FIXED REPRODUCIBLE CAPITAL IN ARGENTINA, 1935–55

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I. INTRODUCTION

THE team which is carrying out studies on the national income of Argentina has for some time back been making various estimates of annual depreciation in order to determine income and net capital formation. It estimates annual depreciation, at replacement costs or in terms of prices of a base period, by applying amortization rates to gross investment for previous periods classified by categories of goods and according to their probable useful average life.

The publication of Raymond Goldsmith's studies on the Estimation of fixed reproducible capital stock in the United States and the ECLA studies on capital in the Latin American countries and on the Analysis and Projection of Economic Development prompted the national-income team of Argentina to apply a method of the perpetual-inventory type for the purpose of estimating fixed reproducible capital stock.

It was, however, on the occasion of the establishment of the Joint Argentine Government–United Nations Study Group, under the chairmanship of Dr. Raul Prebisch, Executive Secretary of ECLA, that it was specifically proposed to study the historic evolution of gross and net capital formation. During 1956 the Joint Study Group carried out the necessary compilations and analyses for estimating capital formation and annual investment from the beginning of the century.

It should be noted that the co-operation extended by the national-income group of Argentina in the preparation of the basic series of these estimates was very valuable and, in some cases, decisive. Likewise, background information already available, or recently prepared in ECLA for the studies of the Argentine economy, were used for some aspects. Nevertheless, the responsibility for the opinions expressed and for the estimates included in this report lies exclusively with its authors.

In this report the results obtained in these statistical studies are presented in summary form, including the estimated figures for the value of fixed reproducible capital for each year of the

period 1935–55 and the gross investment series used for these estimates.

In the study of the analysis and projection of the Argentine economy prepared by ECLA, as explained in the report by Alexander Ganz,[1] an economic analysis of these series has been made and estimates are included for periods prior to 1935, largely obtained from the series of gross annual investment included here.

The conceptual and methodological aspects of this report are limited to showing the results of the application of the perpetual-inventory method to the specific case of determining the value of fixed reproducible capital in Argentina. There is no intention of embarking on a discussion of the conceptual bases of the various economic criteria which might be used for such an estimate. These are being critically reviewed at present from various distinct points of view. Stress will be laid here on certain conceptual or logical aspects of the method used which are of special interest for the particular case of Argentina or which are useful to consider in order to arrive at a fair appreciation of the estimated figures.

II. STATISTICAL DATA AVAILABLE IN ARGENTINA FOR ESTIMATING FIXED REPRODUCIBLE CAPITAL

Except for the very old studies by A. Bunge, based mainly on the 1914 census, there are no official or private estimates in Argentina relating to any of the various concepts of national capital or wealth for more recent years. The only known estimates are those prepared by ECLA and published in 1953. They refer to annual series for values, at 1950 prices, of capital invested in durable capital goods for the economy as a whole and by large economic sectors during the period 1945–52. They are estimates obtained by the accumulation of depreciated investment, and are linked, in part, to figures taken from the 1914 census.

Other data available in Argentina relating to the value of capital invested by sectors of activity are scarce. Indeed, a

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[1] Paper 9 in this volume. It should be noted here that there are certain discrepancies between the figures presented in this paper and those given by Dr. Ganz. These are due to differences in classification. In the case of the agricultural sector, for example, Dr. Ganz includes inventories of livestock which have not been included in our estimates: and Dr. Ganz has used a narrower concept of Government than that implied in our definition of Public Works.

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review of available statistics shows that only the following information exists:

(a) Industrial censuses for 1935 and 1946. These include data on the value of investment in land and buildings, machinery, installations and tools, vehicles, furniture, and other facilities; but, whereas the 1935 census gives book values, the 1946 census published the value at 1946 market prices.

(b) Agricultural census for 1937. This contains data on the quantities or units of all existing capital goods on farms, but not information on their age, year of installation, value, etc.

(c) Census of transport enterprises and vehicles for 1947, containing statistics on the rolling stock, their age and distribution by economic sectors, and the amount of investment in railways and shipping enterprises according to book values.

(d) 1948 census and permanent register of state property, listing the value of buildings, various public works and other government-owned capital goods.

(e) Isolated data on the depreciated value of capital investment in certain sectors, such as large-scale public-service enterprises and certain data on the number of buildings of all types.

A critical analysis of all these sources and available data clearly showed that it was not possible to arrive at an estimate of fixed capital stock in respect to even a minimum of economic sectors for a given year which could be used as a base for bringing the estimate up to date by any known method. It happens that the census figures could have been used only as a basis for the industrial sector, but the adjustments which have to be made in these data are very complicated and would always leave a wide margin of uncertainty as regards the final estimate.

On the other hand, in Argentina, as in many other Latin American countries, there are almost complete statistics on industrial production by economic sectors and on imports and exports by categories of commodities, which can provide the basis for a detailed analysis of the commodity flow and thus for the flow of capital goods to be estimated, as is being done to determine annual gross investment in the studies of national product and income. Accordingly, there is no doubt that the accumula-

tion of depreciated investment is the only adequate or feasible method of arriving at estimates of the value of fixed capital, although it will require the assumption of certain working hypotheses which cannot be fully verified in practice.

