

CHANGES IN FARM CAPITAL INVESTMENT - USES AND RETURNS

Speech by Darryl R. Francis, President,
Federal Reserve Bank of St. Louis,
at Ford Motor Company Tractor and
Equipment Industry Review, Plaza Inn,
Kansas City, Mo., June 7, 1968

I. A Brief Review

A. Agriculture made great strides during the century ending in 1950.

1. It changed from subsistence to commercial farming.
2. There was a major decline in home-produced inputs and a rise in purchased inputs.

Examples: Horse power to mechanical power
Hand tools to automated machinery
Open-pollinated to hybrid seed
Home-produced to commercial fertilizers

B. The revolution in agriculture has stepped up in recent years.
A tremendous battle is on to stay even.

1. Total farm output has increased at a slower rate than industrial production.

(Chart) Farm Output and Industrial Production

2. A great rise has occurred, however, in agricultural productivity.

(Chart) Real Product Per Man-Hour in the
Private Economy - United States

3. A flood of farm products puts pressure on farm prices and income.

(Chart) Farm, Consumer, and Wholesale Price Trends, 1950-1967

(Chart) Farm Income Versus National Income, 1950-1967

4. The pressure on incomes, coupled with generally prosperous non-farm conditions, provide incentive for readjustments in resources. The readjustments in turn contribute to increases in realized net income per worker.

(Chart) Number of Farm Workers and Income Per Worker

5. The number of farms declines and average size of farms increases.

(Chart) Number of Farms, and Average Size of Farms in the United States, 1925-1968

6. Agriculture became more commercial and more specialized. The major drive for manufactured inputs occurred in the early post-World War II years. The recent drive has been toward increased specialization.

7. The farming sector has remained fairly stable in dollar value added to national income, but purchased farm supplies and the processing and marketing of farm products have grown rapidly.

(Chart) Value of Agribusiness Product

8. New types of farming developed as a result of new technology and competitive pressure.

Examples: Integrated or contract farming
Vegetables, broilers
Commercial beef feedlots
Commercial milk parlors

II. Farm Technology Dictates Changes in Capital

A. Total production assets are increasing.

1. Assets in agriculture have gained significantly in recent years.
2. A large portion of the gain reflects rising land prices which have more than doubled since 1950, and more than quadrupled since 1940.
3. Non-real estate assets have also made sizable gains, with greatest increases in value of farm machinery.

(Chart) Farm Production Assets

B. Assets per farm rise sharply.

1. Production assets per farm have increased very sharply (rising threefold since 1950) in the competitive struggle to attain greater efficiency through farm enlargement.
2. Approximately 50 per cent of the gain in assets per farm reflects rising land prices.
3. The other gains are from new investments in both real estate and other assets.

(Chart) Total Capital Per Farm United States and
Total Capital Less Real Estate Appreciation

C. The rate of return on farm capital points to future investment trends.

1. Capital in agriculture is increasingly competitive with capital in non-farm uses.

2. The industry is thus not in isolation from other sectors of the economy (capital, labor, land and product markets).
3. Returns to scale of operations have been great during the postwar period, and the margin of efficiency on larger farms is still great.

(Chart) Average Return on Farm Capital
Specified Types of Commercial
Farms by Size (1947-1966)

4. The smaller farms barely provide an opportunity for the operator and family to earn wages at the national average farm wage rate.
 5. Returns to size have been more pronounced in recent years than in early postwar years.
- D. Marginal capital invested in real estate apparently yields greatest returns.
1. Real estate assets are a greater per cent of total assets on the larger farms which have higher returns to capital.

(Chart) Farm Real Estate as Per Cent of Total
Farm Capital - Commercial Farms by
Size (1960-1966)

- E. Larger farms have greater operating efficiency.
1. Operating efficiency as indicated by labor and machinery costs is substantially greater on the larger farms than on the smaller ones.

(Chart) Labor and Machinery Costs as Per Cent
of Gross Farm Receipts - Specified Types
of Commercial Farms by Size

2. High-cost labor is a greater proportion of major cost items on small farms than on larger units.
3. By replacing labor with machinery, the larger farms provide a better opportunity for reducing costs.

III. Greater Capitalization Points to Change in Structure of Farm Ownership

A. Debt-free ownership is more difficult to achieve.

1. Landlord-operator equities decline. Operator equities are down to almost 50 per cent of assets.
2. Large owner-operator equities are increasingly difficult to acquire as capital requirements rise.

(Chart) Equities as a Per Cent of Physical
Farm Assets

B. Trends in ownership are indicated by the distribution of value of products sold according to tenure of operator.

1. The rapid gain in proportion of all farm products sold by part owners and managers and the sizable loss in sales by full owners suggests the greater difficulty of becoming owner operators of efficiently sized farm units.

(Chart) Distribution of Value of Products
Sold by Tenure of Operator, Com-
mercial Farms

C. The change in operator equities and tenure points to further changes in the form of farm ownership.

1. An increase in the corporate form of organization is probable.
2. Other possible types of ownership include:

- (a) more partnerships
 - (b) an increase in vertical farming
- D. Farm management may, like corporate managers, become more detached from ownership.
- 1. The rising proportion of farms operated by part owners and managers indicates further detachment of management from ownership.
 - 2. The rising volume of capital per farm points to an acceleration of this trend as high-priced farm land passes on to future generations.

IV. The Modern Farmer - Small Businessman

- A. The farm business and commercial enterprise have both similarities and differences.
- 1. The similarities are:
 - (a) Capital requirements (ownership)
 - (b) Importance of financial backing (increases as higher costs magnify exposure in agriculture)
 - (c) Management perfection
 - (d) Need for operating statement (expenses as per cent of gross sales)
 - (e) Specialization in one or a limited number of commodities.
 - (f) Bargaining for supplies and raw materials.

2. Differences that stand out include:

(a) Natural factors

(1) More likely to impair farm operating results

(b) Continuity of management

(c) The balance sheet ratios

(1) Example: Land and buildings to total assets and sales are higher in agriculture

