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CAPITAL FORMATION IN IRAQ, 1957-1962

Jawad Mahmood Hashim

London School of Economics & Political Science

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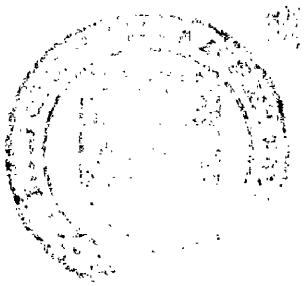

ABSTRACT

The importance of capital formation estimates in general, and for an underdeveloped country such as Iraq in particular, emerges from the fact that plans for the economy can only be properly drawn up, and the significance of such plans for economic development can only be fully understood, on the basis of information about the total available resources in the economy and the part of these devoted to public and private capital formation. The main purpose of measuring capital formation, therefore, is to estimate that part of National Income which is devoted to the addition to the country's existing stock of physical asset. Though Iraq has witnessed during the last decade a large and interesting development of national statistics covering various aspects of the economy, detailed capital formation estimates were not contemplated.

Consequently, it was decided to utilize the available statistics and attempt to build up as complete an estimate of Gross Domestic Fixed Capital Formation as possible for the period 1957 through 1962.

The fundamental objective of this study, therefore, is to produce the estimates and describe their methods of estimation in a meaningful way. It is not the object of this study, however, to undertake an economic analysis of the role of investment.

The study concentrates on one aspect of capital formation : the annual gross additions to the existing stock of fixed capital in terms of new construction and investment in producers' durables. The estimates are presented in three sets of calssification, namely, by type of asset, by industry group, and by type of purchaser of capital goods. In each set, the two groups of transactors - the public and the private sectors - are distinguished. Furthermore, the figures are expressed in current as well as in constant (1957) prices.

Finally, it is hoped that the present estimates of capital formation will fill an empirical gap in Iraq's statistics in a manner suiting several purposes.

* * * * *

ACKNOWLEDGEMENTS

When this study was begun in the Spring of 1964, it was always present in my mind that to undertake a study of this type, calling for such a large volume of documents and source data, could be possible only with the help of many people. Those who have helped me in the process of collecting the basic material are too numerous to mention in detail. However, I wish in particular to thank and express my heartfelt gratitude to my supervisors, Professor R. G. D. Allen and Dr. W. F. Maunder, who have given generously of their time and knowledge to help me in exploring the intricacies of the basic data. It was their constructive criticism, encouragement and invaluable advice that made it possible to present this study.

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Bank of Iraq, who provided me with a working office and gave me access to the statistical material of the Central Bank as well as to all the primary data he had collected for his national income study. It is equally pleasant to record my special thanks to the many officials of the Bank for their invaluable help and assistance. In particular, I would like to thank Mr. Muthanna Salah el-din Mahmood, Mr. Abdul Wahid Al-Mackzomi, Miss Nuha Sami Fattah, Miss Amal Al-Jaddoä, Mr. Majeed Al-Qaisi, and Mr. Sami Atto.

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The construction of the price indices which I am using in this study would have taken a much longer time without the help of Mr. Nuri Al-Jazairi, at present at the London School of Economics, who undertook the task of putting the primary data through the computer.

It would also have been impossible to present this study without the help of many officials at the Iraq Petroleum Company. In particular, I am grateful to Mr. Sinclair Road, Mr. E. G. Bernard, and Mr. G. Grandin for providing whatever statistical evidence I asked for.

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Finally, to my wife, for her patience and encouragement, I owe a debt which can never be repaid and can only be recorded.

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ABBREVIATIONS

BPC	Basrah Petroleum Company.
CBI	Central Bank of Iraq.
C.B.S.	Central Bureau of Statistics.
C.O.E.	Crude Oil Extraction.
F.T.S.	Foreign Trade Statistics.
GDFCF	Gross Domestic Fixed Capital Formation. (This term is used in referring to aggregate Gross Fixed Capital Formation in the country as a whole.)
GFCF	Gross Fixed Capital Formation. (This term is used when referring to Gross Fixed Capital Formation in a particular type of asset, a particular sector (i.e. private or public), or a particular industry. The aggregate of GFCF in all types of asset, all sectors, or all industries, will then equal GDFCF.)
GDP	Gross Domestic Product.
GNP	Gross National Product.
G.O.	Gross Output.
GORA	Government Oil Refineries Administration.

GVA	Gross Value Added.
IBRD	International Bank for Reconstruction and Development.
IPC	Iraq Petroleum Company.
I.S.I.C.	International Standard Industrial Classification of All Economic Activities.
KOC	Khanaqin Oil Company.
MPC	Mosul Petroleum Company
NIC	National Insurance Company.
NNP	Net National Product.
P.B.S.	Principal Bureau of Statistics.
S.I.T.C.	Standard International Trade Classification.
U.N.S.O.	United Nations' Statistical Office.

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CURRENCY AND LAND MEASURES IN IRAQ

One Iraqi Dinar (ID) = 1,000 fils = £1 Sterling.

One Meshara or Donum of Land = 0.62 acre or 0.25 hectare.

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INTRODUCTION TO THE PLAN OF WORK

The last few decades have witnessed a considerable interest in the field of capital formation. The subject has been approached from several angles and various methods have been adopted to solve the problems of its measurement. From the many studies, one could point out authors who took the structural flows approach such as Leontief,[1] Kuznets,[2] Clark,[3] and the theoretical approach such as Robinson,[4] Domar,[5] and Harrods.[6]

The recognition of the importance of capital formation, especially after the appearance of Keyne's General Theory, is due to the fact that the process of capital formation is strategic, not only for long-term economic change, but also for the short-term fluctuations that affect the course of a country's economic activity. Capital formation is essential to the economy's

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1) Leontief, W. and Others, Studies in the American Economy; Theoretical and Empirical Explorations in Input-Output Analysis (New York, Oxford University Press, 1953).
2) Kuznets, S, Income and Wealth of United States: Trend and Structure, (London, Bowes & Bowes, 1952); also 'Commodity-Flow and Capital Formation", N.B.E.R., Vol. One, (New York, 1938).
3) Clark, C., Conditions of Economic Progress, (London, Macmillan, 1957).
4) Robinson, J., The Accumulation of Capital, (London, Macmillan, 1956).
5) Domar, E., "Capital Expansion, Rate of Growth and Employment", (Econometrica, April 1946).
6) Harrod, H.R.F., Towards a Dynamic Economics: Some recent developments of Economic Theory and their application to policy, (London, Macmillan, 1948).

productivity and growth; it represents the real savings of the nation.

The process of capital formation involves three distinct activities, whereupon the intensity and efficiency with which they are carried on the volume of capital formation depends. These activities are: saving, finance, and investment itself. The first two activities are ex-ante concepts of capital formation, while the third activity is the ex-post concept, i.e. the actual commitment of resources to the production of capital goods.

In the present study we are concerned with the measurement of the third activity, i.e. the realized fixed capital formation, while changes in inventories is left outside the scope of this study for two reasons. First, such changes in Iraq are insignificant as can be seen from Tables 1 and 11 of Appendix IX. Second, the scarcity of data on its magnitude means that its inclusion would introduce an unnecessary margin of error to the figures of capital formation.

The concept of capital formation as used here, refers to Gross Domestic Fixed Capital Formation in terms of gross additions to construction, and to producers' durable machinery, equipment, furniture and fixtures, and transport equipment within the political boundary of Iraq. The term "gross additions", however, does not cover expenditure on repair work and on military construction and equipment. Furthermore, the value of land and the cost of its possible intersectoral transfers (if any) are not

accounted for in the present estimates, but expenditure on land reclamation and improvement is considered as part of the gross capital formation of the country.

No attempt is made to adjust the estimates for the current consumption of fixed capital. Two reasons may be suggested for dispensing with this adjustment. First, since capital consumption is not an identifiable set of transactions, then its measurement would be at best a rough estimate. Second, the indeterminateness of the adjustment for capital consumption reflects not only lack of reliable data, but also its own necessary arbitrary nature. If, however, a crude measure of capital consumption is desired, then I suggest the estimates of the provisions for the consumption of fixed capital (shown in Appendix IX Table 2). There is no need to emphasize that these "provisions" do not represent the replacement value of worn out assets. They are, at their best, rough approximations.

The estimation procedure involved the application of two general methods: the expenditure approach and the commodity-flow approach. The first approach was used to estimate gross fixed capital formation in construction, with a breakdown of the figures into residential buildings, non-residential buildings and other construction and works. The second approach was employed in estimating gross fixed capital formation in machinery, equipment and transport facilities. As will be gathered from the

succeeding chapters, only 25 per cent of total capital formation was derived by the second method, while the remaining 75 per cent was directly obtained from the expenditure side.

In so far as the reliability of estimates is concerned, although it is unrealistic to claim that they are definitive - because in every estimate, whether of capital formation or other variables of the national income, there is a margin of error which cannot be statistically determined - nevertheless it is felt that they enjoy a high degree of reliability that would yield interesting results on which further studies could be built. An assessment of the reliability of the present estimates is made by assigning to each component of capital formation a subjective margin of error. These error margins, however, should not be taken as presenting absolute certainty. They may simply be interpreted to mean that in the opinion of the estimator and according to the present state of knowledge, there is 95 per cent chance that the true value of the estimates lies within the limits set.

The choice of the period 1957 - 1962 was mainly due to the fact that major statistical sources containing reasonable details were available only from 1957 onwards. The time-lag of two to three years between the year to which the statistics refer and the year of their publication was by far the main obstacle for not covering years after 1962.

The study falls into fifteen chapters, supplemented by nine appendices. Chapter I is devoted to an introductory background of Iraq. Chapter II is designed to give a summary of the concepts and definitions of capital formation, methods of its measurement, and other conceptual and practical problems. In addition, this chapter describes the nature and scope of the price indices which we have constructed for the deflation of the estimates to 1957 prices. Chapter III, which is divided into two parts, presents the details on the sources of data and methods of estimation. Part one contains a description of the major statistical sources from which the estimates were drawn up. Part two, on the other hand, contains a detailed exposition of the methods by which the basic data were utilized to arrive at the capital formation estimates. For statistical convenience, this part is sub-divided into three sections, A, B, and C. Section A is concerned with the methods of estimating gross fixed capital formation in each type of asset. Section B deals with the methods by which the investment in each industry group was arrived at. In this section, it will be seen that the economy is divided into eleven sectors designated as "industry groups". For each industry the capital formation estimates are classified by type of asset. Furthermore, wherever applicable, public and private investments are shown separately. The methods of classifying investment figures by type of purchaser are exposed in Section C. Here the economy

is divided into three major purchasers of capital goods, namely, private enterprises and non-profit institutions, public enterprises, and General Government.

In Chapter IV, the results of the estimates are brought together and shown in a concise form in more than twenty-five tables. The chapter also contains a comparison between the present and previous estimates. An assessment of the reliability of the present estimates is also given in chapter IV.

Chapters V to XV are devoted to the description of the sources and methods of estimating the gross fixed capital formation in the eleven industry groups to which the economy is divided. There is, however, a certain relationship between these chapters, i.e. chapter V through XV, and chapter III. Thus, where the methods of estimating the investment in a particular industry group is similar to those described in chapter III, no details on the methods of estimation are given in the chapter relating to that particular industry. The order of these chapters and the industry group to which each of them refers is as follows : Chapter V, Agriculture; Chapter VI, Mining and Quarrying; Chapter VII, Manufacturing; Chapter VIII, Construction; Chapter IX, Electricity and Water; Chapter X, Transportation, Storage and Communications; Chapter XI, Wholesale and Retail Trade; Chapter XII, Banking and Insurance; Chapter XIII, Ownership

of Dwellings; Chapter XIV, Public Administration; and, finally, Chapter XV, Services.

It is to be noted, however, that Chapter VII, which pertains to "Manufacturing" contains additional information on a sample of 155 private manufacturing establishments, which was collected during our field work in Iraq in the summer of 1965. The information contained therein can be of use for further studies. It shows the capital formation of these establishments for the period 1957 - 1962, in addition to their gross output, input, and gross value added during 1957 and 1962. The value added figure is broken down into four components, namely, wages and salaries, rent, profit and depreciation.

So far as the appendices are concerned, their arrangement is as follows : Appendix I contains the basic data from which estimates of private investment in residential and non-residential buildings during 1960 - 1962 were derived.

Appendix II is, by far, the most important one because it gives the details of imported items which were considered as machinery and equipment, the conversion of the Iraqi Customs Code of these items into the Standard International Trade Classification (S.I.T.C.) and the International Standard Industrial Classification (I.S.I.C.), and the allocation of each item to the relevant industry group.

Appendix III, which shows the imports of furniture and fixtures, and Appendix IV, which shows the imports of transport equipment, are similar to that of machinery and equipment. The former (i.e. Appendix III) shows the imports of items which were classified as furniture and fixtures, the conversion of their customs code into the S.I.T.C. and I.S.I.C. The latter (i.e. Appendix IV) shows the imports of items which were classified under transport equipment, the conversion of their customs code into the S.I.T.C. and I.S.I.C., and also the treatment of each individual type of transport equipment in the course of their distribution by industry group. It is hoped that Appendices II, III and IV will set the frame for the treatment of imported capital equipment in future studies in this field.

Appendix V contains the capital expenditure figures derived from the accounts of the Central Government, Development Board, Municipalities and the Local Administrations. The figures are arranged in a manner suiting the purpose of classifying capital expenditure by type of asset and by industry group.

Appendix VI contains several tables showing the cross valuation of imported capital goods and of cement used in domestic construction for the years 1957 - 1962. These tables will be useful in constructing various types of index numbers.

Private and public expenditures on repair and maintenance and Government expenditure on military construction are shown in Appendix VII.

Appendix VIII contains information pertaining to the number of taxis, private cars and other relevant data.

Appendix IX contains tables showing the various estimates of National Income and Expenditure of Iraq for the period 1950 - 1963. It also contains an estimate of the capital formation from 1922 - 1957.

Finally, due to the many appendices, the study has been divided into two volumes. Volume One contains the main text of the dissertation (i.e. Chapters I to XV) and the bibliography. Volume Two embraces the nine appendices referred to earlier.

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VOLUME ONE

CHAPTER I

IRAQ: AN INTRODUCTORY BACKGROUND

1. INTRODUCTION

Iraq covers an area of about 172,000 square miles, with a population of 7 million. The annual average rate of growth of the population is about 2 per cent. It was estimated, in 1957, that the rural population constituted 65 per cent of the total population; but as a result of migration from rural to urban areas, the rate of increase in urban population is estimated to be over 2.5 per cent, as against an increase of less than 2 per cent in the rural population.