III. ESTIMATION OF FIXED REPRODUCIBLE CAPITAL BY THE ACCUMULATION OF DEPRECIATED INVESTMENT

There are two alternative ways of applying the general method of estimating the stock of capital by the accumulation of depreciated investment. One is to use as a base a census figure pertaining to the stock of capital for a given period and to bring the inventory up to date by the method described, or to interpolate the stock between census years after adjusting the results to render them comparable. The other alternative must be used when census data, either total or sectoral, are not available or not useful. The stock is then obtained by calculating directly the accumulation of depreciated investment.

In practice, it is apparent that combined solutions may be applied, or total or partial estimates obtained independently by either procedure may be checked. In the first case, it may be said that census data may be used as a check on, or as a methodological or statistical base for the estimates. In the second case, the estimate and the very definition of the concept of capital are identified with the operational estimation procedure, and the statistical value is determined mainly by the accuracy of the estimates of gross annual investment and by the hypotheses adopted with regard to the concept and the measurement of the value of annual capital consumption.

The method followed in Argentina is the second alternative of the perpetual inventory, i.e. as already pointed out, the estimates are not based on census data but on an accumulation of net annual investment. Only in the case of shipping, electric power stations, agricultural buildings, and improvements was a separate method used for estimating the value of fixed capital stock directly.

A brief explanation follows of the way in which the annual series of gross investment were estimated and of the method used in determining depreciation.

IV. ESTIMATE OF GROSS FIXED INVESTMENT

Broadly speaking, the gross capital formation series used in this study are, from the standpoint of definition and method of valuation, the same as those incorporated in the estimates of the domestic gross product. Discrepancies with the official data published are attributable to improved statistical methods or to the incorporation of series for new items.

Tables IV and V give the estimated figures by broad categories of goods. The method used for these estimates was as follows:

(a) *Machinery and motors.* Series for values at current prices were compiled by type of commodity. It was impossible to follow a single procedure for the conversion of these series to current 1950 prices; in some cases they were deflated by means of price indices for machinery with the most stable specifications possible, while in others, values at constant prices were determined by the direct application of unit values to the volume series. A third procedure was that of deflating some items by means of price indices or unit values for other sectors for which data were available.

Needless to say, no adjustment for changes in quality were made, except in so far as they may have been implicit in the process of deflation, which does not seem very likely.

(b) *Transport and communication equipment.* Annual gross investment was determined by a procedure similar to that adopted in the case of machinery and motors. Only for inland waterway and overseas shipping was direct valuation of the stock on the basis of tonnage and age considered desirable.

(c) *Other producers' durable goods.* The general procedure described above was followed.

(d) *Agricultural improvements and housing.* The stock of capital in rural housing was estimated directly on the basis of census statistics, the intermediate years being interpolated. Among other elements, data on the number of farms and the agricultural population were taken into account. A computation of annual gross investment as deduced from capital estimates was incorporated in Table

IV, merely for the sake of completing the series. Under this head are also included perennial crops, wire fencing, mills and other agricultural installations, annual investment in which was estimated in accordance with the general method adopted for the preceding sectors.

(e) *Private non-agricultural construction.* Annual basic series were available relating to the area covered by the new construction classified according to region and main purpose. Real values were determined through the application of 1950 prices, by type of building and by region.

(f) *Public works.* The series for values at current prices were deflated by a construction cost index. This index was worked out on the basis of wages and prices of the most important types of materials used. Obviously, this type of deflation is in the nature of an overall cost adjustment, which does not explicitly take into account changes in the structure or composition of the value series. Nor are fluctuations in the productivity of the building industry taken into consideration.

(g) *Repair costs.* The gross investment series in Table IV include costs of repairs of railways, trams, motor vehicles, and machinery. Conversion to 1950 prices was effected by means of a repair-costs index and an index of inputs of materials in the case of railways and trams. Expenditure under this head was included under capital formation, because it was considered to relate not so much to current conservation and maintenance costs as to major repairs aimed at partly or totally restoring the production capacity of the equipment concerned or prolonging its useful life.

In general terms, the conclusion might be reached that the basic series for annual gross investment at 1950 prices, estimated by means of the procedures described, reflect the quantum of capital goods, but do not allow for variations in quality, except in so far as the methods of deflation utilized may have implicitly taken this factor into account in specific lines. In all likelihood the tendency has largely been to consider 1950 goods and those belonging to earlier periods on the same level, as if they were similar in characteristics, 'quality', etc.

The estimation of capital formation through the flow of goods is essentially a problem of estimating the quantum of

production deriving from the capital-goods industries and from foreign-trade activities. Consequently, in such estimates the same criterion must be adopted as is applied in measuring the production of other types of goods, despite the greater complexity presented by the capital goods sector (R. Stone, *Quantity and Price Indexes in National Accounts*, OEEC). From this point of view, the increase in 'productivity exclusively attributable' to an improvement in the quality of capital goods would tend to be reflected in the industries producing such goods and not in the industries utilizing them as primary factors.

