Installment Credit at Banks* ¹ (Mil. \$)						Member Bank Deposits	July	190	186	185	165
New Loans	July	673	661r	679	590	Bank Debits**	July	214	205	194	168
Repayments	July	615	570r	564	494	FLORIDA					
EMPLOYMENT AND PRODUCTION					INCOME						
Nonfarm Employment	July	125	125	125	121	Manufacturing Payrolls	July	164	161	156	145
Manufacturing	July	114	114	114	111	Farm Cash Receipts	June	197	214	149	159
Nonurable Goods	July	112	112	112	111	EMPLOYMENT					
Food	July	101	102	103	102	Nonfarm Employment	July	144	142	141	134
Textiles	July	110	111	110	108	Manufacturing	July	121	120	118	115
Apparel	July	111	111	110	110	Nonmanufacturing	July	148	146	145	137
Paper	July	111	111	111	110	Construction	July	179	178	177	156
Printing and Publishing	July	124	123	123	119	Farm Employment	July	114	103	105	104
Chemicals	July	107	107	107	105	Unemployment Rate					
Durable Goods	July	117	117	116	112	(Percent of Work Force)	July	2.7	2.8	2.8	3.7
Lbr., Wood Prods., Furn. & Fix.	July	111	110	110	108	Avg. Weekly Hrs. in Mfg. (Hrs.)	July	40.9	40.9	40.8	41.7
Stone, Clay, and Glass	July	120	120	120	115	FINANCE AND BANKING					
Primary Metals	July	111	111	110	109	Member Bank Loans	July	268	263	259	201
Fabricated Metals	July	127	127	126	119	Member Bank Deposits	July	230	224	224	191
Machinery	July	142	141	139	130	Bank Debits**	July	284	271r	267	222
Transportation Equipment	July	108	108	106	107	GEORGIA					
Nonmanufacturing	July	129	129	129	124	INCOME					
Construction	July	132	131	132	125	Manufacturing Payrolls	July	160	154	156	145
Transportation	July	122	122	123	118	Farm Cash Receipts	June	174	178	185	117
Trade	July	132	131	131	126	EMPLOYMENT					
Fin., ins., and real est.	July	136	136	135	130	Nonfarm Employment	July	121	122	122	119
Services	July	134	134	134	130	Manufacturing	July	109	109	109	107
Federal Government	July	100	99	102	100	Nonmanufacturing	July	127	128	128	124
State and Local Government	July	134	132	131	126	Construction	July	126	126	126	126
Farm Employment	July	86	84	86	86	Farm Employment	July	82	81	86	78
Unemployment Rate						Unemployment Rate					
(Percent of Work Force)	July	3.7	3.8	3.8	4.0	(Percent of Work Force)	July	3.8	3.7	3.8	3.9
Insured Unemployment						Avg. Weekly Hrs. in Mfg. (Hrs.)	July	40.6	39.7	40.4	40.7
(Percent of Gov. Emp.)	July	1.8	1.8	1.7	2.4	FINANCE AND BANKING					
Avg. Weekly Hrs. in Mfg. (Hrs.)	July	40.8	40.7	40.6	41.1	Member Bank Loans	July	239	232	231	181
Construction Contracts*	July	242	275	203	196	Member Bank Deposits	July	185	182	183	152
Residential	July	281	308	276	257	Bank Debits**	July	261	264	261	201
All Other	July	203	242	131	136	LOUISIANA					
Electric Power Production**	Dec.	188	187	186	168	INCOME					
Cotton Consumption**	June	84	80	79	86	Manufacturing Payrolls	July	149	147	143	138
Petroleum Production**	Aug.	114	115	114	126	Farm Cash Receipts	June	159	234	143	122
Manufacturing Production	Apr.	292	291	289	269	EMPLOYMENT					
Nonurable Goods	Apr.	244	242	239	234	Nonfarm Employment	July	113	113	114	111
Food	Apr.	188	188	186	185	Manufacturing	July	104	104	105	104
Textiles	Apr.	288	284	282	266	Nonmanufacturing	July	115	114	115	113
Apparel	Apr.	297	294	287	290	Construction	July	93	92	97	92
Paper	Apr.	223	223	222	215	Farm Employment	July	75	76	76	83
Printing and Publishing	Apr.	164	164	162	164	Unemployment Rate					
Chemicals	Apr.	306	307	306	299	(Percent of Work Force)	July	5.6	6.2	6.0	5.9
Durable Goods	Apr.	349	349	348	311	Avg. Weekly Hrs. in Mfg. (Hrs.)	July	42.0	41.6	41.4	42.3
Lumber and Wood	Apr.	200	200	200	193	FINANCE AND BANKING					
Furniture and Fixtures	Apr.	191	191	191	183	Member Bank Loans*	July	214	214	211	161
Stone, Clay, and Glass	Apr.	207	207	207	185	Member Bank Deposits*	July	172	173	169	156
Primary Metals	Apr.	232	234	231	200	Bank Debits* ¹ **	July	192	187	175	153
Fabricated Metals	Apr.	289	285	283	267	MISSISSIPPI					
Nonelectrical Machinery	Apr.	445	436	436	398	INCOME					
Electrical Machinery	Apr.	770	772	778	650	Manufacturing Payrolls	July	181	182	178	165
Transportation Equipment	Apr.	454	459	453	413	Farm Cash Receipts	June	202	118	205	156
FINANCE AND BANKING					EMPLOYMENT						
Loans*						Nonfarm Employment	July	121	121	122	119
All Member Banks	July	238	234	231	184	Manufacturing	July	126	126	126	123
Large Banks	July	223	221	216	170	Nonmanufacturing	July	119	119	120	116
Deposits*						Construction	July	110	109	113	112
All Member Banks	July	198	195	194	169	Farm Employment	July	83	81	82	91
Large Banks	July	175	173	171	150	ALABAMA					
Bank Debits* ¹ **	July	246	236	234	190	INCOME					
ALABAMA					INCOME						
INCOME					EMPLOYMENT						
Manufacturing Payrolls	July	158	160	155	145	Manufacturing Payrolls	July	181	182	178	165
Farm Cash Receipts	June	205	224	209	145	Farm Cash Receipts	June	202	118	205	156
EMPLOYMENT					EMPLOYMENT						
Nonfarm Employment	July	115	115	115	112	Nonfarm Employment	July	121	121	122	119
Manufacturing	July	113	112	112	110	Manufacturing	July	126	126	126	123
Nonmanufacturing	July	116	116	116	113	Nonmanufacturing	July	119	119	120	116
Construction	July	118	115	117	112	Construction	July	110	109	113	112
Farm Employment	July	72	70	80	75	Farm Employment	July	83	81	82	91