(d) Debt as a per cent of total assets

(1) Generally higher in non-farm business

V. Some Musts for Modern Farm Banking Are:

A. Flexible lending policies, prime farm credit rates, other competitive rates.

B. Flexible savings policies. (Are local savings bypassing your bank?) Competitive rates on time and savings deposits.

C. Maximum use should be made of the national money market.

1. Loan participations are one means of easing the local strain on credit supplies.

2. Insurance company credit is another means of relieving local pressures.

3. Some banks purchase Federal funds.

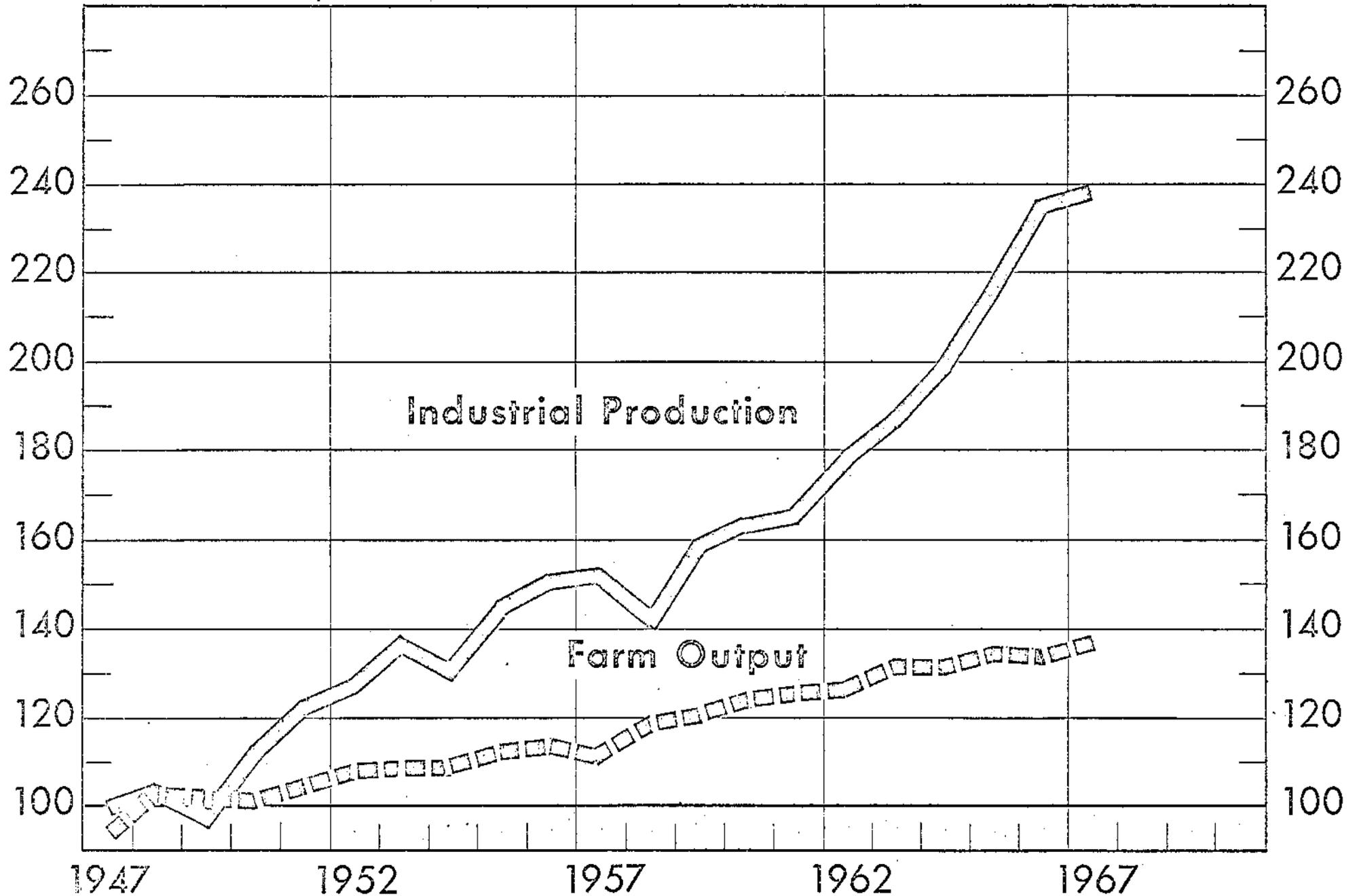
4. Other means are in the developing stage.

- D. Provide sound and adequate financial advice for modern farmers.
- E. Arrange to handle the credit needs of the large, efficient producer; the alternative is for the bank to become a wholesaler of funds by purchasing the credit instruments of others who are better equipped to do the job.

Farm Output and Industrial Production

Index 1947-49=100

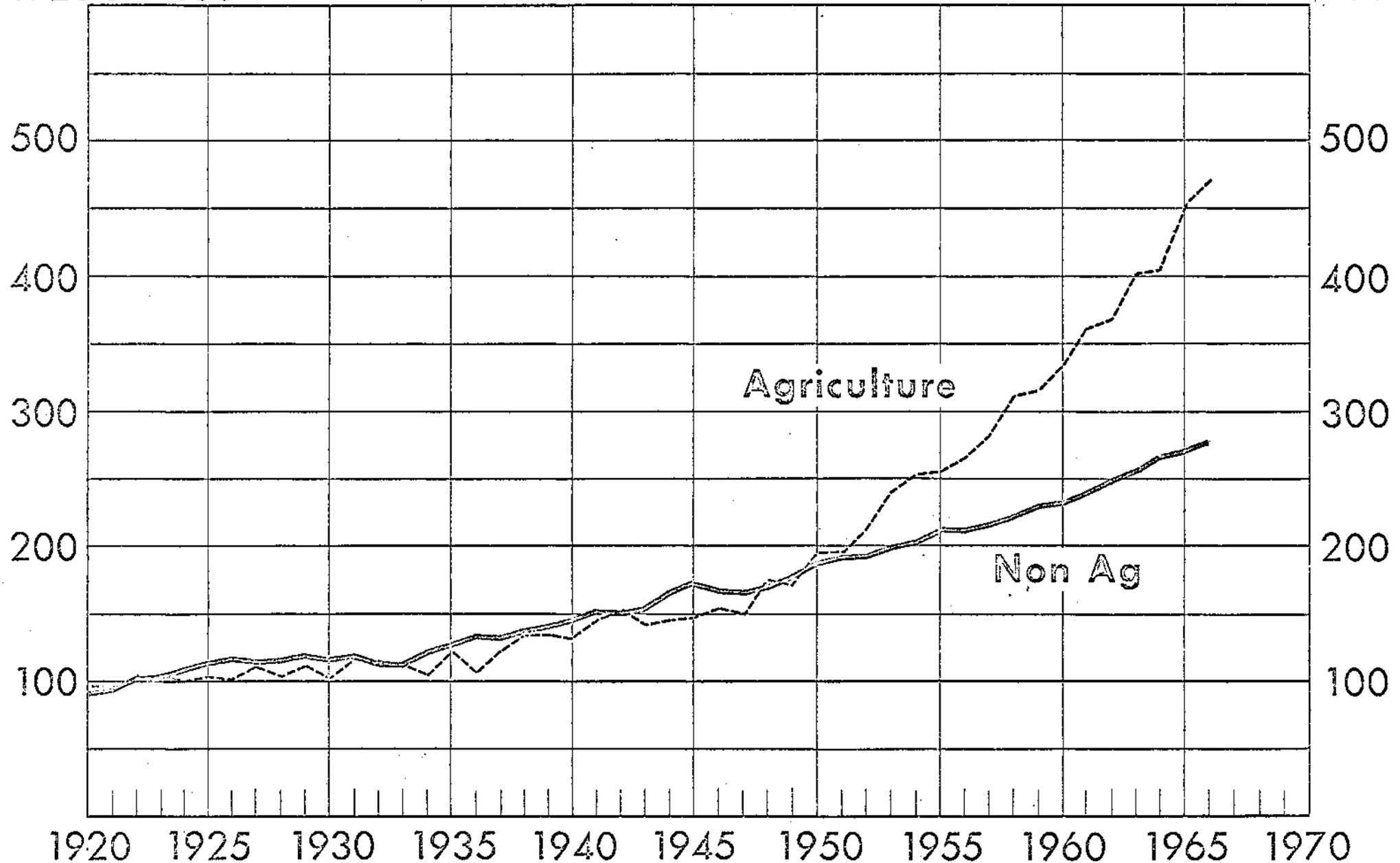
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Real Product Per Man Hour in the Private Economy-United States