In this field of economic analysis and national accounts, therefore, any progress that might be made in the development of independent standards of measurement for variations in the quality of capital goods would be useful. Meanwhile, in practice the only solution is to incorporate new goods by means of deflation in terms of prices for similar goods or other indices of a general nature.[1]

V. ESTIMATE OF CAPITAL CONSUMPTION

The value of annual capital consumption was estimated on the following basis: (a) the determination of the probable average life of groups of goods; (b) the assumption that the good concerned will be completely worn out by the last year of its probable life; and (c) the assumption that annual consumption will represent a constant proportion of the value of the good when new (straight-line depreciation).

Recent analysis and practical studies (those of E. D. Domar, E. Shiff, etc.) show that estimates of consumption and net capital formation may differ substantially according to the method of amortization utilized.

There are two different approaches to this subject. One takes into account the probable evolution of market prices for used capital goods and another derives from the system of valuation in terms of current production capacity of the good.

Certain empirical data seem to suggest that in the former case the value of the good tends to decline much more rapidly in the early than in the middle years of its useful life; as regards the

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[1] If a strict analysis were to be attempted, it would be found that a considerable number of 'new' goods would appear and that the application of the 'production cost in the base year' formula might frequently lead, especially in the case of long-term series, to results that would be unsatisfactory as expressions of the quantum of the product or of the stock of capital.

second method, although no theory is applicable to the various types of good, it has been pointed out that, broadly speaking, production capacity is maintained or does not decrease rapidly during the early years of useful life, that the process of decline may later be intensified and that, lastly, capacity may still remain at a certain level up to the year in which the good is withdrawn from service. These divergent behaviour patterns seem logical, since market prices are bound to be influenced by obsolescence and by the cumulative production capacity which the good still retains, whereas the functions considered in the second case take into account only current production capacity in each period.

In the special case of Argentina, no data were available on prices of used capital goods, and there was a complete lack of analyses or experiments of a relatively general nature against which to check hypotheses on the evolution of production capacity. Consequently, it was decided to adopt the general hypothesis of straight-line amortization on the value of the good at base-year prices in order to determine year-by-year depreciation.

Average useful life of goods

Broadly speaking, in Argentina there are no statistical data on the installation and withdrawal of existing goods, nor are there any censuses or statistics on the stock of capital goods broken down by age groups, except in isolated cases. Thus, the 1946 census registered an average age of 15 years for trucks and 13 years for passenger cars; for inland waterway and overseas shipping, data are available for several years, and indicate average ages ranging from 13 to 21 years; and with respect to railway material, data for 1954 show an average age of 35 years for trucks and 37 years for locomotives.

In the accounting practice of private enterprises the following are the periods of useful life for capital goods commonly adopted:

Buildings	33–50 years
Industrial machinery . .	10 years
Motor cars and trucks . .	5–7 years
Installations and furniture .	10 years
Tools	4–5 years
Agricultural machinery . .	10 years
Farm carts and wagons .	10 years

Tax regulations generally allow for these, or in some cases shorter, amortization periods. However, the life-spans established in accounting practice or by fiscal legislation cannot be adopted for depreciation estimates in national accounts, since it has been proved that in reality capital goods remain in production for longer spells of time. Consequently, although probable average life could not be statistically determined, the various data mentioned were taken into account, as well as estimates made for some sectors by administrative departments and technical experts. As a working hypothesis for determining depreciation rates, the following average life, by types of capital goods, were finally established:

Average useful life of capital goods assumed in estimating depreciation rates for fixed capital in Argentina

I. *Construction and agricultural improvements*

   (1) Perennial crops (alfalfa, fruit-trees, olive-groves, vineyards, etc.) . . . . 5–50 years

   (2) Agricultural installations . . . 33 years

   (3) Public and private construction . . 50 years

II. *Machinery and equipment*

   (1) Industrial and agricultural machinery . 20 years

   (2) Tools . . . . 5 years

   (3) Containers . . . . . . 4 years

   (4) Other producers' durable goods . . 20 years

   (5) Transport and communication equipment—

      (a) Aeroplanes . . . . . 8 years

      (b) Truck and bus chassis . . . 10 years

      (c) Motor vehicles for passenger and goods transport . . . . . . 20 years

      (d) Carts . . . . . . 20 years

      (e) Railway rolling stock . . . . 33 years

      (f) Inland waterway and overseas shipping 33 years

      (g) Railway installations . . . . 50 years

      (h) Durable goods for communications . 33 years

   (6) Repairs in general . . . . 4 years

The amortization rates derived from these periods of average useful life by types of goods were applied in order to determine the annual stock of capital throughout the period 1935–55. It

was thought, however, that the average life-span of goods must have varied in the course of the long interval that has to be taken into account. In all likelihood, before World War II, and especially during the years immediately preceding the depression of the thirties, capital goods were replaced more frequently. But such changes could not be estimated, and nothing is known of their possible influence on estimates of the stock of capital during the period 1935–55.

If these data for Argentina are compared with those relating to the average life of goods in the United States, according to the research carried out by Raymond Goldsmith, it can be seen that as a general rule capital goods remain in use for a longer period in Argentina, especially where vehicles and agricultural machinery are concerned, but that the average useful life of construction and private buildings is practically the same.