The country possesses an abundance of agricultural land. It is estimated that about 6.4 million hectares are used for agricultural purposes; while unused and potentially productive lands are estimated to be 12 million hectares, or about 27 per cent of the total area of Iraq. Thus, assuming that the rural population is roughly 4.6 million, with an average of six persons per family, land actually under cultivation amounts to 8.4 hectares per family, or 1.4 hectares per person (this is approximately 10 times as much as in Egypt).

Prior to the 1958 Revolution, the Government had no intention

of introducing a policy of reforming agricultural land tenure, and hence the typical land tenure system was that of the large semi-feudal farm.

The Agrarian Reform Law promulgated by the new regime in 1958 limited agricultural holdings to 250 and 500 hectares in irrigated and rainfed areas respectively. The immediate result of this law was a decline in agricultural production due to both economic and political factors. The economic factor consisted of the Government 's failure to replace the landlords' position vis-à-vis the farmers in respect of provision of financial aid, technical assistance and marketing facilities. There was also the administrative delay causing a time lag between expropriation and distribution of land to farmers. The political factor aggravated the situation by creating an unhealthy atmosphere of instability which was hardly conducive to economic progress.

2. EMPLOYMENT

No reliable surveys on employment exist in the country, but estimates made on several occasions[1)] suggest a labour force of about 2 million, of which 7 per cent is said to be employed in industry, including

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1) IBRD: Current Economic Position and Prospect of Iraq, Report No. AS-100a, September 30, 1963.

homeworkers. The 1962 Monthly Industrial Survey[1] indicated that 78,000 persons were employed in 1186 industrial establishments with 10 or more employees, with an annual wage bill amounting to ID 19 million (about ID 245 per employee). The number of persons employed in establishments with less than 10 employees (excluding homeworkers) is given as 19,000 paid employees (and 24,000 persons as owners) in 20,191 establishments. The annual wage bill for the paid employees is given as ID 3 million; that is, roughly ID 158 per employee.

The Census of Agriculture and Livestock for 1958/1959 indicates that about 1.8 million persons are directly engaged in agriculture, but unemployed labour resources in agriculture is estimated to be more than 50 per cent of this figure.[2]

3. THE OIL AND THE ECONOMY

The discovery of oil in 1927 transformed the whole economic prospect of Iraq. Oil production did not exceed 3 million tons until 1950, when it increased very rapidly; likewise Government royalties which did not exceed ID 3 million until that year, began to rise thereafter making the year

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1) Returns of the Monthly Industrial Survey 1962, CBS, Ministry of Planning, Baghdad, 1964 (in Arabic).

2) U.N. F.A.O. Mediterranean Development Project, Iraq, Country Report, No. 250, Rome, 1959, Ch.V., p.38.

1950 the turning point in the history of the country's development. Table (I - 1) shows the amount of crude oil extracted, the amount exported, and the Government oil royalties from 1934 - 1963.

From that year (1950) onwards, the oil industry has played a unique and vital role in the country's economy. In real terms, it accounts for about 50 per cent of the national income (i.e. 25% after deducting the Oil Companies' share in profits remitted abroad) as shown in Appendix IX Tables 3 and 7). The oil royalties provide roughly 90 per cent of Iraq's net foreign exchange receipts, and account for more than 65 per cent of the Government's revenue.

About 9 per cent of proven world oil resources exist in Iraq, and thus it ranks fourth among the four major Middle East oil producers, (after Kuwait, Saudi Arabia, and Iran). In 1962, Iraqi oil accounted for 16 per cent of total production of petroleum in the Middle East and for about 4 per cent of world total production.

More than 90 per cent of Iraq's oil is exported. The major market is Western Europe (89% in 1962). The remainder goes to Africa and Aden (4%), and the Far East (7%).

This enormous wealth of oil is almost the country's only source of development finance. It relieves Iraq from the greatest economic difficulty that besets most other under-developed countries in their effort to pay for a substantial volume of capital and consumer-good imports.

TABLE I - 1

PRODUCTION AND EXPORT OF OILS AND

GOVERNMENT ROYALTIES, 1934 - 1963

	Production of Crude Oil in Iraq, 1934 - 1963 (Long Tons, Million)	Crude Oil Exported from Iraq (Long Tons, Million)	Iraqi Government Oil Revenues (£ Million)
1934	0.96	0.93	1.48
1935	3.58	3.55	1.01
1936	3.91	3.88	1.05
1937	4.14	4.10	1.25
1938	4.16	4.13	1.90
1939	3.81	3.78	2.23
1940	2.35	2.32	1.79
1941	1.38	1.36	1.38
1942	2.29	2.26	1.76
1943	3.34	3.31	2.21
1944	3.93	3.88	2.45
1945	4.34	4.28	2.66
1946	4.40	4.35	2.72
1947	4.41	4.31	2.71
1948	3.10	3.02	2.14
1949	3.78	3.67	3.13
1950	6.16	6.06	6.78
1951	8.12	8.18	15.16
1952	18.06	17.47	41.44(1)*
1953	27.23	26.77	57.75(2)*
1954	29.61	29.19	68.52
1955	32.71	31.65	74.00
1956	30.61	29.16	69.17
1957	21.36	19.94	49.03
1958	34.93	33.26	80.10
1959	40.90	39.26	86.82
1960	36.54	44.50	95.36
1961	48.06	45.86	95.09
1962	48.21	45.94	95.26
1963	55.58	53.23	110.26

*(1) Includes £7,500,000 paid in 1952 as ratification payment for the period prior to 1951.

*(2) Includes 1953 £7 million settlement.

Sources: Data supplied to the writer by IPC office in London.

4. THE ECONOMIC PERFORMANCE

The economic performance of Iraq is amply represented by the National Income figures given in Appendix IX, Tables 2 - 10.

Tables 2 and 3 of Appendix IX show that during the past ten years the GNP, both at current and at constant (1956) prices, has nearly doubled. But despite this considerable economic expansion, the per-capita national income in 1962 was as low as ID 73 at constant prices (ID 76 at current prices) as shown in Table 6 of Appendix IX.

Table 7 of Appendix IX shows that the percentage contributions of the two important sectors in the Iraqi economy, namely, Agriculture and Oil, to the NNP have been moving in the opposite direction from each other. Thus, while the contribution of the oil sector was rising from 46% in 1953 to over 55% in 1963, the contribution of the agricultural sector was showing a continuous decline from 32.6% in 1953 to 16.4% in 1963.

The compound annual rate of growth of the economy as a whole amounted to 6.4% (Table 5 Appendix IX). If we exclude the agricultural sector (the growth of which was practically zero) from the GNP, the latter's rate of growth will amount to just over 8%. Moreover, if only the oil sector is excluded from the GNP, then the rate of growth of the economy becomes about 6%; but if both the oil and the agricultural sectors are excluded, the GNP's rate of growth rises to 8.2%.

However, it is unrealistic to calculate the economy's rate of growth excluding the oil sector, because of the indirect effects of the oil royalties on the economic structure of Iraq where the growth of other sectors is almost dependent on the oil industry. For instance, since oil royalties constitute about 65% of Government annual revenue, then it is self-evident that Government expenditure on development programmes, (to which 50% of oil revenues is allocated), and more than half of Government current expenditure, (to which the other 50% of oil revenues is directed), are the direct contribution of the oil sector; and hence the rates of growth of the sectors "Construction" and "Public Administration" are partially affected by the trend of the growth of the oil industry.

The Role of Public and Private Sectors in the National Economy:

In so far as the contributions of the public and the private sectors to the national income is concerned, it can be seen from Tables 9 and 10 of Appendix IX that the greater contribution is made by the private sector, though the public sector's share, which was only 15% in 1953, shows a rising trend.

However, it will be seen from our estimate of the GDFCF that, despite the fact that the public sector did not contribute more than 20% of the GNP, its contribution to GDFCF is almost equal to that of the private sector. Moreover, in some sectors, such as agriculture, to the value added of which

the public sector makes no contribution at all, nearly 75% of the investment is made by the Government.

5. GOVERNMENT DEVELOPMENT POLICY (The Development and Planning Board)

To use the increasing oil royalties for the most desirable form of economic development, the Government, in 1950, set up an autonomous agency called the "Development Board", consisting of five members nominated by the Council of Ministers for a period of five years.[1] The main purpose of the Board was to prepare "general economic and financial plans for the development of the resources of Iraq and the raising of the standard of living of her people".[2]

Initially, all the oil royalties were channelled to the financing of the Development Board's programmes; but in 1952 the amount was reduced to 70% of the total.

In 1953, a Ministry of Development was set up and the Board was represented in the cabinet by the Minister of Development. The creation of the Ministry, however, did not change the Board's financial status and effectiveness. Its budget remained autonomous and all the new Ministry's

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1) Law No. 23 of 1950, supplemented by Laws No. 22 and 35 of 1951 and Law No. 25 of 1952.

2) Ibid., Law No. 23 Article 3, item 1(a)

staff were actually under the Board's control.

During its lifetime, the Board drew up three development plans; one for the period 1951-1956 with total allocation of ID 155m.; another for 1953-1959 which was revised a year later and superceded by a new six-year plan, 1955-1960 with a total investment allocation of ID 500m.

In all these programmes, the agricultural sector received first priority. In the first programme nearly 50% of the annual allocation was devoted to the agricultural sector, with particular emphasis upon flood control projects. But with tthe completion of some of these projects, the emphasis shifted in later programmes to Communications, Housing and Buildings, and Industry, as can be seen from Table (I - 2) below.

The implementation of these projects was very slow at the beginning, with actual expenditure less than 30% of annual allocations; but towards the end of 1954 actual expenditure began to rise to over 50% of the allocations. Table (I - 2) shows that total expenditure on various development programmes was only ID 3m. (33% of total allocations) in 1951, but thereafter rose to the level of more than ID 50m. (about 53% of total allocations) in 1958.[1)]

The preparation and presentation of these plans and their

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1) The end of this year may practically be considered as the terminal period of the Development Board's Plan.

subsequent implementation suffered from several shortcomings.

First, in drawing these programmes the Development Board was influenced by the "engineers" view point on the feasibility of the proposed projects rather than the "economists".[1] No consideration was taken of "cost-benefit analysis", especially for agricultural projects.[2] Thus, a large amount of money was spent on the most costly methods of increasing agricultural production through the extension of the cultivated area, where it could have concentrated on improving the productivity of land already under cultivation.

Second, the Board's investment policy did not place enough emphasis upon industrial projects because Iraq, it was claimed, "has large comparative advantages in agricultural production, whereas the possibilities of creating new industries able to compete on equal terms with producers abroad are more limited and more remote."[3]

The operational interpretation of this view is that there is no reason for establishing any industry in the country as long as it is produced abroad with a lower cost of production. But the practical operation of the Board's policy in this respect turned out to be unrealistic and unsound.

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1) Salter, Lord: The Development of Iraq; A Plan of Action; Iraq Development Board, April 1955.
2) IBRD, September 1963.
3) Iverson, C., A Report on the Monetary Policy in Iraq, National Bank of Iraq, Baghdad, 1954, p.177.

Despite the heavy investment in the agricultural sector, it remained in an almost complete state of stagnation; while the industrial sector showed a marked responsiveness, in spite of the small amount invested in it by the Government.[1)]

The Era after the 1958 Revolution; The Planning Board

After the Revolution of 1958, the entire organization for economic development changed. In early 1959, the Development Board and the Ministry of Development were abolished and replaced by the Ministry of Planning and the Economic Planning Board. The Board became an inter-ministerial committee with the Prime Minister as chairman and eight ministers as members of the Board.[2)]

Preparation of development programmes became the responsibility of the Ministry of Planning; while the Board's duty is to review and to approve the overall plan, and superivse the implementation of the plan's projects, which are carried out by individual Ministries.

The Development Board's last plan was discontinued and replaced by a "Provisional Economic Plan" which was introduced and became operational in January 1960. In 1961, however, a "Detailed Economic Plan"

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1) Kanaan, T.H., Input-Output and Social Accounts of Iraq 1960-1963, Ministry of Planning, Baghdad, September 1965.
2) Throughout this study the term "Development Board" is used instead of the "Development and Planning Board".

for 1961-1965 was introduced calling for a total expenditure of ID 556m. (ID 111.2m. per year).

The new-regime's attitude towards development planning shifted, to some extent, from that of the ancien regime. Greater emphasis was placed upon industrialization. Tariff restrictions and import embargoes were introduced for the protection of local industrial enterprises from foreign competition. Allocations for industrial development were scaled up to 30% (or ID 167m.) of total investment called for during the 1961-1965 plan.

However, in spite of criticisms of the old regime's spending on industry, the new regime could not match it. In fact, actual expenditure (as distinct from annual allocations) on industry after 1958 declined both relatively and absolutely, as can be seen from Table (I - 2).

All in all, it is fair to say that Iraq's development record is not unsatisfactory. In fact, it is striking to observe that a country which was so neglected for centuries, and which became a political entity only in 1920, can achieve such a level of economic development.