1920-24=100

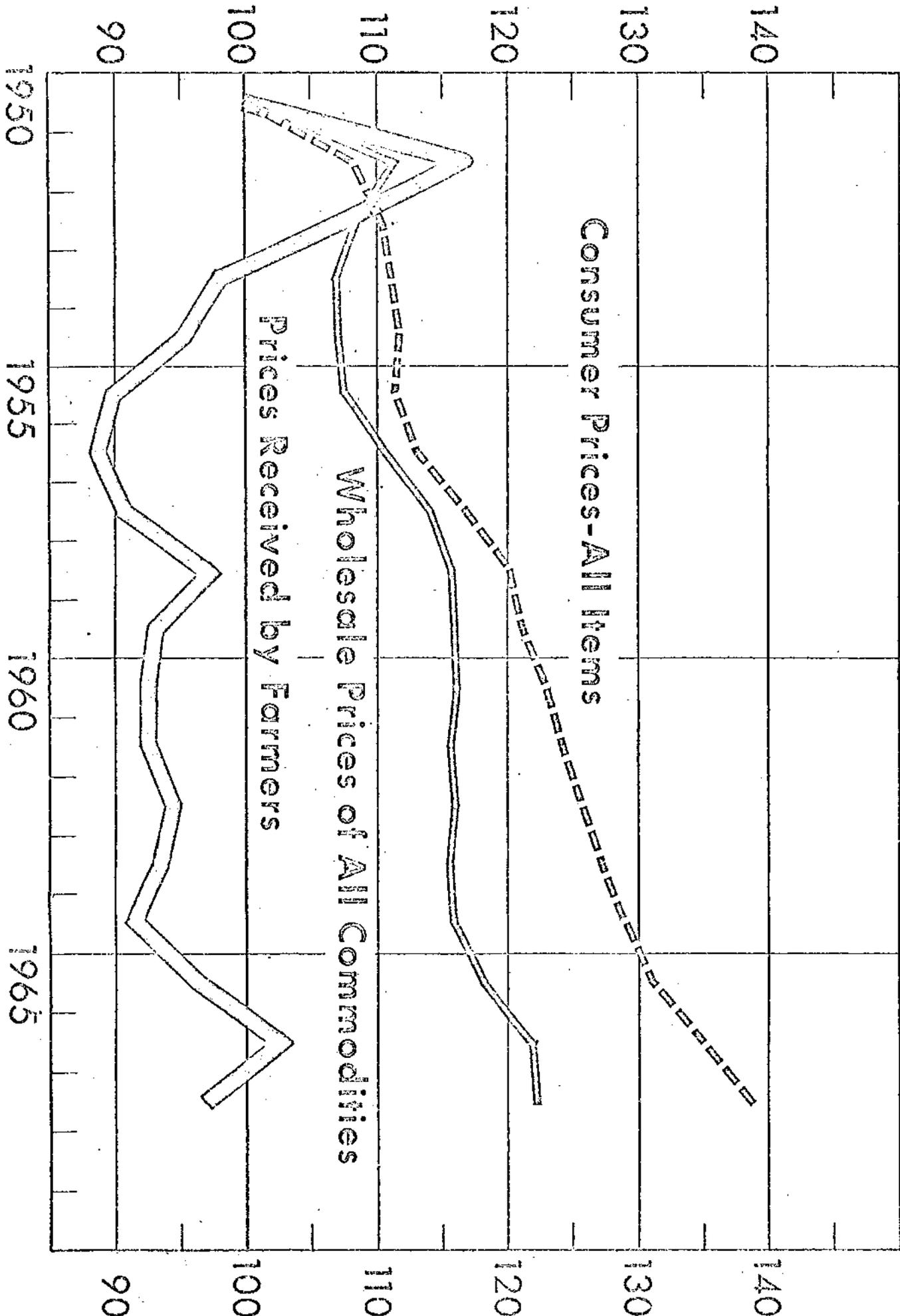
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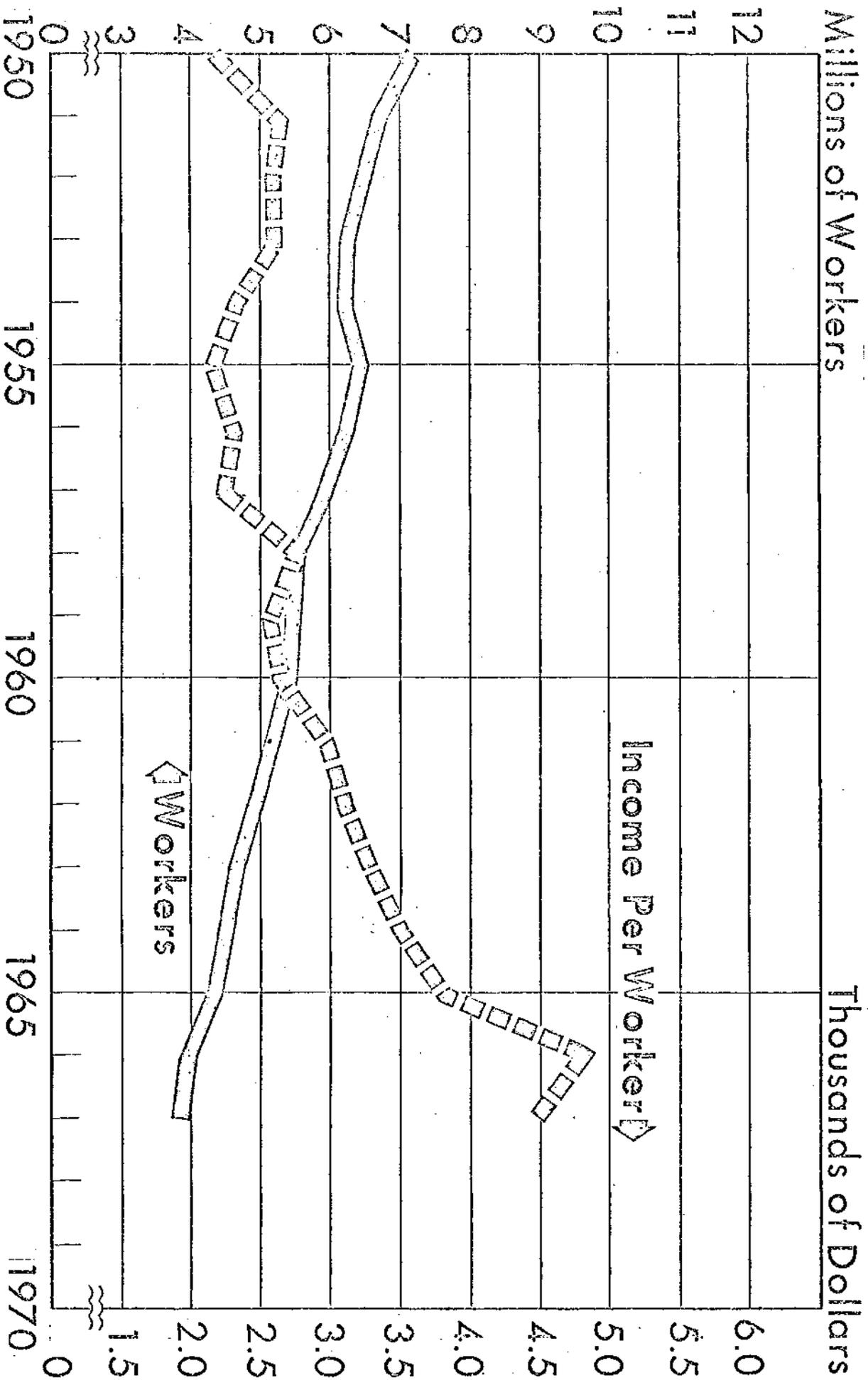
Farm, Consumer and Wholesale Price Trends