	Latest Month	One Month Ago	Two Months Ago	One Year Ago		Latest Month	One Month Ago	Two Months Ago	One Year Ago
UNEMPLOYMENT RATE					EMPLOYMENT				
(Percent of Work Force)	July 4.4	4.2	4.2	4.1	Nonfarm Employment	July 123	124	124	119
Avg. Weekly Hrs. in Mfg. (Hrs.)	July 40.4	40.7	40.3	41.1	Manufacturing	July 115	116	116	112
FINANCE AND BANKING					FINANCE AND BANKING				
Member Bank Loans*	July 225	228	220	180	Nonmanufacturing	July 128	128	128	123
Member Bank Deposits*	July 193	195	189	167	Construction	July 121	121	122	120
Bank Debits**	July 227	219	217	181	Farm Employment	July 93	93	84	88
TENNESSEE					UNEMPLOYMENT RATE				
INCOME					(Percent of Work Force)				
Manufacturing Payrolls	July 165	163	164	147	Avg. Weekly Hrs. in Mfg. (Hrs.)	July 3.2	3.0	2.9	3.7
Farm Cash Receipts	June 202	252	159	156		July 40.8	40.5	40.6	40.8
					FINANCE AND BANKING				
					Member Bank Loans*				
					Member Bank Deposits*				
					Bank Debits**				

*For Sixth District area only; other totals for entire six states **Daily average basis †Preliminary data r-Revised N.A. Not available

Note: Indexes for bank debits, construction contracts, cotton consumption, employment, farm cash receipts, loans, petroleum production, and payrolls: 1967 = 100. All other indexes: 1957-59 = 100.