6. NATIONAL ACCOUNTS: Summary of Previous Work

Prior to 1950, no estimate of the national income of the country was made. However, the IBRD in a "Report on the Economic Development of Iraq" published in 1952 concluded that the annual per-capita

TABLE I - 2

DEVELOPMENT BUDGET: SUMMARY OF ALLOCATIONS AND ACTUAL EXPENDITURE, 1951 - 1962*

(ID millions)

		1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Total 1951-1962
1	Agriculture, Irrigation, Drainage and Land Reclamation:													
	a. Allocations	4.7	10.6	15.0	16.3	14.1	27.0	26.6	29.5	23.1	29.6	15.6	20.2	232.3
	b. Expenditures	1.1	2.8	6.2	9.8	12.9	13.6	14.2	13.5	10.9	10.8	11.9	6.3	114.0
	% of total expenditures	35%	37%	52%	48%	41%	32%	25%	26%	22%	23%	18%	11%	49%
2	Industry, Mining and Power:													
	a. Allocations	-	3.0	5.0	6.0	4.1	17.0	16.0	11.0	9.4	21.3	12.5	24.7	130.0
	b. Expenditures	-	-	0.5	2.0	2.9	5.0	8.6	11.9	4.9	5.7	7.2	10.3	59.0
	% of total expenditures	-	-	4%	10%	9%	12%	15%	25%	10%	12%	11%	17%	45%
3	Transport, Storage and Communications:													
	a. Allocations	2.1	3.8	4.7	5.3	14.1	17.7	29.3	32.1	21.3	57.1	25.5	32.4	245.4
	b. Expenditures	0.9	2.3	2.2	4.9	9.9	11.1	14.2	9.6	13.7	8.1	14.2	15.8	106.9
	% of total expenditures	30%	31%	18%	24%	32%	26%	25%	19%	28%	17%	21%	27%	44%
4	Housing and Buildings:													
	a. Allocations	2.5	3.1	3.7	3.9	14.3	20.2	28.9	26.9	29.8	126.7	44.8	30.8	335.6
	b. Expenditures	1.1	2.4	3.1	3.8	5.5	12.7	19.8	16.6	20.1	22.9	33.4	26.4	167.8
	% of total expenditures	35%	32%	26%	18%	18%	30%	35%	32%	40%	48%	50%	45%	50%
5	TOTAL ALLOCATIONS	9.3	20.5	28.4	31.5	46.6	81.9	100.8	99.5	83.6	234.7	98.4	108.1	943.3
6	TOTAL EXPENDITURES	3.1	7.5	12.0	20.5	31.2	42.4	56.8	51.6	49.6	47.5	66.7	58.8	447.7
	(6) as % of (5)	33%	37%	42%	65%	67%	52%	56%	52%	59%	20%	68%	54%	47%

* Excluding Administrative Expenditures amounting to ID 6 million, and also excluding loans to Semi-Government Departments amounting to ID 53.4 million.

Sources: Directorate General of Accounts, Ministry of Finance, Baghdad.

Note: Figures of actual expenditure appearing in this table differ from those given in Appendix V, Table 7, due to various adjustments and reclassification of the Development expenditures.

income in Iraq was approximately ID 30.[1)]

Since 1958 several attempts have been made to estimate the national income of Iraq: some were official,[2)] others resulted from private research work in European and American Universities.

a) Dr. K. G. Fenlon conducted the first estimate of National Income and Expenditure for the period 1950-56, following approximately the U.N.'s recommended pattern. The content of this estimate is shown in Appendix IX, Table 1.

The relevant part of this estimate to the present study concerns the way he estimated the GDFCF.

Two different methods were employed, which, he claimed, checked each other. The first method consisted of adding the Development Board's capital expenditure, Government expenditure on capital works, and capital expenditure by private industrial enterprises as given in the 1954

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1) A Report on the Economic Development in Iraq: IBRD. John Hopkins University, 1952.

2) The Official estimate of the National Income of Iraq was made in 1961 for the period 1956-1960 by V. Maniakin (a Russian expert). The study is vague and very little information is given on the method of compilation and the sources of data. It is widely criticised by pioneers in the field of national income of Iraq. (See Ashour, I: The National Income Statistics in the Arab Countries, The Arabic Economic Review, June 1962, published by the General Federation of the Arab Chambers of Commerce, Industry and Agriculture; Al-Bayan Press, Beirut, p.113; also see Haseeb, K., The National Income of Iraq 1953-61, Al-Sinai - The Industrialist - No. 8, Vol. 1 and 2, June 1963, published by the Federation of Iraqi Industries, p.36.)

Industrial Census for large establishments. To this total, estimates of the capital expenditure of smaller undertakings, agricultural capital expenditure, and expenditure on housing and other private building were added.

The second method, on the other hand, consisted of taking imports of capital goods[1] from Foreign Trade Statistics, adding import duties and then uplifting the figures by $33\frac{1}{2}$ per cent to allow for dealers' margins, transport charges and other costs.

b) In 1959, an elaborate and comprehensive estimate of the National Income of Iraq for the period 1953-1956 was presented by K. Haseeb in a Ph.D. dissertation in the University of Cambridge.[2] The tedious task of the estimate was approached from the value added side, and the U.N. recommendations in this respect were closely followed.

From 1962 onwards, Haseeb resumed his work and the estimates were brought up to 1961 and later to 1963.[3]

In comparison with similar attempts, Haseeb's figures enjoy

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1) He did not explain what kind of goods were considered as of a capital nature, and whether parts and accesories were included. Moreover, I very much doubt that the second approach will check the results obtained by the first since imports of capital goods account for only a certain proportion of GDFCF.

2) Haseeb, K., An Estimate of the National Income of Iraq, 1953-1956, Ph.D dissertation in the University of Cambridge, September 1959.

3) Haseeb, K., The National Income of Iraq, 1953-1961; R.I.I.A., Oxford University Press, London 1964. Also The National Income of Iraq, 1962-63 The Central Bank of Iraq; Mimeographed, 1964.

a high degree of reliability. They are invaluable in the sense that they provide the only existing detailed classification of the value added approach through the Industrial Origin of GDP at Factor Cost. These estimates are shown in Appendix IX Tables 2-10.

The importance of Haseeb's estimates to the present study is that the contributions of various sectors to the GDP (Table 8 Appendix IX) are used as a yardstick to distribute most of the components of the GDFCF among the relevant sectors, as explained in Chapter III. They are also used to determine the ratio of GDFCF to GDP and GNP, and to calculate the sectoral investment/value added ratios. Finally, a useful comparison is made between his estimate of the gross output of construction with the comparable estimate of the present study.

c) In 1963, another study on the structure of the Iraqi economy (inter-industry relation) for the year 1960 was completed by T. H. Kanaan as a Ph.D. dissertation in the University of Cambridge.[1] The final tabulation of the study was given in a 20 x 20 matrix.

In 1965, the author[2] published his study in a revised and extended version, covering the period 1960-1963, where the final tabulation

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1) Kanaan, T.H., A Study in the Structure of Iraqi Economy, Ph.D. dissertation in the University of Cambridge, 1963.

2) From 1964 until September 1965, the author was the Economic Adviser to the Ministry of Planning in Iraq.

of the results were given in a 32 x 32 matrix.[1)]

Kanaan's analysis is particularly useful in respect of determining the capital formation in "Furniture and Fixtures" by private enterprises. His estimate of the GDFCF is also compared with the present one at a later stage.

Table 11 of Appendix IX shows the aggregate National Expenditure in Iraq, 1960-1963 as derived from his input-output tables.

d) An estimate of Capital Formation in Iraq, which is very relevant to this study, was made in 1958 for the period 1922-1957 by Dr. R. Abu-El-Haj.[2)]

The terminal year of his study coincides with the initial year of ours. The estimate was an outgrowth of a study by the author on the impact of the oil industry on the economic development in Iraq.[3)]

The author admits the limitations of his estimates (shown in Tables 12-14 of Appendix IX), and their tendency to underestimate the actual value of investment. They are, as the author states, "at their best rough estimates".[4)]

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1) Kanaan, T.H., Input-Output and Social Accounts of Iraq, 1960-1963, The Ministry of Planning, Baghdad, September 1965.

3) Abu-El-Haj, R., Oil Industry, a Strategic Factor in the Economic Development of Iraq, unpublished Ph.D. dissertation, Department of Economics, Columbia University, 1957.

2) Abu-El-Haj, R., Capital Formation In Iraq, 1922-1957, Journal of Economic Development and Cultural Change, Chicago University, July 1961.

4) Ibid.

Gross investment, as defined by the author, "is that part of investment which yields an increase in gross national production". This definition is different from the present study in two ways: first it includes all parts and accessories of imported durable producer's goods, while these are excluded from the definition adopted here; second, it excludes the value of home-made agricultural tools and implements, which are included here.

Net Investment, is arrived at by deducting from gross investment all expenditure on maintenance and renewals, as well as the estimated value of parts and accessories of imported items included in the gross investment.

The author derived his estimates from several sources: Foreign Trade Statistics, Government Ordinary Budgets, The Development Budgets, Property Tax Returns, and information on the value of building materials.

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CHAPTER II

CONCEPTS AND DEFINITIONS OF CAPITAL FORMATION

The purpose of the present chapter is to set out a general summary of the conceptual and practical problems involved in the estimation of capital formation. It covers various aspects and problems of capital formation and its general methods of estimation, valuation and measurement in real terms. Problems connected with the treatment of repair and maintenance, alteration and renovations, and the distinction between new and used assets are also discussed briefly.

§1. DEFINITION OF CAPITAL FORMATION

The concept of "capital formation" derives from the fact that society does not apply the whole of its current production capacity to the needs and desires of immediate consumption, but directs a part of it to the making of capital goods.[1] These include tools and instruments, machines, transport facilities, plant and equipment, etc. However, the term "capital

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1) Nurkse, R., Problems of Capital Formation in Underdeveloped Countries, (Basil Blackwell, Oxford, 1962) p.2.

formation" is usually in practice limited to the accumulation of material capital.

"Fixed capital formation" is usually defined therefore as the acquisition of durable physical assets by their ultimate users plus work-in-progress on durable heavy equipment and construction.

Gross Vs. Net Concepts:

Gross fixed capital formation, according to the U.N. Statistical Office, is defined to include the value of the purchases and own-account construction of fixed assets (civilian construction and works, machinery and equipment) by enterprises, private non-profit institutions, in their capacity as landlords, and general government. Non-transportable fixed assets are included only if they are located in the territory of the country. Also included is the value of the change in work-in-progress on domestic account in dwellings and non-residential buildings.[1] In other words, gross fixed capital formation comprises expenditure on the replacement of, and additions and major improvements to, fixed capital assets located in the

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1) U.N. Statistical Office: Studies in Methods, Series F. No. 2. Rev. 2, "A System of National Accounts and Supporting Tables", p.28.

country concerned,[1] (this includes fixed assets owned by non-residents but located in the country concerned).

By the term "net fixed capital formation" is meant that increases in capital is measured after allowances have been made for depreciation, obsolescence and accidental damage to existing fixed capital. These allowances, i.e. capital consumption allowances, represent a decline in the value of durable capital and are said to equal that portion of currently produced capital formation required to maintain intact the stock of physical assets. However, the measurement of capital consumption is among the most difficult and complicated subjects. Although it has been explored from many viewpoints, with the result that many ambiguous and difficult problems have been clarified, no solution has yet been developed satisfactorily enough to provide a unique definition for measuring capital consumption. This is so because of the lack of information in capital accounts, in addition to other problematical

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1) In the case of international carriers, such as ships and aircraft, we may deviate from the general rule of classifying fixed capital on the basis of physical location to the basis of the nationality of their owners. In some instances, however, "large numbers of vessels are transferred to foreign registry owing principally to the less costly regulations of the foreign country. The transfer of registry may be accompanied by the transfer of ownership, generally to a wholly owned foreign subsidiary chartered in the country of registration. In such cases the ownership criterion fails to reflect the country of beneficial ownership. To effect a more realistic classification it is suggested that in such cases the nationality of the parent company be used to determine domestic capital formation." (U.N. Statistical Office, Studies in Methods, Series F. No. 3, Concepts and Definitions of Capital Formation, New York, July 1953), p.11, para. 42.

factors such as technological changes, changes in demand, etc.[1)]

Since our intention in this study is to measure the capital formation in Iraq in "gross" terms, the subject of capital consumption - on which there is so much literature - is left outside the scope of this study.

It is useful, however, to make a distinction between capital and wealth. The latter is a very comprehensive term and embraces, in addition to physical capital, all other natural resources such as land, mines, forests and the like. It sometimes includes even human resources and human qualities like health, skill, technical training and knowledge, and entrepreneurship. Quite obviously, this comprehensive definition is neither useful nor measurable from the viewpoint of national accounting. On the other hand, the definition of capital as reproducible wealth used for further production has been criticized as too narrow. Simon Kuznets, for example, says that if we view capital as all tools for increased productivity for economic growth, this definition is too narrow; it should also include all goods held

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1) In the U.K. and U.S.A. attempts were made to make approximate estimates of the consumption of fixed assets according to the economic concept of capital consumption. For details on the methods used in this respect, see: Redfern, Philip, "Net Investment in Fixed Assets in the United Kingdom, 1938-1953", Journal of the Royal Statistical Society, Series A, Vol. 118, part 2, 1955. Also see: Goldsmith, R.W., "A Perpetual Inventory of National Wealth", Studies in Income and Wealth, Vol. 14, N.B.E.R., New York, 1951.

by consumers and all resources (e.g. education and training) making for a more efficient labour force - a society more capable of grasping the potentialities of technical progress. If, however, we view capital as the tools of economic enterprise more narrowly defined we should have to exclude residential construction and all stocks in the hands of the government proper.

For studying economic growth, the broader definition of capital is desired - one including much of what is usually measured under consumer expenditure.[1)]

These observations by Kuznets raise a few fundamental questions which ought to be answered. Should we confine the term 'capital' to physical assets only or should it be extended to cover other activities which are included under the heading "development expenditure". This refers especially to some developing countries where these expenditures are of great importance.

The root cause of this problem can be traced to the theory of economic growth since the late nineteen-forties where theimportance of capital formation in economic growth and development has remained a controversial matter. Some economists deny the role of capital as a strategic factor in economic progress and argue that the scarce factor in develop-

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1) Kuznets, S., "International Differences in Capital Formation and Financing", Capital Formation and Economic Growth, N.B.E.R., Princeton University Press, Princeton, 1955, pp.20-21.

ment is the ability to make decisions.[1] The role of education and technical progress as the prime mover of economic growth has been increasingly emphasized. Solow,[2] for example, has estimated that only 10% of the growth of aggregate non-farm production of the U.S.A. between 1900 and 1960 could be attributed to capital, while the remaining 90% is due to residual factors falling under the general heading of technological progress. Studies made by Massel,[3] Aukrust[4] and Reddaway[5] also support the above-mentioned conclusions.

The United Nations Economic Commission for Europe in a study made in 1961 arrived at the conclusion that in the post-war growth of Western European countries, "inputs of labour and capital account for only a part - and often a relatively small part - of growth, and that more intangible factors, whether they are labelled technique or organization or the

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1) Hirshman, A.O., The Strategy of Economic Development (Yale Studies in Economics 10), New Haven, Yale University Press, 1958, p.5.
2) Solow, R.M., Technical Change and the Aggregate Production Function, in the Review of Economics and Statistics, Vol. XXXIX, No. 3, August 1957, pp.312-320.
3) Massel, B., Capital Formation and Technological Change in United States Manufacturing, Rev. of Economics and Statistics, Vol. XLII, No. 2, May 1960, pp.182-188.
4) Aukrust, O., European Productivity Review, February 1960.
5) Reddaway, W.B., and Smith, A.D., Progress in British Manufacturing Industries in the Period 1948-1950, Economic Journal, March 1960.

human factor play a very important role".[1)]

Our contention in this dissertation, however, is that the definition of capital as given by the U.N. Statistical Office[2)] should be accepted because a wider definition of capital creates more anomalies than it removes, e.g., the inclusion of the content of residential housing, and even certain types of education may be cases in point. Moreover, by equating capital to physical capital only, national accounting techniques will be kept consistent and the problem involved in the valuation of intangible assets avoided. Finally, if the effect of certain types of expenditure on production is accepted as the guiding principle, even the distinction between "consumption" and "capital formation" may appear untenable as in the context of the extremely low levelsof consumption, increased consumption may lead to increases in production.[3)]

At this stage it is important to indicate that capital formation as measured here is restricted to gross additions to the stock of physical fixed capital within the political boundary of Iraq, irrespective of the national-

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1) U.N. Econ. Comm. for Europe: "A Study of Development of Growth in Europe during the Nineteen-Fifties". Mimeo. Econ. Advisers Conf./13 dated 2 March, 1961.