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Index 1950=100



Number of Farm Workers and Income Per Worker

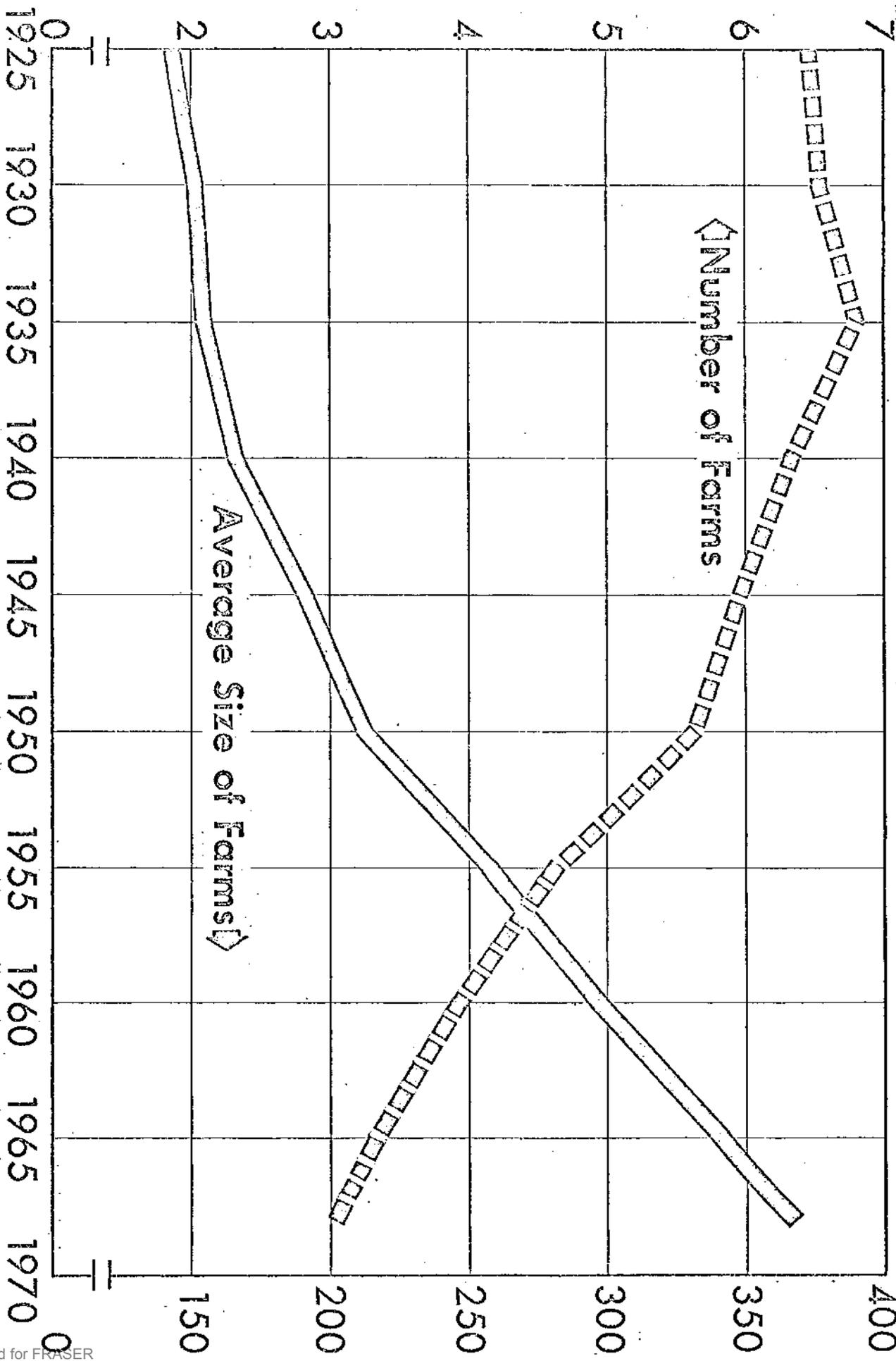