Sources: Manufacturing production estimated by this Bank; nonfarm, mfg. and nonmfg. emp., mfg. payrolls and hours, and unemp., U.S. Dept. of Labor and cooperating state agencies; cotton consumption, U.S. Bureau of Census; construction contracts, F. W. Dodge Div., McGraw-Hill Information Systems Co.; petrol. prod., U.S. Bureau of Mines; industrial use of elec. power, Fed. Power Comm.; farm cash receipts and farm emp., U.S.D.A. Other indexes based on data collected by this Bank. All indexes calculated by this Bank.

†Data benchmarked to June 1971 Report of Condition

Debits to Demand Deposit Accounts

Insured Commercial Banks in the Sixth District (In Thousands of Dollars)

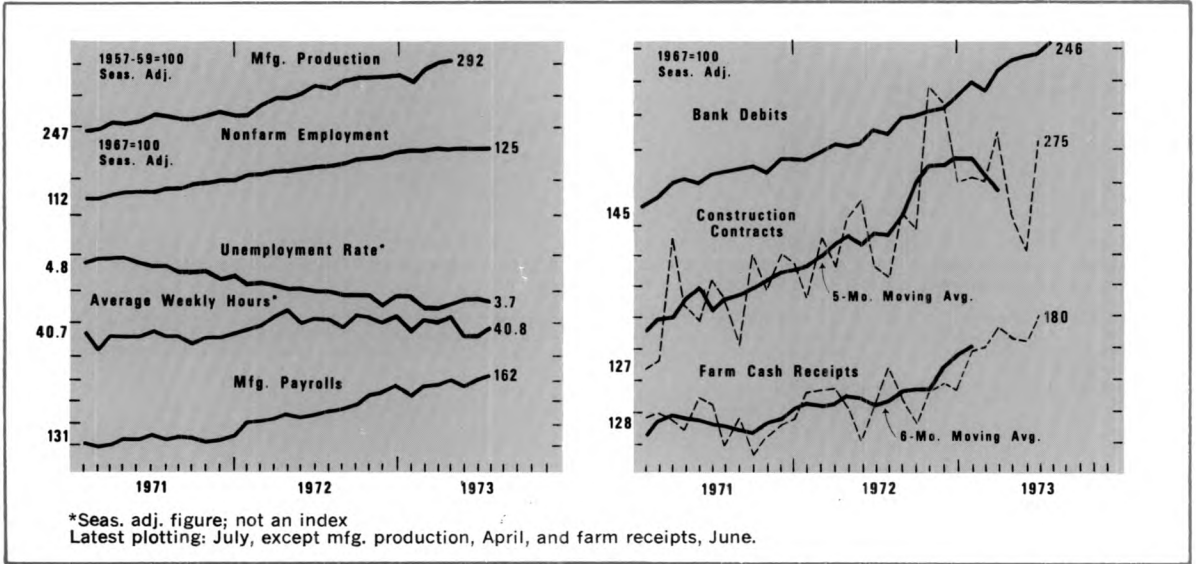
	Percent Change						Percent Change					
	July 1973		July 1972		Year to date 7 mos. from 1973		June 1973		June 1972		Year to date 7 mos. from 1973	
	July 1973	June 1973	July 1972	June 1972	July 1973	July 1972	July 1973	June 1973	July 1972	June 1972	July 1973	July 1972
STANDARD METROPOLITAN STATISTICAL AREAS**												
Birmingham	3,662,288	3,323,085	2,769,381	+10	+32	+21						
Gadsden	95,059	100,427	81,190	-5	+17	+18						
Huntsville	345,964	330,191	257,365	+5	+34	+19						
Mobile	1,030,921	1,035,244	866,423	+0	+19	+14						
Montgomery	658,327	577,406	503,880	+14	+31	+22						
Tuscaloosa	219,626	210,117	161,626	+5	+36	+27						
Bartow-Lakeland-Winter Haven												
Daytona Beach	469,924	347,569	329,470	+36	+43	+25						
Fl. Lauderdale-Hollywood												
Ft. Myers	1,837,522	1,776,008	1,466,863	+3	+25	+17						
Gainesville	288,132	308,846	213,535	-7	+35	+35						
Jacksonville	241,684	241,649	191,272	+0	+26	+20						
Melbourne	3,856,659	3,641,502	3,118,999	+6	+24	+22						
Titusville-Cocoa												
Miami	427,911	446,998	341,191	-4	+25	+27						
Orlando	6,979,296	6,418,014	4,998,964	+9	+40	+28						
Pensacola	1,563,379	1,473,773	1,192,727	+6	+31	+22						
Sarasota	437,262	432,957	371,511	+1	+18	+11						
Tallahassee	520,392	502,901	332,951	+3	+56	+49						
Tampa-St. Pete	855,923	763,134	604,157	+12	+42	+44						
W. Palm Beach	3,930,396	3,812,678	2,909,793	+3	+35	+25						
Albany	1,234,521	1,141,515	853,817	+8	+44	+37						
Atlanta	187,176	194,594	162,706	-4	+15	+19						
Augusta	15,280,487	15,184,118	10,667,057	+1	+43	+41						
Columbus	520,411	496,861	409,416	+5	+27	+18						
Macon	431,569	406,285	363,273	+6	+19	+11						
Savannah	540,315	515,173	453,096	+5	+19	+18						
Alexandria	537,783	504,621	420,169	+7	+28	+19						
Baton Rouge	259,919	225,932	208,285	+15	+25	+20						
Lafayette	1,413,581	1,295,321	1,093,787	+9	+29	+13						