It is no easy matter to establish a standard of measurement for the depreciation of investment in repairs. A device sometimes adopted has been to incorporate it in the stock of goods and depreciate it at the same rate as is used for the principal good. But if the amortization period is prolonged because of repairs, it might be contended that up to a point expenditure on repairs ought not to be reckoned as capital, since a tendency to overestimate the value of the stock of capital would result. Again, it must also be borne in mind that these incorporated repair costs, because they relate to major repairs, differing from mere conservation and maintenance costs, produce, at the time when they are effected, an increase in the value and productive capacity of the good, which may afterwards disappear, independently of the useful life of the good concerned. It was therefore decided, as a provisional compromise, to allow an amortization period of four years for costs of this kind.

Lastly, it must be noted that these estimates make no special allowance for obsolescence and exceptional losses. As regards the former, in Argentina's case there is no practical way of including it under the system of work adopted, unless precise information should happen to be available as to goods withdrawn from service before the expiry of their established average useful life. With respect to exceptional losses, while some were substantial, such as those caused by earthquakes, which particularly affected fixed capital in the form of buildings, the necessary data were not available.

VI. ESTIMATES OF FIXED REPRODUCIBLE CAPITAL BY TYPES OF CAPITAL GOODS AND ECONOMIC SECTOR ALLOCATION

The method adopted in regard to existing sources of information in Argentina provides a direct estimate only of the stock of capital goods classified by industries of origin, or in other words, by categories of goods. A classification of that stock by the economic sectors to which the goods were allocated can be undertaken only in so far as the characteristics of the separate categories of goods clearly show that they are intended for a given sector.

For those other goods which may be utilized in more than one economic sector, all that can be done is to determine some probable distribution by economic sector of destination as indicated by several factors.

Table II shows the figures for the depreciated value of the stocks classified according to six categories of goods: (1) machinery and motors, (2) transport and communications equipment; (3) other producers' durable goods; (4) agricultural improvements and housing; (5) private non-agricultural construction; and (6) public works. These six series constitute the results of the aggregation of thirty-four partial series, twenty-nine of which were determined by the usual method of accumulating annual depreciated investment and five series, corresponding to shipping, agricultural housing and certain improvements, and the fixed capital of electric power stations, represent a direct estimate of the depreciated value, in terms of prices for the base year, of the invested fixed capital.

Table III includes estimates of the stock of capital goods classified according to four major economic sectors of destination: (1) agriculture; (2) manufacturing, mining, and construction; (3) transport, communications, electricity, trade, housing, and personal services; and (4) public works. The allocation of the thirty-four series to these four major economic sectors was facilitated to a considerable extent by the fact that the basic national statistics of production and imports are compiled in many cases according to the sectors for which the goods are intended. Yet there are categories which had to be classified according to their main sector of destination and others which had to be distributed, sometimes tentatively, among the various

sectors, since they included goods used in all sectors. This applies to motor cars, trucks, and wagons. Fortunately, for these categories, as noted at the beginning of this report, there are statistics which indicate for each year the stock of vehicles in operation by sectors of activity. Distribution coefficients were established which were applied in order to interpolate or project for other years the distribution recorded for a given period.

It would seem that this allocation, according to the criterion of main utilization or destination, together with probable and sometimes rather tentative distribution by sectors, must fall within reasonable margins of approximation, since it has been possible to make use of series by relatively small groups of industries of origin and statistical indices on distribution for given periods, and since it is also to be expected that there is some offsetting compensation for possible errors.

It would be desirable to compare these allocations with census figures or other statistical data referring to the value of fixed capital. But this could be done only for the industrial sector, since the 1935 and 1946 census record data correspond to the book value (1935) and market value (1946) of the capital invested in this activity.

The census figures had to be adjusted so that they could be expressed in terms of 1950 prices and in order to eliminate the value of the land which is included in the data with the value of buildings. Although considerable information was available on deflation indices by sectors of goods and on criteria useful for separating the value of the land, the census figures adjusted to 1950 prices must obviously be taken as rough estimates, since serious difficulties arise when dealing with the 1935 book value, and the impression is given that the 1946 census values must not be subject to a standard and relatively strict criterion of valuation because of the complexity in practice of replying to the question in the census form of that year. Table I summarizes the results of this comparison.

It will be noted that the partial figures for each category show sizeable differences but that the totals indicate a surprising degree of similarity. Nevertheless, it would be illogical to infer from this single experiment final conclusions concerning the accuracy of the results obtained or the effectiveness of the method used as compared with the census results. Insufficient information is available for an appreciation to be made of the

accuracy of the deflation and of the adjustments in the 1935 census figures, and, generally speaking, it is doubtful whether the 1946 census figures correspond strictly to a valuation in terms of the current prices for that year of fixed capital invested

TABLE I

Fixed Capital Invested in Mining, Manufacturing, and Construction Industries

(In millions of pesos at 1950 prices)

Category	Adjusted Census Figures		Figure Obtained by Accumulation of Annual Depreciated Investment	
	1935	1946	1935	1946
1. Machinery, installations, tools, etc.	7,258	7,485	7,580	6,838
2. Vehicles and other transport equipment	1,535	1,885	1,783	2,457
3. Buildings	7,556	7,043	7,074	7,780
Total	16,349	16,413	16,437	17,075

in industry. Yet, despite all these shortcomings, this experiment may be regarded as a means of showing that the economic concepts used in taking the census coincide with those used in the procedure of accumulating depreciated investment, and it also indicates, to a certain extent, the probable margin of error of the method adopted for this estimate of fixed capital.