Number of Farms and Average Size of Farms

Millions of Farms

in the United States

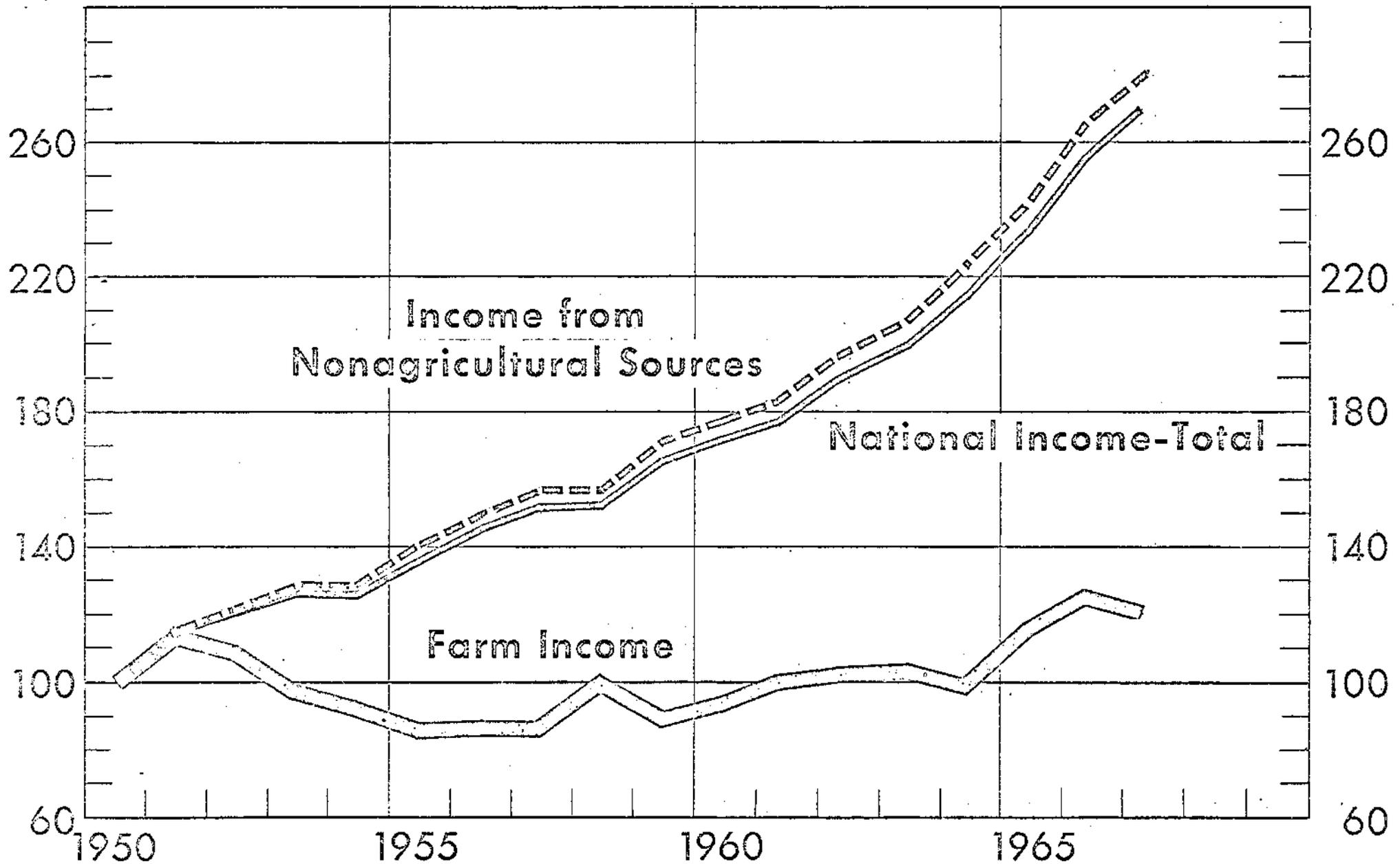
Acres



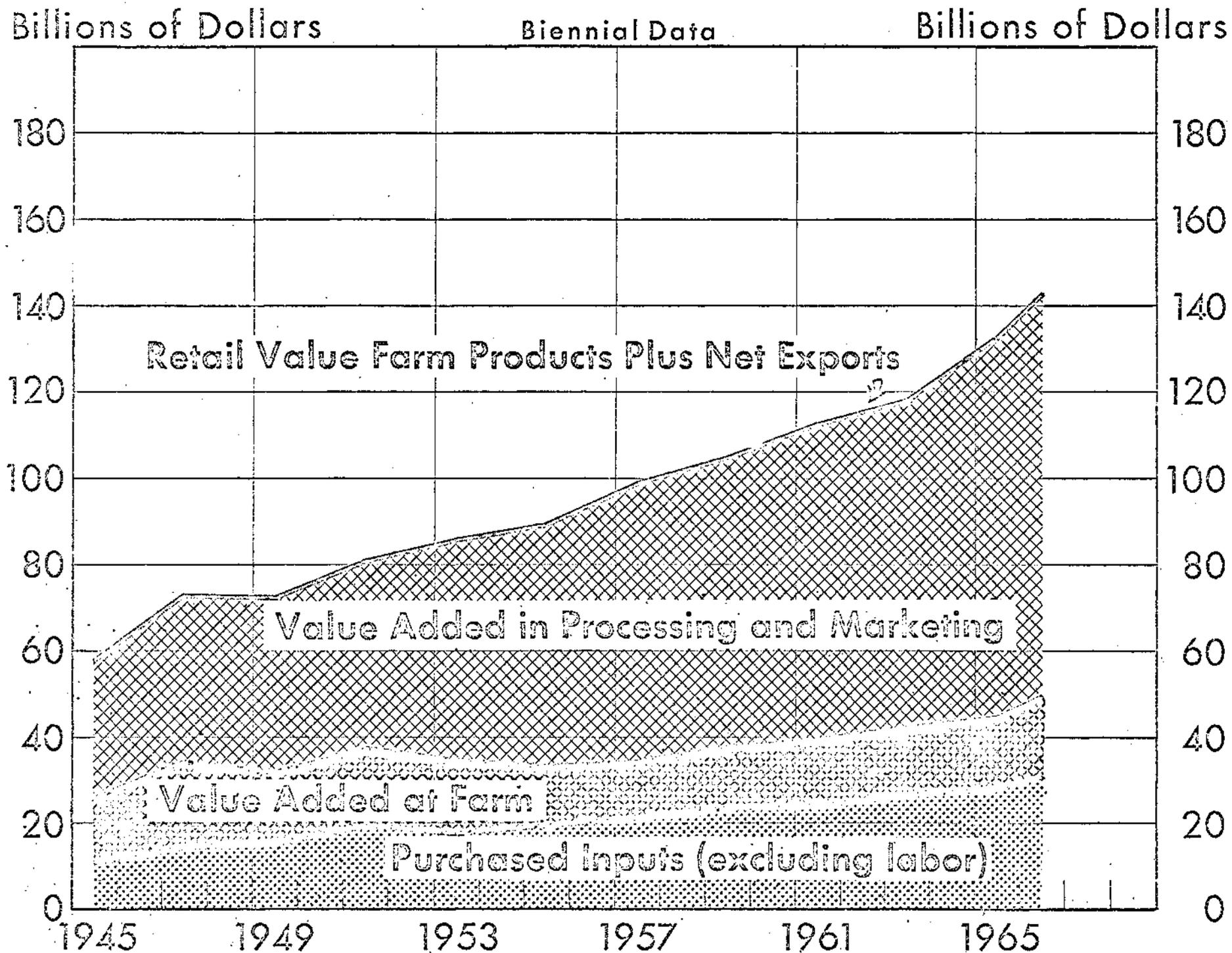
Farm Income versus National Income