2) U.N. Statistical Office, Studies in Methods, Series F, No. 3, Concepts and Definitions of Capital Formation, New York, 1953.

3) Abbas, S.A., "Capital Formation in National Accounting, with Particular Reference to Pakistan" in Middle Eastern Studies in Income and Wealth; International Association for Research in Income and Wealth, Bowes and Bowes, London, 1965, p.238-239.

ity of the ownership of assets. This implies that our estimates refer to Gross Domestic Fixed Capital Formation (GDFCF) which comprises gross additions to civilian construction (buildings, roads, bridges, etc.) and to producers' durable machinery and equipment, furniture and fixtures, and transport equipment.

As a consequence of the adoption of this definition - which is in conformity with that of the U.N. - the following items are omitted from the concept of capital formation:

1. All intangible assets such as patents, concessions, goodwill of business enterprises, human capacities and the like. There are many good reasons for excluding these intangibles, one of which is the impossibility of their valuation, and because there is no clear-cut relationship between such values and their contribution to future production for the nation as a whole.

2. All expenditures on research, health and education.

3. Durable goods purchased by households, (with the exception of dwellings). These are regarded as current expenditure. This treatment is not based on profound and logical grounds but merely on the fact that the services they yield are generally not marketed and, in addition, there is difficulty in estimating their depreciation.

4. All sub-soil resources such as petroleum or minerals. However, those expenditures which involve the creation of structures, such

as drilling wells or digging mine-shafts, are included in capital formation, although the inclusion of such expenditures may not provide for the inclusion in capital formation of the full value of the resources exploited, as the extraction of these resources is considered as a charge to current output.[1)]

5. Inventories of museums, works of art and other collectors' items. The reason for this is similar to that of paragraph (1) above.

6. Parts and accessories of producers' durable equipment.

7. Expenditures on military construction (with the exception of dwellings), arms and other military equipment. The inclusion or exclusion of this type of expenditure may have a considerable effect upon the volume of the country's capital formation. Their exclusion, however, became conventional on the grounds that, although such expenditures constitute an important factor in the existence of the economy, they seldom increase the productive capacity of the economy.[2)]

8. Expenditure on repair and maintenance.

9. All development expenditures, unless they are directly connected with the acquisition or construction of fixed assets. An exception to this is Government expenditure on aerial and general surveys of agricul-

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1) U.N.S.O. Studies in Methods: Series F. No. 3, Concepts and Definitions of Capital Formation, p.8, para. 18.

2) Ibid., p.14, para. 60; also see Kuznets, S., National Product in Wartime, New York, 1945, p.7.

tural land, which we think is essential as a preliminary step for land reclamation, distribution and other agricultural projects.

§2. METHODS OF MEASURING FIXED CAPITAL FORMATION

Fixed capital formation may be measured by either of two methods: the production or commodity-flow method and the expenditure method. In many cases, however, the scarcity of data for the application of one of these two methods throughout the whole process of estimation forces the investigator to use a combination of the two. When properly applied, the two approaches should arrive at approximately the same aggregate for fixed capital formation, (i.e., exactly the same but allowing for a small margin of calculation error).

A third method of estimation may also be recognized. This is the accumulation of capital funds method. It is an ex-ante rather than ex-post concept of capital formation, which is essentially an analysis of the flow of funds that become available for capital formation. This method is now generally considered to be unsatisfactory for many reasons, among which is the possibility of double counting. Another reason is the difficulty of securing the data on self-financed capital formation by enterprises or individuals which has no counterpart in the flow of funds. Hence, although it is useful to have an analysis of the whole process of capital formation, it

is extremely complicated. And, as Keynes suggested, it is practicable to discard the process of capital formation and concentrate on the final stages, that is, on realized investment.[1)]

2.1. The Production or Commodity-Flow Method

According to this approach, fixed capital formation is estimated in terms of domestic production plus imports of capital goods less those (except dwellings) sold to households or exported.

Since fixed capital formation is usually defined as the acquisition of durable physical assets by their ultimate users, plus work-in-progress on durable heavy equipment and construction, it becomes fundamental to adjust production statistics for any change in the inventories of producers as well as distributors. In some cases we may, however, avoid the need for adjusting producers' inventories by using producers' shipment data; but it should be emphasized that this procedure does not remove the need to adjust distributors' inventories of capital goods.[2)]

Practically, the adjustments take the form of adding the decrease to, or deducting the increase from, the inventories of producers

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1) Keynes, The Process of Capital Formation, The Economic Journal, September 1939, p.574.

2) U.N. Statistical Office, Studies in Methods, Series F. No. 3, Concepts and Definitions of Capital Formation, p.10.

and distributors in order to reach an approximate figure of the flow of capital goods to the ultimate users. It is also necessary to distinguish between final and intermediate products, and at the former level, between those flowing to consumers and those used for capital formation.

Application of the commodity-flow method needs, basically, two classes of information:

(i) Essential Data, on production, inventory changes (both at producer as well as at the distributor levels), and external trade statistics.

(ii) Supplementary Data, on transportation charges, cost of installation, dealers' margins, and other data connected directly with the acquisition of assets by ultimate users, since these assets must be valued at their cost to their users.

However, in the case of under-developed countries, where the bulk of equipment being imported, and the exports of capital goods are negligible or non-existent, the application of the commodity-flow approach is mainly confined to the estimation of investment in durable equipment by utilizing the statistics of imports. In many of these countries, and Iraq is a good example, import statistics are given in considerable detail, often beyond that required for the Standard International Trade Classification. This detail facilitates the classification of imported equipment not only by type, but also frequently by industry of use.

The application of this method, however, through the utiliza-

tion of foreign trade statistics is usually confronted with one important problem in calculating the total cost of equipment to their final purchaser due to the lack of the supplementary data on dealers' margins, transport charges and installation cost. Countries like Burma, Ceylon and the Philippines, for example, mark-up the c.i.f. value of imported capital goods by 50, 30 and 50 per cent respectively. Brazil, on the other hand, marks-up two-thirds of the c.i.f. value by 20 per cent, one-third by 70 per cent, on the grounds that the first fraction is purchased by firms from overseas directly, and the second fraction is purchased from importers in Brazil.[1)]

2.2. The Expenditure Method

Estimates of fixed capital formation are at present generally derived from data on capital expenditure made by the principal users of fixed assets. The main sources of these data consist of censuses of manufacturing, published accounts of companies, government accounts, foreign trade statistics, and other records of capital expenditure.

According to this approach, fixed capital formation is defined as the expenditure made by enterprises and general government on machinery, equipment, buildings and other construction and works. Where statistical

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1) U.N. Statistical Office: Studies in Methods, Series F. No. 8, Methods of National Income Estimation, (New York 1955), p.32.

difficulties are encountered, government's fixed capital formation may be limited to expenditure on buildings and other construction and works.[1)]

Measured in this way, fixed capital formation is related to the increase of the physical capacity of enterprises as defined by business accountants; and of general government as defined by statisticians.

2.3. The Relative Merits of the Commodity-Flow and Expenditure Approaches

1. Adoption of commodity-flow method for estimating fixed capital formation permits:

(i) a classification of capital formation by major product groups and industries producing the goods; and

(ii) the definition of the items comprising capital formation by the investigating statistician rather than by business accountants. But, however, it remains the estimator's problem to decide which items or parts of items of goods listed, say in import statistics, should be included in the capital formation estimates. In this respect, estimators in different countries, or different estimators in the same country, may differ.

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1) U.N. Statistical Office: Studies in Methods, Series F. No. 3, Concepts and Definitions of Capital Formation, (New York, July 1953) p.10, para.29.

2. Adoption of the expenditure method, on the other hand, means the acceptance of business conventions in distinguishing between capital and current expenditures. Hence, the derivation of capital expenditure from the accounting data results in estimates which:

(i) reflect the decision of business accountants as to what items constitute depreciable assets;

(ii) ensure a degree of internal consistency in national income estimates, provided that accounting data is also used to define business profits and capital consumption provisions;

(iii) avoid the need of providing detailed definitions of capital expenditure as distinct from current expenditure in the instructions accompanying the questionnaires usually sent to the purchasers of capital goods.[1)]

However, adoption of the accounting definitions of capital expenditure has the following shortcomings:

(i) the accounting data may lead to a lack of uniformity in defining capital items as between firms, industries and countries;

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1) Ibid., para. 33.

(ii) the data may lead to an understatement of capital formation since accountants usually charge to current expenses the cost of items of small value even if these items have an expected life span that exceeds the accounting period (usually one year).

Any attempt to estimate capital formation in an under-developed country, such as Iraq, by adopting only one of the two methods, is confronted with two important problems. The first is that the scarcity of data does not permit a consistent measure; or, in the case of the unavailability of the relevant information, the tedious task of locating and extracting the data. The second problem is the existence of non-monetary transactions in rural areas, where capital formation draws largely on the direct contribution of local labour and material. This introduces an inevitable element of guesswork in the imputation of values of such activities.

Even in the urban sector of the economy, there are wide gaps in the information necessary for a direct assessment of capital expenditure made by a large section of the private enterprises and non-profit institutions. This is due to the absence of the practice of accounting in these cases.

In view of these difficulties, it is not possible, therefore, to adapt either the expenditure or the commodity-flow approach consistently throughout our estimates. Consequently, a method which can be regarded as a combined "expenditure-commodity-flow" approach is adopted for the

estimation of Gross Domestic Fixed Capital Formation (GDFCF).

Strictly speaking, the direct expenditure approach is used for estimating investment in buildings and other construction and works; whilst the commodity-flow approach is followed in estimating investment in machinery, furniture and fixtures and transport equipment. Thus, as can be seen from the main tables presented in this dissertation (see Chapter IV) about 75 per cent of total GDFCF is measured by the direct expenditure method, and about 25 per cent is measured by the commodity-flow approach; within the latter part public capital formation is estimated from the expenditure side.

The distribution of GDFCF between public and private sectors is made by the direct expenditure method in the case of public capital formation, and by the combined expenditure-commodity-flow approach in the case of private capital formation. The same procedure is followed when classifying GDFCF by industry group.

§3. VALUATION PROBLEMS

Transactions in capital goods, as well as in other economic activities are usually measured at one of several stages (according to the accounting practices, which prevail in the country concerned). For example, we may measure the transactions concerned with fixed capital formation at the time of making the order; the acceptance of the order by the seller;

shipments; physical receipt of the item; issuance and receipt of invoice; date the payment due; date of actual payment; time of installation of the item in the purchaser's premises, or at any other stage.

Capital expenditure, which covers all acquisitions of new and used fixed assets, may consist of :

1. Deliveries of new or used fixed assets during the enquiry year.
2. Alterations, renovations or similar work, completed by others on fixed assets already held by ultimate users.
3. Work done during the enquiry year by enterprises in producing, altering or renovating fixed assets on their own account.

These types of transactions in fixed capital formation can be measured at any of the stages mentioned earlier. The Statistical Office of the United Nations, however, has proposed the adoption of the rule of recording transactions at the time when the transactions are recorded as liabilities or assets.[1)]

The valuation of work-in-progress on construction and heavy fixed equipment raises some difficulties because the production process of this type of goods usually extends over a long period, sometimes up to

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1) U.N. Statistical Office: Series F. No. 3, p.12, para. 46.

several years.

Business accountants normally value this type of work-in-progress at the cost of direct labour and materials incorporated in the work with a percentage added for the former to account for overheads. The range of overheads covered by this percentage varies from no addition at all (the direct cost method) to one that covers all costs such as factory overheads, general administration, sales costs and research but not profits (the on-cost method).[1)]

From a national accounting view point, work-in-progress is most conveniently measured in terms of :

(i) value in place; or

(ii) payments due.

Though the former is the most appropriate from an economic standpoint, the latter can be more satisfactorily measured when fixed capital formation is estimated by the expenditure approach.

To conclude our discussion on the problems of valuation, since the term "capital expenditure" is used here to indicate the purchase price plus all direct expenses connected with the acquisition of capital goods, it is emphasized that all direct and indirect costs of providing capital funds

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1) See Central Statistical Office, "New Contributions to Economic Statistics", Second Series, (H.M.S.O., London, 1962) pp.48-51.

are excluded from capital expenditures and instead are regarded as current expenditures for two reasons :

(i) it is difficult to obtain data on such costs and to allocate them between fixed and working capital;

(ii) the inclusion of these costs will create a degree of non-comparability between government capital formation and capital expenditure made by private enterprises out of retained earnings and those enterprises resorting to the capital market.[1)]

$ 4. DISTINCTION BETWEEN CAPITAL AND CURRENT EXPENDITURES; ALTERATIONS AND RENOVATIONS; REPAIRS AND MAINTENANCE; NEW AND USED ASSETS :

4.1. Capital Vs. Current Expenditures :

The distinction between expenditures on capital goods and those on current goods should be made, in theory, by examining the economic life span of the items for which the expenditures have been made. Thus, "expenditures for physical assets having an economic life exceeding the length of the accounting period (which is usually one year) should be classed as

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1) U.N. Statistical Office, Studies in Methods, Series F. No. 3, p.12, para. 51.

capital formation".[1] In practice, this criterion cannot be strictly followed especially when the expenditure approach, which mainly relies on the data provided by business accountants, is used in estimating fixed capital formation.

Business accountants sometimes depart from the life expectancy criterion by posting to current expenditure account - instead of capital account - items which have a fairly constant replacement rate and/or which are of relatively small value such as hand tools, minor equipment, some office furniture and fixtures.

However, we may suggest that the type of account to which the entries are posted be used as a guiding yardstick of differentiating between capital and current expenditures. This criterion has been used in several countries among which we may give the United States as an example.