Lake Charles	276,126	254,304	226,914	+9	+22	+21						
New Orleans	4,227,204	212,866	195,154	+7	+16	+9						
Biloxi-Gulfport	2,420,809	4,086,837	3,330,676	+8	+33	+12						
Jackson	280,701	268,126	215,913	+5	+30	+23						
Chattanooga	1,466,436	1,390,882	1,098,534	+5	+33	+25						
Knoxville	1,286,820	1,210,253	945,746	+6	+36	+21						
Nashville	949,133	846,598	759,538	+12	+25	+20						
Anniston	3,182,193	3,141,170	2,667,549	+1	+19	+20						
OTHER CENTERS												
Dothan	180,955	175,124	119,906	+3	+51	+31						
Selma	74,841	71,148	58,121	+5	+29	+28						
Bradenton	186,613	168,488	129,056	+11	+45	+31						
Monroe County	75,188	70,210	57,611	+7	+31	+26						
Ocala	200,084	194,952	141,522	+3	+42	+34						
St. Augustine	44,187	40,542r	37,471r	+9	+18r	+19r						
St. Petersburg	1,097,947	988,644	735,602	+11	+49	+38						
Tampa	1,824,458	1,808,967	1,406,729	+1	+30	+19						
Athens	164,506	162,501	148,519	+2	+11	+13						
Brunswick	102,883	96,591	90,595	+7	+14	+21						
Dalton	166,700	179,908	148,890	+7	+12	+18						
Elberton	19,409	22,667	22,815	-14	-15	+2						
Gainesville	141,130	126,714	105,615	+11	+34	+29						
Griffin	72,296	65,919	51,566	+10	+40	+23						
LaGrange	39,793	47,222	31,350	-16	+27	+25						
Newnan	56,790	67,523	47,869	-16	+19	+43						
Rome	142,880	139,004	123,286	+3	+16	+16						
Valdosta	98,963	94,583	84,468	+4	+17	+13						
Abbeville	18,942	16,546	14,149	+14	+34	+5						
Bunkie	11,131	10,882	8,490	+2	+31	+25						
Hammond	95,192	77,054	60,550	+24	+57	+36						
New Iberia	62,917	53,163	49,341	+18	+28	+13						
Plaquemine	28,092	25,472	15,218	+10	+85	+59						
Thibodaux	38,353	38,504	31,902	-0	+20	+13						
Hattiesburg	137,797	133,233	114,921	+3	+19	+22						
Laurel	76,050	67,402	64,920	+13	+17	+20						
Meridian	137,548	113,730	102,733	+21	+34	+19						
Natchez	53,515	51,280	47,764	+4	+12	+6						
Pascagoula												
Moss Point	139,059	139,653	131,110	-0	+6	+18						
Vicksburg	78,368	67,691	59,088	+16	+37	+24						
Yazoo City	46,981	38,019	37,556	+24	+25	+6						
Bristol	116,492	114,982	116,145	+1	+0	-0						
Johnson City	188,371	166,638	146,029	+13	+29	+16						
Kingsport	259,987	254,935	216,010	+2	+20	+17						
District Total	74,993,722	71,494,120r	57,084,222r	+5	+31	+26						
Alabama	8,604,741	8,040,573	6,625,552	+7	+30	+20						
Florida	25,892,208	24,459,076r	19,556,779r	+6	+32	+26						
Georgia	21,152,663	20,877,609	15,632,055	+1	+35	+34						
Louisiana	7,913,681	7,284,519	6,078,048	+9	+30	+22						
Mississippi	3,201,718	2,994,069	2,504,236	+7	+28	+20						
Tennessee	8,228,711	7,838,274	6,687,552	+5	+23	+19						