Index 1950=100

Index 1950=100



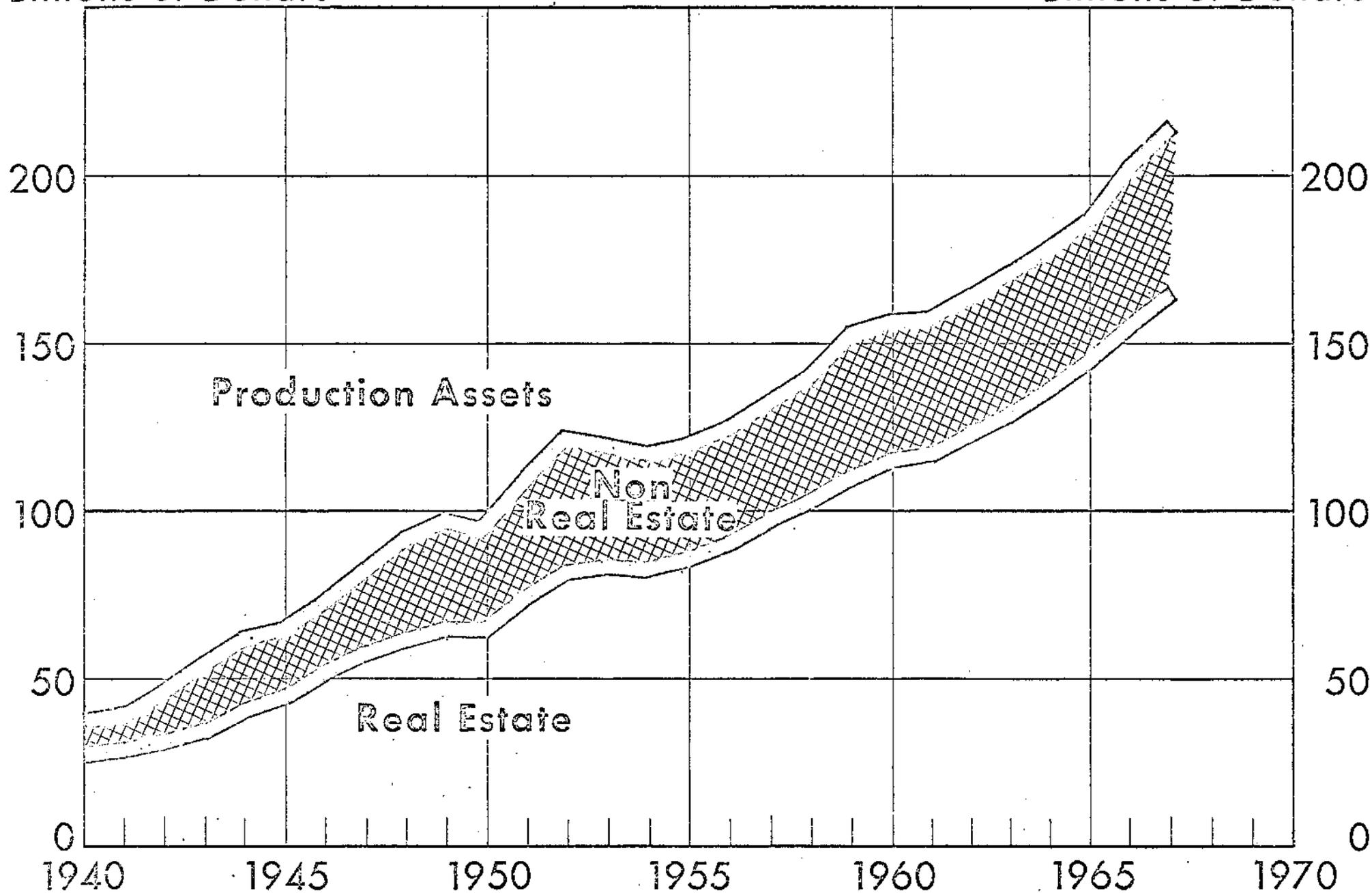
Value of Agribusiness Product



Farm Production Assets

Billions of Dollars