4.2. Alterations and Renovations Vs. Repairs and Maintenance

Alterations and renovations represent additions to the stock of capital since they either extend the normal life of the asset or increase its productivity. Thus, complete replacement of roofs or walls, addition of stories, elevator shafts or stairwalls for structures are examples of alterations and renovations.

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1) Ibid., p.12, para. 52.

Repairs and maintenance, on the other hand, neither extend the economic life of the asset nor do they increase its productivity but only maintain the operating efficiency of the structure in the original use to which it has been put. Hence, they ought to be treated as current expenditures. An example of this type of expenditure is the routine care of the asset such as painting walls, replacing broken stairs, oiling machinery or replacing its dies, and replacing burnt-out wiring or minor broken parts.

In practice, the distinction between major alterations and repair work is perplexingly complicated by the difficulty involved in distinguishing between repair work which extends the normal life of existing assets and that which does not. In both cases theoretical distinctions are drawn to which there are not always clear equivalents in practice. Ordinary repairing sometimes involves improvement; normal upkeep of existing assets sometimes involves repair work; in neither case can the theoretical distinction be applied.

Conventions of many countries in treating repair work in their estimates of capital formation vary in accordance with the data available. In Norway, for example, fixed investment is measured mainly by the "Commodity-flow" or output method. This approach means that estimates of building output has to be estimated as the sum of the value of output of building materials, net of stock changes, plus labour costs, plus profits; from such estimates one cannot tell how much of the inputs enters into new

work and how much into repairs.[1] In the U.K., on the other hand, estimates of fixed capital formation are compiled from direct returns of expenditure which are usually based on the figures in the enterprise's own accounts. The figures thus measure what the Inland Revenue and the Courts allow and the enterprises themselves desire. Since accountants do not usually capitalize repairs such expenditure (apart from grant-aided conversions and improvements to dwellings) is regarded as expenditure on current account and not as part of fixed capital formation. Nevertheless, expenditure figures on repair work in U.K. estimates are given at a footnote to the table of gross investment because :

> "(a) Variations in the amount of this expenditure may be of some importance and (b), some other countries (and the United Kingdomuntil 1952) treat such expenditure as a part of gross fixed capital formation in their national accounts, and estimates of the amount involved may thus help international comparisons."[2]

In Iraq, expenditure on repair work is treated as a part of the gross output of the Construction Sector in National Income estimates[3] and hence we decided to show them in our estimate of gross fixed capital forma-

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1) Dean, G., Fixed Investment in Britain and Norway, An Experiment in International Comparison, J.R.S.S., Series A (general), Vol. 127, Part I 1964, pp.92-93.
2) Central Statistical Office, National Income and Expenditure, 1961 (H.M.S.O., London 1961) p.80.
3) Haseeb, K., The National Income of Iraq, 1953-1961, R.I.I.A.; Oxford University Press, 1964, pp.106-109.

tion. But instead of merging such expenditure with that on new construction, a separate appendix is drawn up in which we show the amount of repair work involved. Moreover, public expenditures on repair work are shown in detail at footnotes to the tables containing public investment in the relevant sectors of the economy, in addition to showing the summary of these expenditures in the appendix devoted to this purpose (that is Appendix VII).

4.3. New Vs. Used Fixed Assets

It is sometimes desirable, when the available data permits to make a distinction between new and used fixed capital so that expenditures that represent additions to the physical capital stock of a country can be separated from those that merely indicate changes of ownership.

New fixed capital formation may be classified under three broad headings :

(i) Acquisitions of structures, machinery and equipment which the ultimate users of a country have not used before.[1)]

(ii) Improvements to land and buildings.

(iii) All alterations and renovations of fixed assets.

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1) Acquisitions of capital equipment that have been used in another country are included among new fixed assets when imported by the relevant country.

Used fixed assets, on the other hand, covers all acquisitions not classified as new, including structures and equipment that may have been altered or renovated before their purchase.

Transactions in used assets may affect domestic fixed capital formation positively or negatively depending on the sectors involved in the transaction. These effects may be summarized by the following points :

(i) Transfers of used assets between enterprises do not affect total domestic capital formation, but transfer costs are part of new capital formation. Moreover, the transferred assets are recorded at their price as negative capital formation of the selling enterprise and as positive capital formation of the enterprise acquiring them. Capital gains/losses which accrue as the selling price exceeds/falls short of the net book value of the assets do not affect capital formation of the country as a whole but of the individual enterprises and sectors only.

(ii) Transfers of capital assets from enterprises and civilian branches of general government to the household sector (with the exception of dwellings) should be treated as negative capital formation of the country and as private consumption expenditure of the household sector.

(iii) Transfers of physical assets from civilian branches of

general government to its military agencies is treated as negative capital formation of the former and as current expenditure of the latter. Military expenditure for permanent family dwellings, however, is regarded as part of fixed capital formation of the country.

(iv) Land, as such is not regarded as part of the newly produced capital assets of the country and with certain exceptions is treated in the same way as other used assets. Reclamation of land and all durable improvements to land such as drainage, irrigation, clearing of forests, grading ... etc., should, however, be included in capital formation of the period when such improvements are made.

§ 5. CLASSIFICATION OF GDFCF

The U.N. Statistical Office has recommended[1)] that gross capital formation be classified according to "Type of Asset", "Structure" and "Industrial Use".

For our estimates of GDFCF in Iraq, we have complied with

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1) U.N. Statistical Office: Studies in Methods, Series F. No. 3, p.17.

the above recommendation, but have extended the classification further by splitting "Machinery and other equipment" into "Machinery and Equipment proper" and "Furniture and fixtures". We have also sub-classified the estimates by "Industry Group" and "Type of Asset". The "Structure" of GDFCF, or what we call here "Type of Purchaser" is further sub-classified by "type of asset".

5.1. Classification of GDFCF by Type of Asset

1. Building :
   - (a) Dwellings
   - (b) Non-Residential Buildings.
2. Other Construction and Works.
3. Machinery and other Equipment:
   - (i) Machinery and Equipment
   - (ii) Furniture and Fixtures.
4. Transport Equipment.

Dwellings (item 1(a))

This item includes all residential buildings not operated on purely transient bases. It represents all expenditures on new construction and major alterations and renovations to residential buildings. The value of the change in work-in-progress is also included.

By the term "all expenditures", is meant all cost of making the dwelling unit habitable, such as the cost of permanent fixtures (plumbing, stoves, heating, washing facilities, etc.) and internal and external painting. The value of land on which the structure is erected is excluded. Further details on the definition, scope and coverage of capital formation in this item are given in Chapter XIII below.

Non-Residential Buildings (item 1(b))

Under this heading, all buildings - other than dwellings - which are constructed for civilian functions of general government, public and private enterprises and non-profit institutions are included. Thus, industrial buildings; warehouses ; office buildings ; hotels; restaurants; stores; farm buildings; churches, mosques and other buildings for religious purposes; schools, hospitals and other buildings for recreational and social purposes are all included. Movable equipments which do not constitute integral parts of the structure are not included under this heading.

Other Construction and Works (item 2)

This item comprises all expenditures by general government, private and public enterprises and private non-profit institutions on construction, other than dwellings and non-residential buildings. The following are examples of the assets included under this heading :

1. Permanent railways
2. Subways, tunnels and viaducts
3. Marine construction, other than shipbuilding
4. Piers, docks, navigational and other harbour facilities
5. Athletic fields, parks and the like
6. Water supply pipes, reservoir and sanitation projects
7. Electricity transmission lines
8. Gas mains and pipes
9. Pipe lines for crude oil and gas
10. Telephonic, telegraphic and other communications systems
11. Grain silos
12. Airports and aircraft hangars
13. Roads, bridges, culverts, streets, sewers and waterways
14. Expenditures for drainage and other improvements of land, reclamation and the like, as well as expenditure on aerial and general surveys of agricultural land. Expenditures on the construction of dams, reservoirs, re-afforestation and artesian wells are also included.

Machinery and Other Equipment (item 3)

(i) Machinery and Equipment (item 3(i))

This item includes all types of machinery and equipment acquired by Government and private and public enterprises, such as agricultural machinery; tractors (other than those used for road haulage); machines used for metal work, mining, construction, and industrial machinery; scientific equipment; power generating motors, etc. Details of machinery and equipment covered by this heading are given in Appendix II Table 1.

(ii) Furniture and Fixtures (item 3(ii))

This item, which usually is merged with item 3(i) in the tables recommended by the U.N. Statistical Office, is given here separately from machinery and equipment for several reasons. One of the reasons is that the estimation procedure of capital formation in furniture and fixtures is different from that of machinery and equipment. Another reason is that since the price indices of furniture and fixtures and machinery and equipment are moving in the opposite direction, as shown in Table II-6 below, then unless these two items are deflated separately, each by its proper deflator, the GFCF in "Machinery and Other Equipment" at constant prices will be distorted.

The item covers furniture and fixtures acquired by Government and business enterprises. It does not include the acquisition of furniture and

fixtures by households and military branches of the Government. It includes expenditure on furniture of all kinds, typewriters, and other office equipment. Details of items included under this heading are given in Appendix III, Table 1.

Transport Equipment (item 4)

All expenditure by Government (civilian branches only) and private and public enterprises on the acquisition of ships, motor cars, aircraft, trucks and commercial vehicles, vehicles used for transport systems, tractors for road haulage, railway and tramway rolling stocks, and locomotives are included under this heading. Details of transport equipment are given in Appendix IV, Table 1.

5.2. Classification of GDFCF by Type of Asset and Type of Purchaser[1)]

1. Buildings:
   - (a) Private Enterprises and Non-Profit Institutions
   - (b) Public Enterprises
   - (c) General Government
2. Other Construction and Works:
   - (a) Private Enterprises and Non-Profit Institutions

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1) For the definitions of public and private enterprises and general government, see Chapter III, Part Two, Section C.

(b) Public Enterprises

(c) General Government

3. Machinery and Other Equipment :

(a) Private Enterprises and Non-Profit Institutions

(b) Public Enterprises

(c) General Government

4. Transport Equipment:

(a) Private Enterprises and Non-Profit Institutions

(b) Public Enterprises

(c) General Government

5.3. Classification of GDFCF by Industry Group[1)]

GFCF in :

1. Agriculture
2. Mining and Quarrying
3. Manufacturing
4. Construction
5. Electricity and Water
6. Transportation, Storage and Communications

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1) For detailed definition of each industry group see their relevant chapters.

7. Wholesale and Retail Trade

8. Banking and Insurance

9. Ownership of Dwellings

10. Public Administration

11. Services.

$ 6. MEASUREMENT OF GDFCF IN REAL TERMS

It is natural enough that a comparable presentation of the GDFCF estimates in a systematic form cannot be considered unless each component of the GDFCF is adjusted for price changes and expressed in constant prices.

The term "constant prices" means that the effect of price fluctuation is eliminated from the magnitude of capital formation throughout the period of the study by either deflating the figures by a suitable price index or by expressing all the quantities in prices of a chosen base period.

For our estimates, however, we decided to use the deflation method rather than the direct cost procedure because of the scarcity of data on the cost of each type of capital goods.

The year 1957 is chosen as base, and the deflation of GDFCF

to the prices of this year is made by four price indices.[1] Each index is specially compiled for a particular component of GDFCF.

The compilation of these indices is according to Paache's formula:

$$\frac{\Sigma P_i Q_i}{\Sigma P_1 Q_i}, \quad \text{where } i = 1, 2, 3, \ldots 6.$$

These indices are :

6.1. Price Index of Building Materials

The official price index of building materials, with December 1938-August 1939 as base, was switched to 1957. Since this index does not cover cement, we compiled a separate price index for cement used in domestic construction.[2] Both indices were then combined together and their weighted average was used as the deflator for GFCF in "Buildings" and "Other Construction and Works". The weights being the percentage contribution of the value of cement and of building materials (other than cement) to total inputs used in domestic construction during 1960-1962 as follows :

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1) See Tables II-2 and II-6 below.

2) The cross-value matrix of cement used in domestic construction is given in Appendix VI Table 1.

TABLE II - 1

CONSTRUCTION: Material Inputs 1960 - 1962

		1960		1961		1962	
		ID 000	%	ID 000	%	ID 000	%
1	Cement	5123	15	5700	14	4994	13
2	Other Building Materials	29617	85	36049	86	35569	87
	TOTAL Inputs :	34740	100	41749	100	40563	100

Sources: Kanaan, T.H., Input-Output and Social Accounts of Iraq 1960-1963, Ministry of Planning, Baghdad, September 1965, Table A I015-14.

Since it is unlikely that the proportional importance of these building materials fluctuate greatly over short periods, the price index of cement and that of building materials were given 15% and 85%, respectively, as weight throughout the period 1957-1962.

Table II-2 shows the official price index of building materials, the price index of cement, and their weighted average.

TABLE II-2

PRICE INDEX OF BUILDING MATERIALS

		1957	1958	1959	1960	1961	1962
1	Official Price Index of Building Material; Dec. 1938 - Aug. 1939 = 100	596.3	538.6	592.5	626.4	624.1	597.9
2	(1) Switched to 1957 = 100	100.0	90.3	99.4	105.0	104.7	100.3
3	Price Index of Cement used in domestic construction (1957 = 100)*	100.0	84.7	92.7	99.6	96.8	101.0
4	Weighted average of (2) and (3)**	100.0	89.5	98.4	104.2	103.5	100.4

* Compiled by the writer by using the formula $\frac{\Sigma P_i Q_i}{\Sigma P_1 Q_i}$, where i = 1, 2, ..., 6.

** The Price Index of Cement is given 15% as weight while the official index is given 85%. The weights represent the value of cement and of other building materials as percentage of total value of building materials (total inputs) used in construction, which were derived from the input-output tables of Iraq.

6.2. Price Index of Machinery and Equipment[1)]

This index is used to deflate GFCF in "Machinery and Equipment". It is compiled on the basis of information derived from import statistics of machinery and equipment.

The index covers 81 out of 110 types of machinery and equipment imported during the period 1957-1962. Total value of the covered items represents about 93 per cent of total value of imported machinery and equipment included in GDFCF as shown in Table II-3 below.

TABLE II-3

MACHINERY AND EQUIPMENT

(ID 000)

Year	c.i.f. Value of Total Imports of Machinery and Equipment* (1)	c.i.f. Value of Machinery & Equipment covered by the Index (2)	Ratio of (2) : (1) % (3)
1957	17090.7	15917.8	93.1
1958	12925.5	11541.4	89.3
1959	10957.7	9938.1	90.7
1960	12113.1	11628.9	96.0
1961	15020.9	13505.1	89.9
1962	16027.4	15524.6	96.9

* including imports of the oil companies.