VII. CONCLUSIONS

This attempt to determine the depreciated value of the stock of capital goods in Argentina, its statistical and economic interpretation and the use made of these estimates in the analysis and projections leads to the following conclusions:

(1) The method adopted seems to offer a practical and reasonably acceptable procedure, despite the complexity of the subject, for estimating the value of fixed capital by categories of goods and by large economic sectors of allocation.

(2) It will be seen that the following aspects require further development: periodical censuses of the fixed reproducible capital stock; compilation of prices of new and used capi-

tal goods; and investigation of the possibilities of deriving some objective standards for taking into account the variations in quality and intensifying the study of the productive capacity in terms of the age of the producing equipment.

(3) Two different systems of depreciation seem to offer themselves: one based on the law of market prices of used capital goods, and the other based on the (current) consumption of capital during the period or in the variation of productive capacity. The former would be influenced, *inter alia*, by the obsolescence and by the residual productive capacity of the equipment, and the latter depends on the 'need for replacements to maintain initial productive capacity'. The first criterion is what we might term the 'market price' or 'economic value' criterion and is the one which E. F. Denison apparently advocates; the second is connected with physical replacement requirements and regards capital rather as a factor of productive capacity (E. D. Domar, R. Eisner, E. Schiff *et al.*)

(4) The method of estimation actually adopted (perpetual inventory) obviously has conceptual and operational advantages because it is inherent in the structure and concepts of national accounts.

(5) In the particular case of this, the estimates of the stock of capital embody the practical problems and critical observations made to the estimate of investment by the commodity flow method.

TABLE II

Fixed Reproducible Capital in Argentina, by Type of Capital Good, 1935–55

(Millions of pesos of 1950)

Year	Machinery and Equipment				Construction and Improvements				Total
	Machinery and Motors	Transport and Communications Equipment	Other Producers' Durable Goods	Sub-total	Agricultural Improvements and Housing	Private Non-agricultural Construction	Public Works	Sub-total	
1935	12,867·1	27,784·1	9,257·9	49,909·1	13,953·1	67,545·4	23,232·8	104,731·3	154,640·4
1936	12,776·8	27,523·7	9,263·0	49,563·5	13,989·4	67,003·4	24,583·3	105,576·1	155,139·6
1937	13,060·8	28,146·2	9,407·4	50,614·4	14,018·2	67,087·8	26,366·9	107,472·9	158,087·3
1938	13,474·1	28,893·5	9,656·3	52,023·9	14,172·7	67,331·1	28,454·4	109,958·2	161,982·1
1939	13,301·9	28,576·5	9,721·6	51,600·0	14,373·6	67,674·1	29,983·0	112,030·7	163,630·7
1940	12,993·7	27,982·2	9,636·9	50,612·8	14,384·8	67,713·2	31,161·8	113,259·8	163,872·6
1941	12,475·9	27,357·4	9,546·1	49,379·4	14,261·4	68,194·2	32,122·0	114,577·6	163,957·0
1942	11,914·9	26,332·3	9,204·2	47,451·4	14,394·2	68,941·5	32,801·9	116,137·6	163,589·0
1943	11,213·1	25,016·6	8,936·6	45,166·3	14,346·1	69,840·7	33,443·7	117,630·5	162,796·8
1944	10,624·4	23,672·5	8,656·7	42,953·6	14,475·9	71,117·9	34,676·9	120,270·7	163,224·3
1945	10,107·9	22,267·8	8,454·9	40,830·6	14,557·1	72,343·4	35,738·9	122,639·4	163,470·0
1946	10,019·0	22,012·7	8,403·2	40,434·9	14,674·8	74,120·8	36,627·3	125,422·9	165,857·8
1947	11,064·9	26,343·3	8,912·7	46,320·9	14,830·8	76,069·8	37,349·8	128,250·4	174,571·3
1948	13,014·2	27,689·5	9,533·8	50,237·5	15,014·9	78,406·8	39,285·7	132,707·4	182,944·9
1949	13,957·6	26,957·5	9,633·7	50,548·8	15,098·2	80,576·5	42,069·2	137,743·9	188,292·7
1950	14,778·6	26,046·0	9,716·0	50,540·6	15,324·9	83,335·5	44,568·6	143,229·0	193,769·6
1951	15,532·9	25,930·2	10,059·1	51,522·2	15,472·7	86,127·3	46,757·3	148,357·3	199,879·5
1952	16,240·1	25,243·5	10,192·7	51,676·4	15,590·6	88,533·9	47,919·8	152,044·3	203,720·7
1953	16,867·7	24,891·5	10,142·3	51,901·5	15,688·8	90,368·7	49,069·8	155,127·3	207,028·8
1954	17,439·9	24,571·4	10,299·2	52,310·5	15,809·6	92,457·4	50,755·9	159,022·9	211,333·4
1955	18,170·7	24,787·2	10,476·4	53,434·3	16,140·9	94,946·6	52,295·3	163,382·8	216,817·1