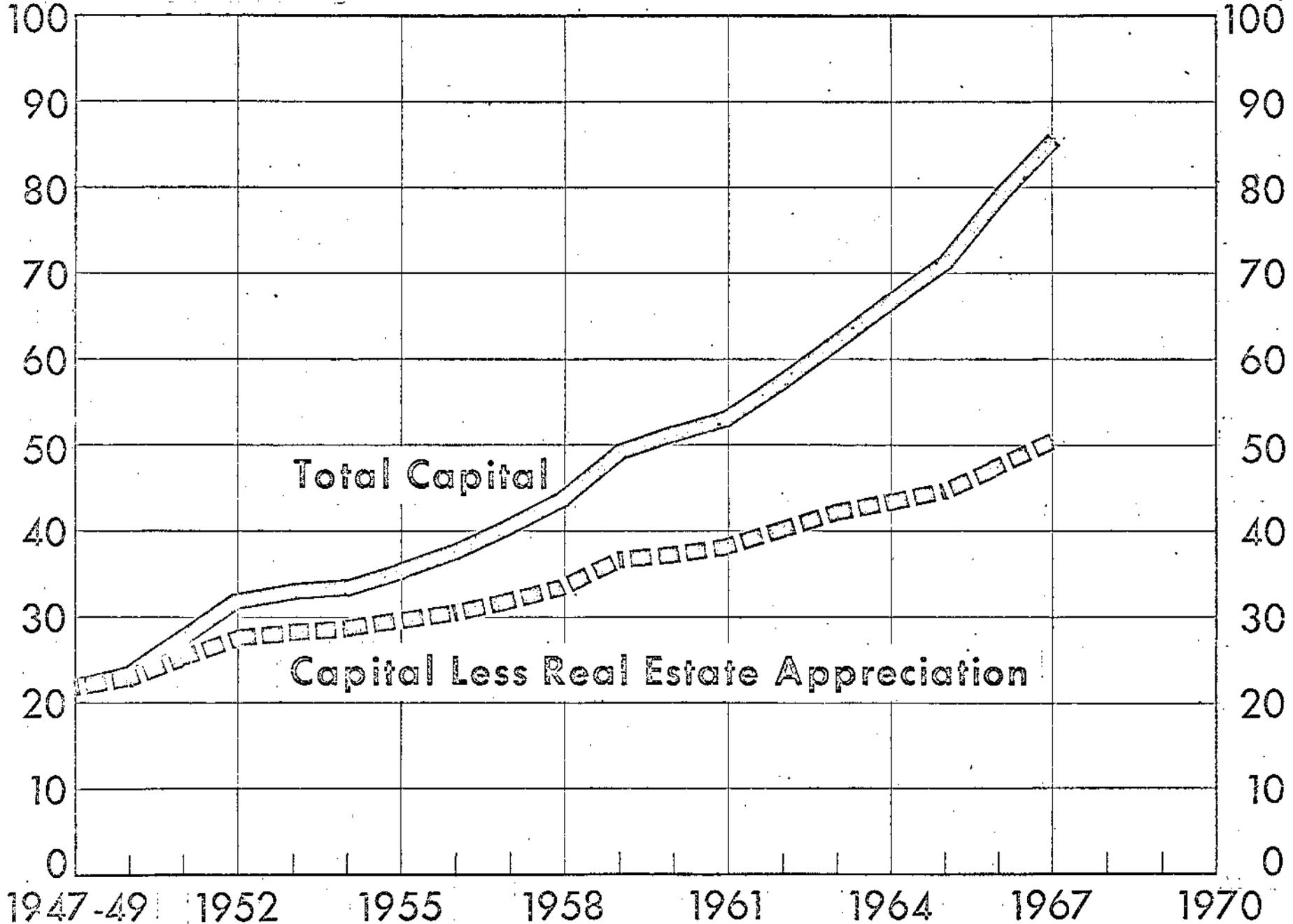
Billions of Dollars



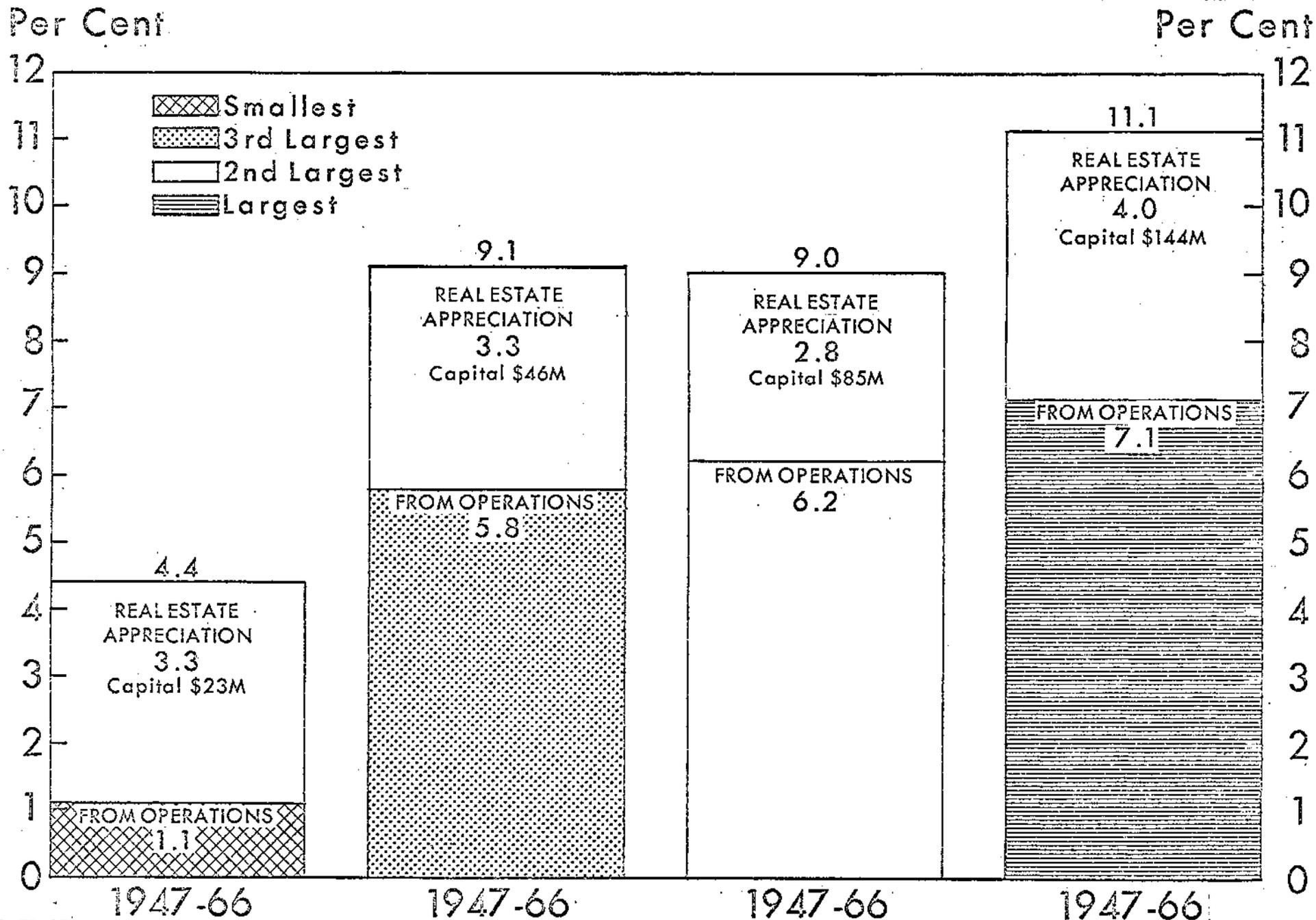
Total Capital Per Farm United States and Total Capital Less Real Estate Appreciation