1) The cross value matrix of imported machinery and equipment during 1957-1962 is given in Appendix VI Table 2.

Since there was no change in the rate of import duties on this type of capital goods and the marking-up of the figures remained the same during the period under review, the c.i.f. value of each type of machinery and equipment was used throughout the calculation procedure of this index.

6.3. Price Index of Furniture and Fixtures[1)]

This index is used for the deflation of GFCF in "Furniture and Fixtures". Its compilation is based on import statistics of furniture and fixtures shown in Appendix III.

Similar to the index of "Machinery and Equipment", its calculation is based on the c.i.f. value of imported furniture and fixtures, since neither the rate of import duties nor the marking-up of the figures have changed throughout the period 1957-1962.

It is to be observed, however, that this type of goods is not only imported, but domestically made as well; which means that a proper price index should also take account of the latter type. But, due to the lack of information, on the quantities of domestically made furniture and fixtures, we assumed that variation in their prices is similar to the variation in the prices of imported furniture and fixtures; an assumption which is not unlikely.

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1) The cross-value matrix of imported furniture and fixtures is given in Appendix VI Table 3.

Table II-4 below shows that practically this index covers all the imported items which are classified as furniture and fixtures.

TABLE II-4

FURNITURE AND FIXTURES

(ID 000)

Year	c.i.f. Value of Total Imports of Furniture & Fixtures* (1)	c.i.f. Value of Imported Furniture & Fixtures covered by the Index (2)	Ratio of (2) : (1) % (3)
1957	2156.0	2134.3	99.0
1958	2493.4	2485.6	99.7
1959	2153.3	2140.4	99.4
1960	3290.9	3281.2	99.7
1961	3198.3	3185.5	99.6
1962	2917.5	2909.0	99.7

* including imports of oil companies.

6.4. Price Index of Transport Equipment[1)]

This index is used for the deflation of GFCF in "Transport Equipment". Its calculation and source of data are similar to that of Machinery and Equipment and Furniture and Fixtures.

1) The cross-value matrix of imported transport equipment is given in Appendix VI Tables 4 and 5. The former shows the cross-valuation after adjustment for changes in import duties, while the latter gives the cross-valuation on the c.i.f. basis.

An exception to this similarity, however, is that the c.i.f. values of transport equipment are adjusted for the changes in the rates of import duties during the period of this study, where the rate of import duties on most transport equipment (especially motor cars) has changed after 1958.

The index covers 15 out of 32 items of imported transport equipment. Their c.i.f. value constitutes about 81 per cent of total c.i.f. value of transport equipment, as shown in Table II-5 below.

TABLE II-5

TRANSPORT EQUIPMENT

(ID 000)

	c.i.f. Value of Total Imports of Transport Equipment* (1)	c.i.f. Value of Imported Transport Equipment covered by the Index (2)	Ratio of (2) : (1) % (3)
1957	8027.6	7523.5	93.7
1958	7301.2	6962.5	95.4
1959	5965.5	4401.2	73.8
1960	8217.6	6743.6	82.1
1961	10335.6	7266.8	70.3
1962	8374.5	6003.5	71.7

* including oil companies imports.

TABLE II-6

PRICE INDEX NUMBERS OF IMPORTED CAPITAL EQUIPMENT

Year	Price Index of Machinery and Equipment 1957 = 100	Price Index of Transport Equipment 1957 = 100	Price Index of Furniture and Fixtures 1957 = 100
1957	100.0	100.0	100.0
1958	102.7	103.6	97.0
1959	107.2	113.3	91.7
1960	102.6	116.4	93.0
1961	103.4	114.7	86.7
1962	102.2	118.4	84.3

Sources: These Price Indices are compiled by the writer in the manner described above.

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CHAPTER III

SOURCES AND METHODS OF ESTIMATION

A study of the statistical sources and methods underlying the present estimate of GDFCF is of interest for two main reasons. First, it provides a basis for judging whether the estimates are accurate enough for any given use to which they may be put. Second, it provides a framework for future estimates in this field.

This chapter, therefore, is designed to review, in Part One, the major data sources from which the estimates are made. Part Two is devoted to a detailed exposition of the statistical methodology by which the primary data are fused in preparing the GDFCF.

PART ONE

STATISTICAL SOURCES

In estimating the GDFCF in Iraq many statistical sources of various kinds in varying degrees of development were utilized. Some of these are published by the Central Bureau of Statistics, some by other Government departments, and others unpublished which proved to be very useful.

This part deals with the major statistical sources which were relied upon at every step of the estimating procedure. Additional information was also utilized, but it is impossible either to generalize effectively about the sources or to enumerate them exhaustively; what follows is a compromise.

The main sources of data are the following:

$ 1. STATISTICS OF BUILDING PERMITS

These statistics are published annually by the CBS. They constituted the only source for estimating Private GFCF in residential and non-residential buildings. The nature and reliability of these statistics are fully discussed in Chapter XIII below when we deal with the capital formation in "Ownership of Dwellings".

$ 2. FOREIGN TRADE STATISTICS (FTS)

This source is of considerable importance for our estimates of total GFCF in "Machinery and other Equipment" and "Transport Equipment".

The CBS annually compiles and publishes the statistics of imports, exports, re-exports, exports of local products, and transit statements of Iraq. The statistics are for calendar years. Imports of the Oil Companies, though embodied in import figures, are given separately in the detailed import statements. Moreover, when the imports are for Government civilian branches the FTS show that clearly, but imports by the Government military authorities are not included.

The classification of Iraq's FTS is made according to the "Law of Customs Tarriff"[1] which gives the necessary details: the origin, value, quantity - whether weight or number - of each commodity.

Since our prime concern is the import of capital goods, the FTS provided us with a rich source of information from which we were able to derive the import of 110 types of machinery and equipment (See Appendix II);

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1) Directorate-General of Customs and Excise; Law of Customs Tarriff No. 77 of 1955 as amended by The First Amendment Law No. 4 of 1956; (Government Press, Baghdad 1956) (in Arabic and English).

32 types of transport equipment (See Appendix IV); and 21 types of items classified as furniture and fixtures (See Appendix III). Imports of "Parts and Accessories" of capital goods are, on the whole, shown separately from the goods themselves.

The valuation of imports is on a c.i.f. (cost, insurance and freight) basis, plus landing charges. This method has the advantage that ad valorem duties are assessed on the basis of a value more closely comparable to domestic value than an F.O.B. type of valuation.[1)]

However, from 1960 onwards, the CBS claims that the valuation of imports is on the C. & F. basis. But our thorough investigation revealed that this claim is not justified, and the value of imports shown in the FTS is calculated on the c.i.f. basis. First, there is an obvious contradiction between the claims in the FTS of 1959 and 1960 regarding the import statistics of 1959. The figures given in both bulletins were identical, but surprisingly, it is claimed that the figures in the 1959 bulletin were on the c.i.f. valuation basis; while the figures in the 1960 bulletin were on the C.& F.

Second, in comparing import figures for 1960, 1961, and 1962, which are given in the FTS with their counterparts in the United Nations'

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1) International Trade Statistics; Edited by R.G.D. Allen and J.E. Ely, (Whitefriars Press, London 1953) Ch.5, p.87.

Yearbook of International Trade Statistics, we found that the figures were identical, but the CBS claims that their figures are on the C.& F. valuation basis, while the United Nations' are on the c.i.f.

Third, on a visit to Iraq in the summer of 1965, several import documents were examined in the Directorate-General of Customs and Excise and the CBS. The examination revealed that although the value of imports shown in the original import documents is on the C.& F. basis, the value supplied to the CBS is inclusive of insurance paid on these imports. This is so, because the Customs authorities add insurance to the C.& F. value before assessing import duties, which are levied on the c.i.f. value of imports, not the C.& F.

Re-Exports: Unlike the imports, re-export figures given in the FTS of Iraq do not distinguish between parts and accessories and capital goods proper. An inquiry made to the Directorate-General of Imports and Exports in Baghdad regarding the nature of Iraq's re-exports revealed that almost all the re-exports consist of "Parts and accessories" of capital goods and some consumers' durables. Thus, since the definition of GFCF adopted in this study neither includes parts and accessories, nor conusmers' durables, import figures of capital goods need no adjustment.

Reliability of the FTS. The reliability of import statistics, especially of machinery and equipment, is sometimes questioned on the grounds that since most of these goods are either exempted from import

duties, or the duties are very low, illegal arrangements between the Iraqi importer and the foreign exporter may exist in order to smuggle finance out of the country. This could be done through the over-valuation of imports and thus enabling the importer to build up his own foreign exchange resources.[1)]

This criticism does not seem to be tenable, because when this machinery and equipment is directly imported by the users themselves, as is done in many cases, then there is no reason why the importer should smuggle his money outside the country and at the same time make capital investment inside the country. Moreover, when the importers are the stock companies or companies with limited liabilities, where the ownership is not confined to one person, it is doubtful whether they inflate their import documents in order to smuggle the shareholders' money outside the country; a risk which benefits no one in particular.

It is to be noted, however, that although import records in the FTS are of good reliability, they suffer from serious descrepancies when the aggregates of various items are considered. These discrepancies are mainly due to the fact that when the final tabulations are sent to the press, they are never checked against misprint before publication. Thus, the investigator should be on his guard against using "totals" of imports as given in the FTS

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1) Kanaan, T.H., Input-Output and Social Accounts of Iraq, 1960-1963, Ministry of Planning, Baghdad, September 1965, Ch.V, pp.2-3.

before checking.

$ 3. PUBLIC ACCOUNTS

The term "Public Accounts" refers to the accounts of all Government agencies, whether their functions are purely administrative or commercial.

These accounts constitute the only source of information for estimating Public GFCF. Their details help to classify Public GFCF not only by type of asset, but by the industry group too. They are described under the following headings :

3.1. The Development Budgets (DB)

These budgets give details of Government capital expenditure on projects which are covered by the various Development Plans.

Each year's Development Budget is published in the Annual Report of the Directorate-General of Accounts, of the Ministry of Finance, but usually a two year time-lag exists between the date of publication of this report and the year to which the budget refers.

Moreover, these accounts are for fiscal years, i.e. April - March, and what expenditure figures actually represent is the amount paid to contractors during the year rather than an exact valuation of the actual

accomplishment of works. Hence, they ought to be adjusted for a certain time-lag. In discussing this point with officials of the Ministry of Finance, a satisfactory answer was not given to our inquiry about the relevance of these expenditures to the volume of work done during the fiscal year, but we were assured that there is a reasonably close relation between the two.

Nevertheless, we assumed that a three-month time-lag does exist between the volume of work done and the subsequent Government payments to contractors. Thus expenditure during April-March is taken as equivalent to capital work carried out during January-December. In other words, Government capital expenditure during a fiscal year, say 1957/1958, is considered as expenditure during the calendar year 1957.

In so far as their reliability is concerned, these budgets are highly reliable because they constitute one of the most important documents on Government operations on the one hand, and because they are subject to qualified auditing on the other hand.

3.2. The Ordinary Budgets (OB)

The Ordinary Budgets are those which represent the operations of the Central Government. Other than expenditure on transport equipment, furniture and fixtures, and the expenditure of the "Post Office" on the construction of communications systems, the OB can be considered in general as representing the operations of the Central Government on current account.

Like the Development Budgets, they are published by the Directorate-General of Accounts in its Annual Reports on the Iraqi State Accounts for the relevant fiscal year. There is, also, a two-year time-lag in the publication of these reports. Their reliability is similar to that of the Development Budgets.

3.3. Local Administrations" Capital Expenditure

Records of the capital expenditure (as well as other forms of expenditure and revenues) of the Local Administration in each Livva (Province) are kept at the Ministry of Interior in Baghdad. These accounts are not published and even the available records are in a disorganized form.

However, to make the best out of the bad job, it was possible, after strenuous efforts, to reclassify these records and derive these Administrations capital expenditure during the period of the present study.

3.4. Municipalities' Capital Expenditure

The unpublished accounts of nearly 220 municipalities, all over the country, are kept at the Ministry of Municipal and Rural Affairs. The accounts of the Capital Municipality (Amanet al-Asima), on the other hand, are kept both at the above Ministry and at Amanet al-Asima itself, though the latter keeps more detailed statements on its capital expenditure.

The capital expenditures of these municipalities are given in

enough detail and sophistication to make them as reliable as the Development Budgets.

3.5. Baghdad Sewage Services' (BSS) Capital Expenditure

The annual final (closed) accounts of the BSS are published in the Governments' Official Gazette. Every set of accounts consists of the Balance Sheet, the Revenue and Expenditure Accounts, and detailed statement of the annual capital expenditure on the BSS' various projects. Besides these published accounts it was possible to ascertain from the BSS directly their capital expenditure which is financed from the Development Budgets.

These accounts, compared with that of the Municipalities, for example, enjoy a higher degree of reliability because they are subject to auditing by qualified chartered accountants.

3.6. Public Enterprises' Accounts

These accounts are of the same nature as those of the Development Budgets or the Ordinary Budgets. They are subject, according to the Law, to qualified auditing. Their detailed capital expenditure, which we were able to obtain in addition to their final (closed) accounts, represents actual expenditure during the year. These enterprises may be classified a priori, as follows:

(i) Government Oil Refineries Administration (GORA)

(ii) Electricity and Water Boards

(iii) Iraqi Ports Administration

(iv) Iraqi Railways Administration

(v) Public Transport (Bus) Services

(vi) The Grain Board

(vii) The Tobacco Monopoly Administration

(viii) Government Manufacturing Establishments (other than GORA).

Remarks on Public Accounts:

1. It is of utmost importance to indicate at this stage that in calculating Public GFCF from public accounts, a major problem is encountered. This is due to the interdependence between the Development Budgets and the capital expenditure of some Government Agencies, especially Public Enterprises. In many cases, it was found that expenditure on, say project X, which is recorded in the Development Budget as actual expenditure, is also recorded in the accounts of a certain public enterprise (to whom the project belongs) as actual expenditure. The two figures may or may not be identical. In other cases, it was discovered that what is called actual expenditure in the DB on, say Railway Projects, represented no more than advance payments to the Railways Administration to finance projects drawn up in the development plans and executed by the Administration itself. The latter's capital expenditure usually exceeded the amount received from the Development Board. The following example may elucidate this point.