TABLE III

Fixed Reproducible Capital in Argentina, by Economic Sector,
1935–55

(Millions of pesos of 1950)

Year	Agriculture	Manufacturing, Mining, and Construction	Transport, Communications, Electricity, Commerce, Housing, and Personal Services	Public Works	Total
1935	20,186·7	16,436·4	94,784·5	23,232·8	154,640·4
1936	20,091·1	16,563·0	93,902·2	24,583·3	155,139·6
1937	20,351·4	17,218·2	94,150·8	26,366·9	158,087·3
1938	20,758·9	17,790·7	94,978·1	28,454·4	161,982·1
1939	20,789·1	17,877·4	94,981·1	29,983·0	163,630·6
1940	20,502·1	17,812·5	94,396·2	31,161·8	163,872·6
1941	19,895·2	17,686·4	94,253·4	32,122·0	163,957·0
1942	19,505·1	17,420·1	93,861·9	32,801·9	163,589·0
1943	18,899·6	17,042·6	93,410·9	33,443·7	162,796·8
1944	18,527·1	16,766·1	93,254·2	34,676·9	163,224·3
1945	18,157·3	16,556·8	93,017·0	35,738·9	163,470·0
1946	18,052·8	17,074·1	94,103·6	36,627·3	165,857·8
1947	18,806·4	19,963·2	98,451·9	37,349·8	174,571·3
1948	19,398·7	22,783·4	101,477·1	39,285·7	182,944·9
1949	19,341·0	23,996·2	102,886·3	42,069·2	188,292·7
1950	19,558·8	24,996·1	104,646·1	44,568·6	193,769·6
1951	19,814·4	26,312·1	106,995·7	46,757·3	199,879·5
1952	20,101·4	27,053·6	108,645·8	47,919·8	203,720·6
1953	20,368·0	27,525·9	110,065·1	49,069·8	207,028·8
1954	20,414·1	28,214·0	111,949·4	50,755·9	211,333·4
1955	20,919·0	29,163·9	114,438·9	52,295·3	216,817·1

TABLE IV
Gross Fixed Investment in Argentina, by Type of Capital Good, 1915–55
(Millions of pesos of 1950)