Thousand of Dollars

Thousand of Dollars



Average Return on Farm Capital Specified Types of Commercial Farms by Size

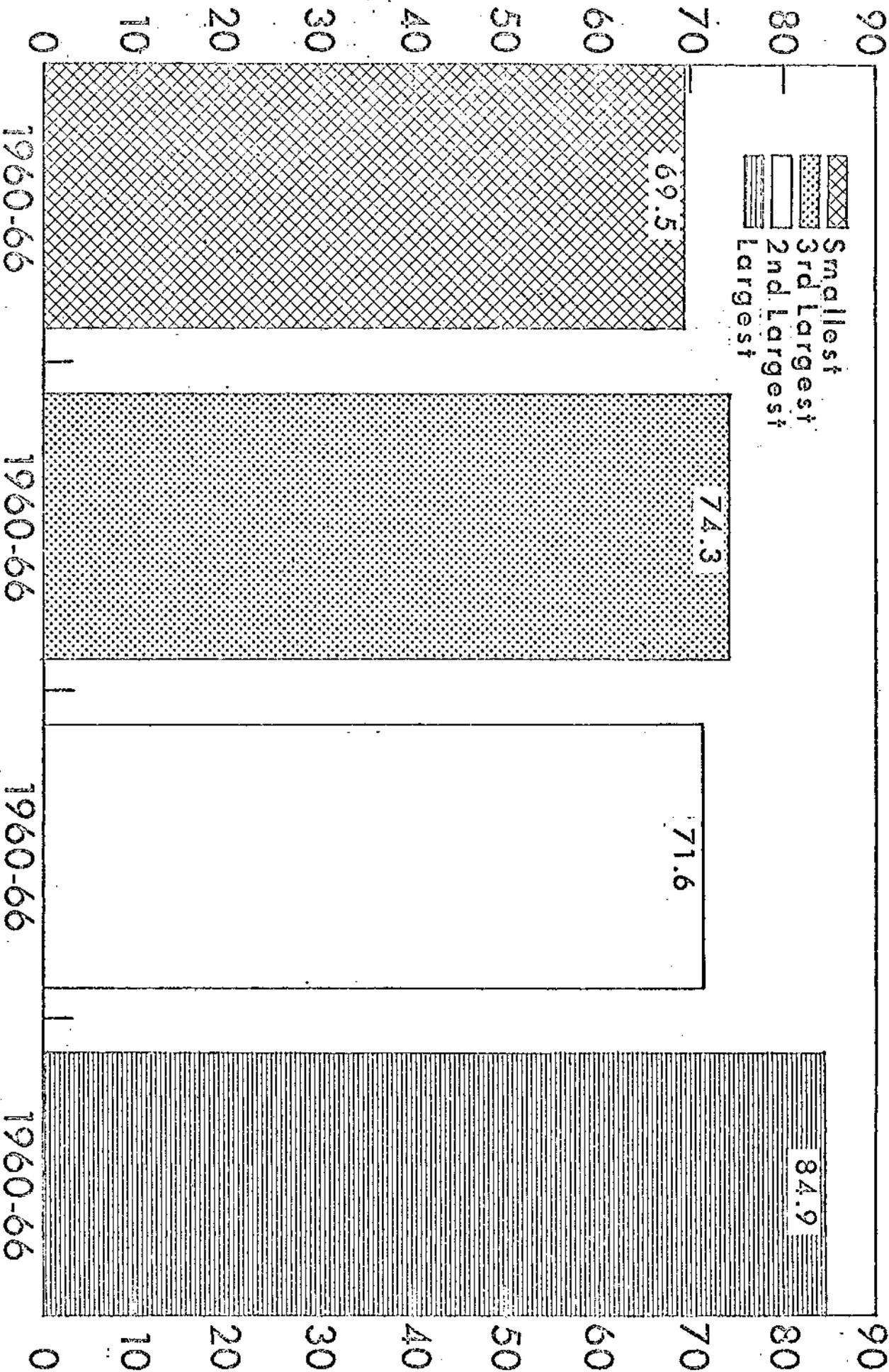


Farm Real Estate as a Per Cent

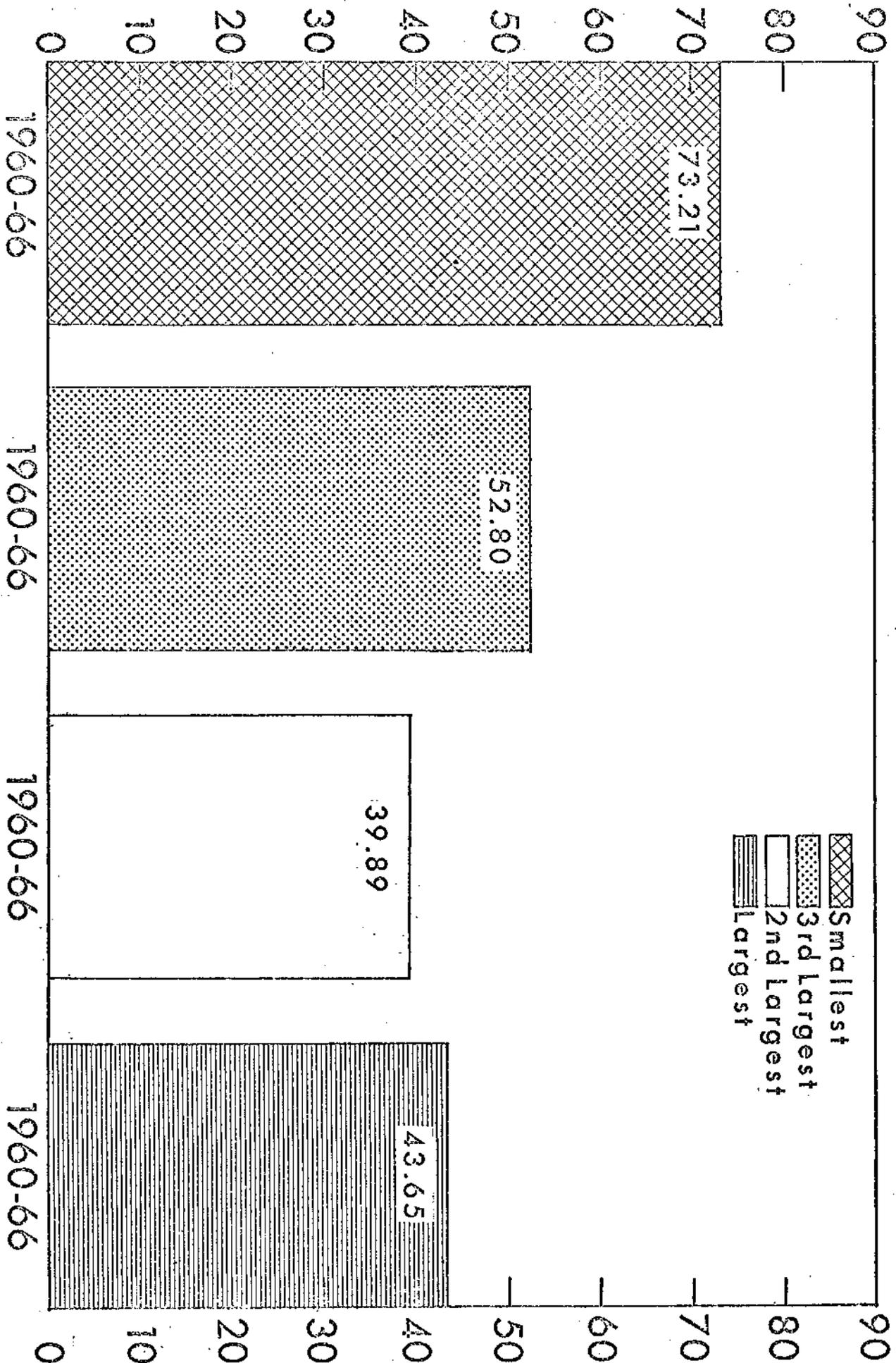
of Total Farm Capital - Commercial Farms by Size

Per Cent

Per Cent



Labor & Machinery Costs as a Per Cent of Gross Farm Receipts-Specified Types of Commercial Farms by Size



Equities as a Per Cent of Physical Farm Assets