The Development Budget for 1957 shows the amount of ID 738,028 as an actual expenditure on railway projects; while the Railway's Budget for 1957 shows the same figure in the liabilities side under Advance by the Development Board for Capital and Major Development Schemes. In the same year, the capital expenditure of the Railways Administration (shown in their accounts) amounted to ID 1.2m., thus exceeding the amount received from the Board.

This, however, is one of several cases in which double-counting may occur should the investigator take into consideration both the Development Board's capital expenditure and that of the agency to whom the project belongs.

To avoid double-counting, therefore, the capital expenditure should be accounted at one end: either the Development Budget or the budget of the particular agency. But to achieve accuracy and detailed breakdown of the expenditure, it is preferable to rely on the accounts of the agency rather than the DB in this respect. This procedure is followed in this study.

2. Certain expenditures given in the Development Budgets as part of Government's capital outlay on various projects appeared to be of a current nature, and hence were discarded in their entirety from the present estimate of GDFCF. Regular maintenance of artesian wells, of machines, expenditures on books and maps are good examples. Expenditures given under the head "Ministry of Defence's Projects" are also excluded.

$ 4. OIL COMPANIES' ACCOUNTS

The capital expenditure of the three Oil Companies (IPC, MPC, and BPC) operating in Iraq were obtained from their London office. They contained detailed statements of the Companies' annual additions to their stock of capital, classified according to the type of assets. These accounts, supplemented by the Companies' imports of machinery and equipment (See Appendix II Table 13), constituted the basis for estimating GFCF in Crude Oil Extraction. The utilization of these accounts and their reliability is dealt with in Chapter VI where the GFCF in Mining and Quarrying is described.

$ 5. PRIVATE ENTERPRISES' FINAL ACCOUNTS (COMPANY ACCOUNTS)

During the visit to Iraq, the final (closed) accounts of more than 250 private enterprises for the period 1956-1962 were collected.

Out of the 250 establishments, 155 are in the "Manufacturing" sector; the remainder are in other sectors of the economy such as Transportation, Trade, Mining. The accounts of 40 of these establishments were obtained from the Federation of Iraqi Industries. The rest were collected from several Government departments and ministries, depending on the legal forms of these establishments. Thus, the accounts of stock companies and

companies with limited liabilities were obtained from the Directorate-General of Registration and Supervision of Companies (DGRSC) upon payment of certain fees. Also, it was discovered that the same information can be obtained from the "Reviews of DGRCS" published weekly. For Collective and Commandite manufacturing establishments, the accounts were collected from the Directorate-General of Development of National Industries (DGDNI). From the latter, detailed information about the types of machines used in various industrial activities were also collected. This information is usually required by the DGDNI from each establishment applying for a licence of exemption from import duties on their raw materials.

In so far as the reliability of these accounts is concerned, on the whole, they are highly reliable, especially when the accounts pertain to stock companies and companies with limited liabilities. But in the case of collective, commandite and individual companies their final accounts do not reflect an accurate picture of their investment in fixed assets, especially those which are collected from the DGDNI. The reason is that they sometimes overstate their invested capital and their profit in order to show that their positions are in conformity with the conditions required to obtain the licence referred to earlier.

Nevertheless, these accounts, supplemented by other information, proved to be very useful for our purpose. They provided the tool to assign certain imported machines to their relevant industry group.

They are also used in deriving the GFCF of 155 manufacturing establishments, whose gross output accounted for more than 40 per cent of total gross output of the Manufacturing Sector during 1957 and 1962.

$ 6. BANKS AND INSURANCE COMPANIES' CAPITAL EXPENDITURE

The capital expenditure of these institutions was directly obtained with the help of the Central Bank of Iraq (CBI), through a special questionnaire prepared for our purpose. More details are given in Chapter XII where the GFCF in Banking and Insurance is discussed.

$ 7. OTHER ECONOMIC STATISTICS

Haseeb's National Income Estimates; Kanaan's Input-Output Study; the Transport Census of 1957; the Industrial Censuses of 1954, 1960, 1961 and 1962; the Agricultural and Livestock Censuses of 1953/54 and of 1958/59; and other official and unofficial statistics were all employed in estimating certain variables of the GDFCF. Reference to these sources will be made throughout the study whenever applicable.

Chapter III PART TWO

METHODS OF ESTIMATION

This part is designed to provide a detailed exposition of the statistical methodology by which we fuse the primary data in preparing the GDFCF estimates in Iraq.

The estimating procedure is neither a mechanical job of adding up a lot of reported figures, nor a question of employing complex statistical and mathematical techniques. It is simply the evaluation of the conflicting evidence, the filling of gaps on the basis of partial evidence or using one's own judgment. The whole process is rather a strenuous one. For the final estimates, avoiding double counting, cannot be obtained unless a complex step-by-step procedure is adopted to streamline the basic data.

In order to utilize the available source material as intensively as possible, the estimating procedure was broken down into as many detailed steps as were required to arrive at the estimates presented in this and subsequent chapters. The detailed incorporation of all available source data contributes to the reliability of the present estimates.

The estimating methods are described under the following

sections : [1]

Section A : Estimation and Classification of GDFCF by Type of Asset.

Section B : Estimation and Classification of GDFCF by Industry Group.

Section C : Estimation and Classification of GDFCF by Type of Purchaser.

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1) Note: the estimates shown in the various tables are exclusive of expenditure on repair work. For the Private Sector, the expenditure is shown in Appendix VII Table 1. The Public Sector's expenditure on repair and maintenance and on construction for military purposes is also shown in Appendix VII Table 2.

Section A: Estimation and Classification of DGFCF by Type of Asset

The first step in the actual estimation procedure was the drawing up of a Control Total for each component of GDFCF, sub-divided between the Public and the Private Sectors. The aggregate of these components will add up to the total GDFCF classified by type of asset.

One advantage of this procedure is that the sub-division of each type of asset among several sectors (industry groups) of the economy will be checked by its "Control Total". Another advantage is that these "Control Totals" eliminate, to a great extent, the possibility of over or under estimating the country's capital formation, which could occur if the estimation were made for each industry group separately.

$ 1. THE CONTROL TOTAL OF GFCF IN BUILDING CONSTRUCTION

1.1. Residential Buildings (Dwellings)

The sources and methods of estimating GFCF in these items are fully described in Chapter XIII. The summary of the estimate is shown in Table XIII-4. It is to be noted that Government expenditure on the construction of dwellings is considered as part of the capital formation of the private sector because, as pointed out in Chapter XIII, these dwellings are used by

private individuals and eventually become their own property after repaying their cost of construction to the Government. In fact, we may consider the financing of Government housing programmes as akin to loans furnished by financial institutions (such as the Mortgage (Real Estate) Bank) to individuals for building their own houses.

1.2. Non-Residential Buildings

Non-Residential buildings are divided into two categories.

(a) Non-Residential Farm Buildings: Capital formation in this type of building is calculated as 50 per cent of total capital formation in rural buildings. The method of estimation is described in Chapter XIII.

(b) Non-Residential Urban Buildings: There are two types of non-residential urban buildings, private and public, and since the latter was not covered by the "Statistics of Building Permits",[1] the estimation of GFCF in Non-Residential Urban Buildings as a whole stems from two sources: Statistics of Building Permits and Public Accounts, as follows :-

(b.1) Public Non-Residential Urban Buildings. Public capital expenditure on this type of building is derived from the accounts of various Government agencies mentioned in Part One of the present chapter. Every precaution was taken to avoid double-counting which may occur due to the inter-

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1) For details on the coverage of building permits, see Chapter XIII.

dependence of the Development Budgets and the accounts of some Government agencies.

Table III-1 below shows the actual expenditure on the construction of non-residential buildings by public authorities. No major obstacle was encountered in calculating the figures, as the accounts of these agencies are sufficiently detailed. Mention is made only of those agencies which incur expenditure on this type of buildings.

(b.2) Private Non-Residential Urban Buildings. The method of estimating Private GFCF in non-residential urban buildings is similar to that employed for estimating private GFCF in "Residential Dwellings".

Since the sources of data and their scope are identical, it is sufficient, at this stage, to outline briefly the methods used (more details are to be found in Chapter XIII).

(i) Private GFCF during 1957-1959. Because the relevant building permits during this period lacked detailed information, the total cost of construction of non-residential urban buildings in each year is derived by applying an annual average cost of construction to the number of building permits issued for the erection of non-residential buildings. The figures are then adjusted for an assumed six month time-lag between the date of issuing the permit and the actual completion of the structure. This is done by deducting 17% of each year's total cost and adding it to the succeeding year. Details on the calculation procedure are given in Chapter XIII. Table III-2

TABLE III-1

PUBLIC GFCF IN NON-RESIDENTIAL BUILDINGS, 1957-1962 *

(ID 000)

	1957	1958	1959	1960	1961	1962
Development and Planning Board (DB)	5238.0	6141.9	5022.7	6154.0	8768.3	8113.8
Central Government (OB)	31.8	2.6	8.7	9.4	8.3	5.7
Municipalities[1]	220.3	217.8	598.5	260.6	194.6	141.5
Local Administrations	1325.4	1507.6	1868.1	1539.3	1778.8	3132.8
Awqaf (Pious Bequests)	43.7	45.7	40.7	45.7	45.5	149.0
Electricity and Water Boards[2]	46.4	74.6	228.8	190.1	195.6	180.0
Tobacco Monopoly Administration	778.4	76.0	100.0	162.0	31.0	30.0
GORA[3]	255.6	119.8	138.6	93.2	67.0	98.0
Government Manufacturing Establishments (other than GORA)	3121.8	464.3	539.2	144.0	299.1	402.5
Ports Administration[4]	30.2	141.9	726.4	1802.5	2338.6	1243.7
Railway Administration[5]	234.6	118.6	286.3	401.4	291.7	159.4
Public Transport (Bus) Services	24.3	59.7	14.9	55.3	24.3	22.2
Government Banks and the NIC	553.1	720.7	674.5	325.4	623.0	849.0
Directorate General of Exhibitions	-	-	-	-	153.0	6.0
TOTAL	11903.6	9691.2	10247.4	11182.9	14818.8	14533.6

* Excluding expenditure on repairs and on buildings for military purposes.

1) Including the Capital Municipality (Amanet Al-Asima).

2) Including: Baghdad Electricity Service, Baghdad Water Supply Board, and Basrah Electricity and Water Board.

3) Including: Gas Distribution Bureau and Oil Products Distribution Services.

4) Including Bar Dredging Scheme at Fao.

5) Including Iraqi Airways.

below shows the actual estimate of this item.

(ii) Private GFCF during 1960-1962. Building permits issued during this period show the relevant classification of buildings according to type as explained in Chapter XIII.

Details on the cost of construction, number of permits and the area of construction of this type of buildings are given in Appendix I Tables 13-18.

No adjustment is contemplated to mark-up the number of building permits, but the "estimated cost"[1] of these buildings is uplifted by 10%, as is done in the case of "Residential Buildings (dwellings)".

Table III-3 below shows the "total cost"[2] of construction of this type of building. The figures of this table are then adjusted for the six months time-lag in exactly the same way as is done for "Residential Buildings."[3] The adjustment is made by regarding the total cost of building permits issued during January-July, plus $\frac{5}{6}$, $\frac{2}{3}$, $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{6}$ of total cost of permits issued in August, September, October, November and December respectively, as part of the capital formation made in the same year in which the permits were

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1) The term "estimated cost" refers to the amount indicated by applicants in their application form for building permits as representing the cost of construction and other amenities which are integral parts of the buildings.
2) The term "total cost" refers to the estimated cost plus 10% mark-up.
3) See Chapter XIII.

TABLE III-2

PRIVATE GFCF IN NON-RESIDENTIAL URBAN BUILDINGS, 1957 - 1959

(ID 000)

		1956*	1957	1958	1959
1	Total Cost of Non-Residential Urban Buildings (as shown in Chapter XIII Table XIII-22, para. 9(1))	4446.6	4042.6	3785.1	5300.7
2	Less 17% which is part of the succeeding year	755.8	687.2	643.5	901.1
3	Plus 17% which is brought forward from the preceding year	-	755.8	687.2	643.5
	TOTAL :	-	4111.2	3828.8	5043.1

* The year 1956 is introduced here for the purpose of estimating the 17% of total cost of Construction which is part of 1957 GFCF.

TABLE III-3

COST OF CONSTRUCTION OF PRIVATE NON-RESIDENTIAL URBAN BUILDINGS, 1960 - 1962 *

(ID)

Month \ Year	1960	1961	1962
January	160655	410264	317852
February	237087	461456	367616
March	117574	186854	304538
April	269919	1100872	867813
May	129302	345717	511163
June	107907	504548	406396
July	133056	687900	435547
August	258723	594485	570184
September	176540	888588	447713
October	275120	576417	568360
November	244962	478909	375955
December	212326	390811	431002
TOTAL :	2323171	6626821	5604139

* Excluding Repair Work.

Sources: Appendix I Tables 13, 15 and 17 for 1960, 1961 and 1962 respectively.

issued. The remaining $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$ and $\frac{5}{6}$ of total cost in August-December, respectively, constitute part of the capital formation in the succeeding year. Tables 19, 20 and 21 of Appendix I elucidate the procedure of calculating capital formation in "Private Non-Residential Urban Buildings" during 1960, 1961 and 1962.

The result of the whole calculation is shown in Table III-4 below.

TABLE III-4

GFCF IN PRIVATE NON-RESIDENTIAL URBAN BUILDINGS, 1957 - 1962

(ID 000)

Year	New Buildings*
1957	4111.2
1958	3828.8
1959	5043.1
1960	2644.5
1961	5878.2
1962	5794.3

* As explained below new non-residential buildings pertaining to the Government owned National Insurance Company and all public Banking Institutions (other than the Central Bank) are included here.

Although the Statistics of Building Permits do not usually cover public authorities' buildings, it was claimed that they do, in fact, cover the buildings of Government banking institutions. This claim was tested with an enquiry through the Central Bank of Iraq to reveal the banks and insurance companies which did not obtain the necessary building permits. The enquiry revealed, surprisingly enough, that only the Central Bank itself failed to obtain a permit for its new building; (its construction started 1957 and took a few years to complete). Hence, the expenditure of all public banks (except the CBI, which was not originally included in the figures), together with the expenditure of the Government owned National Insurance Company, on new buildings is deducted from the figures shown in Table III-4, and private GFCF in Non-Residential Urban Buildings is computed, as shown in Table III-5 below.

The control total of private GFCF in Non-Residential Buildings and GFCF in this type of asset as a whole (i.e., public and private) are shown in Table III-6.