† District portion only
r-Revised

*Figures for some areas differ slightly from preliminary figures published in "Bank Debits and Deposit Turnover" by Board of Governors of the Federal Reserve System.

**Conforms to SMSA definitions as of December 31, 1972.

District Business Conditions



Signs of continuing moderation in the economy's growth rate included slackening growth in bank loans, slowing construction activity and retail sales, and cutbacks in agricultural production. However, a further decline in the unemployment rate, sustained consumer borrowing, and rising farm cash receipts indicated sources of continuing strength.

Bank lending continued to moderate, particularly at the smaller banks. At the larger District banks, business loans, sluggish in recent months, strengthened slightly in July while real estate loans were noticeably weak. Total deposit growth, running slightly behind the pace of previous months, remained strong, with time deposits, particularly large CD's, accounting for the bulk of current growth. On August 16, this Bank raised its discount rate from 7 to 7½ percent. By late August, the prime rate at most District banks had increased to 9¾ percent.

There were signs of softness in the construction sector, though the value of construction contract awards and construction employment remain well above levels recorded a year ago. However, construction employment was down slightly from early-1973 levels. Residential awards remained near historic high levels, but the residential sector was beset by rising rates on construction and permanent loans, as deposit inflows at thrift institutions slowed dramatically.

Prices received by farmers declined in July for the first time in several months, but preliminary data indicate another sharp increase in August. A

decline in soybean prices in July offset gains throughout the livestock sector. Lower feed prices checked the rise in prices paid by farmers. Cash receipts through the first half of 1973 showed a one-fifth gain over last year's level, although Florida's gain was moderated by lower citrus prices. Recent forecasts indicate substantial increases in soybean and rice production in 1973, but production of peanuts and cotton will be down. Indicated broiler production is down 8 percent from a year ago and even more in Georgia.

New consumer instalment loans remained at high levels in all categories. However, large repayments of previously incurred debt resulted in July's total credit outstanding being the smallest in 24 months. Retail sales of autos and other consumer goods tapered off slightly but were substantially higher than the comparable year-ago level.

A continued expansion in labor demand nudged the unemployment rate down to 3.7 percent in July. Employment inched upward, with the gains centered in nonmanufacturing industries. Food processing, textiles, apparel, and chemicals were the only industries recording job declines. Factory hours changed little; a strike-related decline in Alabama was largely offset by gains in other states.

Note: Data on which statements are based have been adjusted whenever possible to eliminate seasonal influences.