Year	Machinery and Equipment							Construction and Improvements				Total	
	Machinery and Motors		Transport and Communications Equipment		Other Producers' Durable Goods	Sub-total		Agricultural Improvements and Housing	Private Non-agricultural Construction	Public Works	Sub-total	Excluding Repairs	Including Repairs
	Excluding Repairs	Including Repairs	Excluding Repairs	Including Repairs		Excluding Repairs	Including Repairs						
1915	397·2	..	378·0	..	316·7	1,091·9	..	665·8	867·9	567·8	2,101·5	3,193·4	..
1916	425·9	..	341·8	..	370·7	1,138·4	..	570·3	729·9	439·9	1,740·1	2,878·5	..
1917	271·0	..	377·6	..	239·6	888·2	..	563·8	575·8	224·9	1,364·5	2,252·7	..
1918	281·1	..	309·0	..	196·3	786·4	..	607·8	711·0	171·0	1,489·8	2,276·2	..
1919	376·4	..	302·4	..	344·8	1,023·6	..	561·2	835·4	163·5	1,560·1	2,583·7	..
1920	653·5	..	563·6	..	597·0	1,814·1	..	923·2	1,800·6	275·2	2,999·0	4,813·1	..
1921	799·5	..	715·4	..	692·7	2,207·6	..	665·1	2,070·9	449·2	3,185·2	5,392·8	..
1922	592·5	..	1,181·0	..	553·7	2,327·2	..	730·1	2,757·6	490·8	3,978·5	6,305·7	..
1923	994·4	..	1,332·4	..	686·2	3,013·0	..	751·1	4,152·7	735·1	5,638·9	8,651·9	..
1924	1,367·3	..	1,705·3	..	755·5	3,828·1	..	719·4	3,985·0	744·9	5,449·3	9,277·4	..
1925	1,318·6	..	2,030·1	..	826·6	4,175·3	..	909·1	3,625·5	604·0	5,138·6	9,313·9	..
1926	1,524·0	..	2,118·0	..	955·6	4,597·6	..	781·2	3,041·5	795·9	4,618·6	9,216·2	..
1927	1,324·1	..	2,514·5	..	960·5	4,799·1	..	865·7	3,390·3	1,504·9	5,760·9	10,560·0	..
1928	1,539·5	..	3,627·8	..	879·7	6,047·0	..	885·9	3,976·9	1,615·3	6,478·1	12,525·1	..
1929	1,821·9	..	3,869·3	..	837·2	6,528·4	..	853·6	4,969·1	1,957·5	7,780·2	14,308·6	..
1930	1,369·0	..	2,575·2	..	856·3	4,800·5	..	804·6	4,425·7	2,037·4	7,267·7	12,068·2	..
1931	638·5	693·5	1,094·0	1,572·1	573·7	2,306·2	2,839·3	690·6	2,976·5	961·1	4,628·2	6,934·4	7,467·5
1932	443·6	498·6	391·4	839·5	404·3	1,239·3	1,742·4	713·4	2,097·9	732·6	3,543·9	4,783·2	5,286·3
1933	481·2	536·2	564·8	997·7	453·9	1,499·9	1,987·8	668·6	2,008·8	1,221·8	3,899·2	5,399·1	5,887·0
1934	527·5	582·5	1,148·8	1,553·8	471·4	2,147·7	2,607·7	699·5	2,603·5	1,833·9	5,136·9	7,284·6	7,744·6
1935	723·0	779·0	1,318·5	1,738·2	675·5	2,717·0	3,192·7	771·3	1,991·0	1,630·6	4,392·9	7,109·9	7,585·6
1936	809·1	878·5	1,432·5	1,916·5	693·0	2,934·6	3,488·0	694·7	1,725·0	2,076·2	4,495·9	7,430·5	7,983·9
1937	1,188·2	1,271·1	2,300·8	2,849·8	873·5	4,362·5	4,994·4	753·1	2,367·0	2,545·3	5,665·4	10,027·9	10,659·8
1938	1,356·7	1,449·4	2,481·6	3,083·6	1,007·2	4,845·5	5,540·2	735·6	2,554·0	2,894·5	6,184·1	11,029·6	11,724·3
1939	825·8	928·3	1,486·9	2,142·3	859·9	3,172·6	3,930·5	854·0	2,685·0	2,387·4	5,926·4	9,099·0	9,856·9
1940	720·7	818·0	1,275·1	1,935·1	713·8	2,709·6	3,466·9	702·9	2,414·0	2,078·8	5,195·7	7,905·3	8,662·6
1941	509·0	599·2	1,303·6	1,970·4	665·3	2,477·9	3,234·9	668·0	2,883·0	1,897·4	5,448·4	7,926·3	8,683·3
1942	472·8	558·9	894·1	1,628·0	406·8	1,773·7	2,593·7	694·5	3,185·0	1,651·1	5,530·6	7,304·3	8,124·3
1943	317·1	405·2	590·3	1,392·1	427·4	1,334·8	2,224·7	659·2	3,378·0	1,641·4	5,678·6	7,013·4	7,903·3
1944	387·4	472·7	500·7	1,377·5	386·1	1,274·2	2,236·3	763·3	3,800·0	2,261·2	6,824·5	8,098·7	9,060·8
1945	416·8	503·4	495·0	1,333·1	452·3	1,364·1	2,288·8	768·8	3,800·0	2,130·5	6,699·3	8,063·4	8,988·1
1946	795·5	886·5	1,666·7	2,454·5	587·5	3,049·7	3,926·5	829·4	4,403·0	1,993·8	7,226·2	10,275·9	11,152·7
1947	1,890·0	1,987·0	6,206·6	7,054·5	1,134·9	9,231·5	10,176·4	881·3	4,637·0	1,859·5	7,377·8	16,609·3	17,554·2
1948	2,833·9	2,914·0	3,388·9	4,238·5	1,299·1	7,521·9	8,451·6	960·1	5,091·0	3,105·2	9,156·3	16,678·2	17,607·9
1949	1,873·8	1,959·5	1,281·7	2,146·3	844·1	3,999·6	4,949·9	858·2	4,998·0	4,004·5	9,860·3	13,860·3	14,810·6
1950	1,733·3	1,836·1	1,031·0	1,856·2	849·2	3,613·5	4,541·5	883·0	5,659·0	3,793·1	10,335·1	13,948·6	14,876·6
1951	1,674·2	1,786·6	1,764·3	2,596·5	1,127·8	4,566·3	5,510·9	916·4	5,776·0	3,552·5	10,244·9	14,811·2	15,755·8
1952	1,674·5	1,787·5	1,169·1	2,044·5	945·1	3,788·7	4,777·1	903·9	5,478·0	2,591·9	8,973·8	12,762·5	13,750·9
1953	1,677·1	1,784·4	1,519·6	2,412·5	742·3	3,939·0	4,939·2	936·9	4,989·0	2,627·1	8,553·0	12,492·0	13,492·2
1954	1,692·0	1,807·7	1,584·6	2,493·2	926·2	4,202·8	5,227·1	991·9	5,317·0	3,210·0	9,518·9	13,721·7	14,746·0
1955	1,900·1	2,041·2	2,104·8	3,047·7	954·4	4,959·3	6,043·3	1,023·6	5,796·2	3,114·9	9,943·8	14,903·1	15,986·1

TABLE V

Some Partial Long-term Series on Gross Fixed Investment in Argentina, 1885–1915

(Millions of pesos of 1950)

Year	Public Works	Private Non-agri-cultural Con-struction	Durable Goods for Communi-cations	Railroad and Inter-urban Transport Equipment	
				Ways and Instal-lations	Rolling Stock
1885	238·6	907·6	..	696·1	..
1886	226·8	935·1	..	295·2	..
1887	279·3	962·7	..	273·6	..
1888	302·5	996·2	..	922·5	..
1889	326·0	1,029·6	..	1,332·7	..
1890	221·1	1,064·3	..	2,323·0	..
1891	198·1	1,100·7	..	1,083·1	..
1892	226·8	1,136·9	..	198·2	..
1893	221·1	1,174·8	..	195·8	..
1894	232·5	1,215·4	..	107·8	..
1895	285·0	1,247·4	..	106·0	..
1896	415·6	1,283·6	..	358·2	..
1897	243·6	1,334·8	..	347·7	..
1898	518·9	1,373·7	..	217·6	..
1899	372·4	1,411·4	..	96·8	..
1900	288·6	1,452·1	..	126·5	..
1901	273·3	1,441·0	..	269·1	..
1902	205·9	1,322·1	5·8	245·2	16·7
1903	284·2	1,284·2	15·0	271·4	49·2
1904	675·6	1,400·5	13·1	497·3	113·7
1905	1,353·9	2,260·2	22·7	876·1	288·2
1906	905·8	2,852·2	37·9	1,444·0	371·0
1907	744·5	4,079·7	49·5	1,858·4	545·5
1908	705·9	3,982·2	40·9	1,119·1	261·2
1909	1,654·6	3,952·6	52·6	1,055·0	425·3
1910	1,593·4	5,034·0	68·8	1,190·6	498·7
1911	1,527·1	4,993·5	77·7	1,275·0	439·3
1912	1,084·5	3,836·4	72·0	678·5	380·9
1913	883·0	3,844·4	127·2	776·3	465·6
1914	807·6	1,692·4	87·8	378·0	282·2
1915	567·8	867·9	37·1	76·1	39·3

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TABLE VI

Depreciation of Fixed Reproducible Capital in Argentina, by Type of Capital Good, 1935–55

(Millions of pesos of 1950)

Year	Machinery and Equipment				Constructions and Improvements				Total
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	Machinery and Motors	Transport and Communications Equipment	Other Producers' Durable Goods	Sub-total	Agricultural Improvements and Housing	Private Non-agricultural Construction	Public Works	Sub-total	
1935	956·8	2,156·8	661·2	3,774·8	821·4	2,245·2	697·9	3,764·5	7,539·3
1936	968·8	2,177·0	687·9	3,833·7	731·4	2,267·0	725·7	3,724·1	7,557·8
1937	987·1	2,227·3	729·1	3,943·5	796·3	2,282·6	761·7	3,840·6	7,784·1
1938	1,036·1	2,336·3	758·3	4,130·7	654·1	2,310·7	807·0	3,771·8	7,902·5
1939	1,100·5	2,459·3	794·6	4,354·4	725·1	2,342·0	858·8	3,925·9	8,280·3
1940	1,126·2	2,529·4	798·5	4,454·1	745·7	2,374·9	900·0	4,020·6	8,474·7
1941	1,117·0	2,595·1	756·1	4,468·2	845·4	2,402·0	937·2	4,184·6	8,652·8
1942	1,119·9	2,653·2	748·8	4,521·9	614·7	2,437·7	971·2	4,023·6	8,545·5
1943	1,107·0	2,707·7	695·0	4,509·7	761·3	2,478·8	999·6	4,239·7	8,749·4
1944	1,061·4	2,721·6	665·2	4,448·2	687·5	2,522·8	1,028·0	4,238·3	8,686·5
1945	1,019·9	2,737·8	654·1	4,411·8	736·6	2,574·5	1,068·5	4,379·6	8,791·4
1946	973·4	2,709·5	639·2	4,322·1	769·7	2,625·6	1,105·4	4,500·7	8,822·8
1947	941·1	2,724·0	625·4	4,290·5	779·3	2,688·0	1,137·0	4,604·3	8,894·8
1948	964·7	2,892·3	678·0	4,535·0	840·0	2,754·0	1,169·3	4,763·3	9,298·3
1949	1,016·1	2,878·3	744·2	4,638·6	847·9	2,828·3	1,221·0	4,897·2	9,535·8
1950	1,015·1	2,767·7	766·9	4,549·7	725·3	2,900·0	1,293·7	4,919·0	9,468·7
1951	1,032·3	2,712·4	784·7	4,529·4	831·6	2,984·2	1,363·8	5,179·6	9,709·0
1952	1,080·2	2,731·2	811·5	4,622·9	860·0	3,071·4	1,429·4	5,360·8	9,983·7
1953	1,156·9	2,764·5	792·7	4,714·1	906·7	3,154·2	1,477·1	5,538·0	10,252·1
1954	1,235·5	2,813·3	769·3	4,818·1	940·1	3,228·3	1,523·9	5,692·3	10,510·4
1955	1,310·3	2,831·9	777·2	4,919·4	769·3	3,306·8	1,574·6	5,650·7	10,570·1