$ 2. THE CONTROL TOTAL OF GFCF IN "OTHER CONSTRUCTION AND WORKS"

This heading includes capital expenditure on all construction activities other than buildings, such as roads, bridges, canals, dams, airports, pipe-lines, silos and similar works.

TABLE III-5

PRIVATE GFCF IN NON-RESIDENTIAL URBAN BUILDINGS, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	GFCF in Non-Residential Buildings (unadjusted)*	4111.2	3828.8	5043.1	2644.5	5878.2	5794.3
2	Less GFCF by Public Banks and the NIC **	143.5	133.0	96.0	190.1	571.0	798.0
	TOTAL Private GFCF in Non-Residential Urban Buildings :	3967.7	3695.8	4947.1	2454.4	5307.2	4996.3

* See Table III-4 above.

** See Chapter XII Table 8.

TABLE III-6

THE CONTROL TOTAL OF GFCF IN NON-RESIDENTIAL BUILDINGS, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Private GFCF:						
	Urban[1]	3967.7	3695.8	4947.1	2454.4	5307.2	4996.3
	Rural[2]	99.8	101.2	102.7	104.1	105.6	107.2
	Total 1 :	4067.5	3797.0	5049.8	2558.5	5412.8	5103.5
2	Public GFCF:[3]	11903.6	9691.2	10247.4	11182.9	14818.8	14533.6
	TOTAL 1 + 2 = GFCF in Non-Residential Buildings at Current Prices :	15971.1	13488.2	15297.2	13741.4	20231.6	19637.1

Sources: 1) Table III-5.
2) Chapter XIII Table XIII-13.
3) Table III-1.

Both public and private bodies contribute to the capital expenditure on this type of asset; the former contributing the major part.

The derivation of Public GFCF in this item from the accounts of Government agencies was not difficult, but the estimation of the private sector's share involved certain assumptions due to the inadequacy of basic data. An outline of the estimation procedure is given below.

2.1. Public GFCF in "Other Construction and Works"

Capital expenditure by public authorities, including all Government agencies operating on a commercial basis, on this item was secured from their accounts. Only expenditure on new construction was taken into consideration. Certain adjustments were made to exclude expenditure which seemed to be of a current nature, although they were classified in the Government accounts as capital expenditure. Table III-7 shows the capital expenditure on "Other Construction and Works" classified according to the agencies which incurred the actual expenditure, while Table III-8 gives the classification of the expenditure according to the type of project.

2.2. Private GFCF in "Other Construction and Works"

No official sources of information were available to evaluate private capital expenditure on this item. In his national income estimates, Haseeb, suggests a figure of ID 500,000 as representing expenditure on the

TABLE III-7

PUBLIC GFCF IN "OTHER CONSTRUCTION AND WORKS", 1957 - 1962*

(ID 000)

	1957	1958	1959	1960	1961	1962
Development and Planning Board	31228.8	27989.2	17833.9	21641.3	24803.0	21352.0
Central Government	536.6	524.6	851.5	1143.5	598.5	697.6
Municipalities	1402.6	1161.1	3627.5	3187.4	2647.8	2357.2
Local Administrations	282.7	191.8	627.9	434.6	264.0	142.4
Electricity and Water Boards	1000.6	1191.4	1349.1	1367.7	1211.1	825.6
Baghdad Sewage Services	2.7	31.3	596.7	2154.1	1357.3	800.5
Tobacco Monopoly Administration	210.0	100.0	57.0	80.0	50.0	53.5
GORA	38.8	-	2000.0	9.0	12.3	-
Government Manufacturing Establishments (other than GORA)	676.1	1109.6	760.0	77.7	156.9	255.0
Ports Administration	187.5	350.6	564.9	1595.1	1927.9	1528.9
Railways Administrations	914.0	733.0	856.1	721.0	2648.2	6592.5
Grain Board	171.7	2823.2	1906.1	1698.1	1192.0	480.2
Public Transport (Bus) Services	-	1.0	1.1	1.6	1.5	4.0
Directorate-General of Exhibitions	-	-	-	-	-	1.0
TOTAL :	36652.1	36206.8	31031.8	34111.1	36870.5	35090.4

* Excluding expenditure on repairs and maintenance.

TABLE III-8

PUBLIC GFCF IN "OTHER CONSTRUCTION AND WORKS", 1957 - 1962*

Classified by Type of Project

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Flood Control, Irrigation and Drainage Projects	14172.8	13055.1	10626.8	10246.8	10185.8	5734.8
2	Roads and Bridges	13906.3	9669.7	9297.9	10108.7	11071.9	8133.1
3	Grain Silos	171.7	2823.2	1906.1	1698.1	1421.2	766.6
4	Railway Lines and related Construction	596.2	733.0	856.1	721.0	2542.2	6158.3
5	Ports, Dockyards and Airports	694.5	505.5	469.2	1404.9	2259.0	2222.5
6	Electricity Transmission Lines, Water Supply Pipes and Sewage Systems	4717.6	6291.4	2711.0	7249.4	4437.1	3309.1
7	Parks, Swimming Pools and other Recreational Services	306.5	238.0	606.3	981.5	1674.4	3270.8
8	Manufacturing Construction	983.7	1917.3	3123.2	158.2	1687.4	4273.8
9	Telephonic, Telegraphic and other Communications Systems	701.5	706.0	1108.5	991.8	1013.9	886.5
10	Miscellaneous Projects	401.3	267.6	326.7	550.7	577.6	334.9
	TOTAL :	36652.1	36206.8	31031.8	34111.1	36870.5	35090.4

* Excluding expenditure on repairs and maintenance.

Sources: The accounts of the various Government Agencies listed in Table III-7 above.

construction of swimming pools, tennis courts and industrial work undertaken by private bodies. (other than oil companies).[1)]

The present study attempts to establish a more definite figure than Haseeb's by examining the final accounts of a sample of private enterprises.

The final accounts of more than 250 establishments[2)] revealed that only establishments in the "Manufacturing Sector" had expenditure on this type of asset. Furthermore, it was found that there is a certain relationship between the establishments' investment in "Machinery and Equipment" and its investment in "Other Construction and Works". Thus, the former practically always induced investment in the latter. (Expenditure on "Other Construction and Works" constituted, on average, 12 per cent of expenditure on "Machinery and Equipment".)[3)]

Consequently, the capital expenditure on "Other Construction and Works" is confined to private manufacturing establishments and oil companies.

Estimation of the former part is described in Chapter VII;

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1) Haseeb, K., The National Income of Iraq, 1953-1961: R.I.I.A. (Oxford University Press, 1964) pp.111-112.
2) 155 of establishments fall in the Manufacturing Sector, 10 in Mining and Quarrying, 11 in Construction, 15 in Wholesale and Retail Trade, 9 in Transportation, Storage and Communications, 25 in Services.
3) See the results of a sample of 155 private manufacturing establishments given in Chapter VII Table VII-11.

while the latter's expenditure is derived from their accounts as described in Chapter VI. Tables III-9 and III-10 show the control total of private GFCF and the control total of GFCF in "Other Construction and Works" respectively.

$ 3. THE CONTROL TOTAL OF GFCF IN "MACHINERY AND OTHER EQUIPMENT"

GFCF in "Machinery and other Equipment" is divided into two parts :

(1) Machinery and Equipment proper, and

(2) Furniture and Fixtures.

This division is an extension of the United Nations' practice in this respect, where these two parts are considered under one heading only. The division is statistically convenient from the estimating standpoint and presents a detailed classification of expenditure on each item.

3.1. GFCF in Machinery and Equipment Proper

This heading embraces a large variety of items, tools such as spades, shovels and hoes are counted. But, in value terms, the biggest proportion of the series consists of machinery such as engines, power-transmission and other power-driven machinery.

Since the bulk of machinery and equipment is imported, it is

TABLE III-9

PRIVATE GFCF IN "OTHER CONSTRUCTION AND WORKS", 1957-1962

(ID 000)

Year	Private Manufacturing	Oil Companies	Total
1957	387.0	1525.1	1912.1
1958	611.6	3074.6	3686.2
1959	82.7	11173.6	11256.3
1960	582.1	18742.7	19324.8
1961	374.0	18382.1	18756.1
1962	741.5	3914.4	4655.9

TABLE III-10

THE CONTROL TOTAL OF GFCF IN

"OTHER CONSTRUCTION AND WORKS", 1957-1962

(ID 000)

Year	Public Sector	Private Sector	TOTAL
1957	36652.1	1912.1	38564.2
1958	36206.8	3686.2	39893.0
1959	31031.8	11256.3	42288.1
1960	34111.1	19324.8	53435.9
1961	36870.5	18756.1	55626.6
1962	35090.4	4655.9	39746.3

Sources: Tables III-7 and III-9 above.

relatively easy to estimate the control total of this item from the available detailed import statistics.

The import of machinery and equipment by the oil companies is exempted from import duties. Hence, it is treated separately in the control total.

From FTS, the flow of 110 types of machinery and equipment at c.i.f. value was determined. In selecting the relevant items, the United Nations definitions and the Standard International Trade Classification (S.I.T.C.) of capital equipment were closely followed. As far as they were identified, all consumers' durables, parts and accessories of capital goods were excluded from the initial tabulation of imports.

In the case of mixed commodities (i.e., goods which are used by both private households and business enterprises: central heating boilers, fans, vacuum cleaners, typewriters and air-conditioning machines), they were all classified as "Furniture and Fixtures" because these are usually treated as such in Government accounts and in private business accounts. An exception to this procedure is the treatment of sewing machines. No statistical evidence was available to determine the proportion which constitutes capital formation as distinct from consumers' usage. Hence, it was assumed that 50 per cent of total imports of this item represent capital formation; an assumption that cannot actually be substantiated.

In Appendix II details of imports of machinery and equipment

are given. Table 1 of the Appendix gives the definitions of these machines and equipment, with the conversion of their customs code into the S.I.T.C. and the I.S.I.C. Table 2 gives the actual import figures. Their allocation by industry group is shown in Tables 3 - 12 of the same appendix. Oil companies imports of machinery and equipment are shown in Table 13 of Appendix II.

Adjustment of the c.i.f. Value of Machinery and Equipment

In order to estimate the actual cost of machinery and equipment to their ultimate users, their c.i.f. value is adjusted by adding import duties, amounts for trade margins, internal transport charges, installation and other direct expenses of their acquisition. Import duties are calculated at the rate prescribed and in accordance with the provisions of the Import Schedule annexed to the Law of Customs Tariff.[1)] In the case of Government imports, no import duties are added.

Information on trade mark-ups, transport charges, installation and other costs could not be ascertained from the official censuses. But the study of various Government regulations for trade margins on imported machinery and equipment revealed that this margin constitutes 15-20 per cent

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1) Customs Tariff Law No. 77 of 1955 as amended by the First Amendment Law No. 4 of 1956; and other amendments thereafter.

of the c.i.f. value plus transport charges.[1] An enquiry from the Baghdad Chamber of Commerce and the examination of the accounts of several importers suggested a trade margin of about 25 per cent.

With regard to other costs, consultation with engineers, industrialists and the information provided in the CBS's recent estimate of GFCF in a sample of manufacturing establishments during 1963/64[2] suggest that the cost of transportation and installation is about 10 per cent of the c.i.f. value.

In weighing all the available evidence, it was decided to make an overall estimate of these costs (i.e., trade margins, transport charges, installation and other costs) by raising the c.i.f. value by 20 - 33.3%, depending on whether the items are tools and implements or machinery proper. Import duties are then added to obtain the final costs.

Table 2 of Appendix II shows the c.i.f. value, the mark-up and the import duties on each type of imported machinery and equipment. A supplement to the table indicates the items which were marked-up by the various percentages.

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1) Higher Supply Committee: Regulation No. 7 of 1958, published in the Review of the Directorate-General of Commerce (Companies Annex), No. 33, July 1958 (Ministry of Economics, Baghdad).

2) Capital Formation in Manufacturing Establishments employing 10 or more persons during 1963/64, CBS, Ministry of Planning, Baghdad. (Unpublished at the time of writing this thesis.)

The c.i.f. value of the Oil Companies' total imports of machinery and equipment is marked up by only 10 per cent (as it was suggested by the Companies' engineers in Iraq and their office in London) to account for transport charges and installation fees. This was so because of the fact that no trade margin is included in their case, since the importation is made directly by the Companies themselves.

Domestically-made Agricultural tools and Implements

An estimate of the value of home-made agricultural tools and implements is made in the manner described in Chapter V below. This estimate is then added to the imported machinery and equipment, and the final control total of GFCF in "Machinery and Equipment" is arrived at, as shown in Table III-11.

Distribution of GFCF in Machinery and Equipment between Public and Private Sectors

Public GFCF in "Machinery and Equipment" is estimated from the accounts of Government agencies as shown in Table III-12.

Private GFCF, on the other hand, is arrived at by first deducting public GFCF in machinery and equipment from the imported machinery and equipment shown in paragraph 1, Table III-11. Secondly, oil companies' imports of machinery and equipment and domestically-made agricultural implements are added, as shown in Table III-13.

TABLE III-11

THE CONTROL TOTAL OF GFCF IN MACHINERY AND EQUIPMENT, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Imported Machinery and Equipment (other than Oil Companies) (See Appendix II Table 2)	20269.2	15473.5	11645.7	12587.6	16253.6	21202.3
2	Oil Companies Imports of Machinery and Equipment (See Appendix II Table 13)	2308.0	1604.6	2600.3	3223.1	3379.0	541.5
	Total Imported Machinery and Equipment :	22577.2	17078.1	14246.0	15810.7	19632.6	21743.8
3	Domestically made Agricultural Tools and Implements	760.0	760.0	760.0	760.0	760.0	760.0
4	CONTROL TOTAL of Machinery and Equipment included in GDFCF, that is, 1 + 2 + 3 :	23337.2	17838.1	15006.0	16570.7	20392.6	22503.8

TABLE III-12

PUBLIC GFCF IN MACHINERY AND EQUIPMENT, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
Development and Planning Board	1056.4	3041.0	2796.3	1401.3	2248.9	3912.5
Central Government	1024.1	603.8	530.4	465.6	362.7	274.0
Municipalities	146.2	181.4	349.8	535.0	338.8	358.0
Local Administrations	58.7	57.8	134.4	123.3	75.7	93.4
Electricity and Water Boards	1222.5	975.8	525.1	616.8	343.3	296.2
Baghdad Sewage Services	-	1.2	99.4	33.0	68.4	51.1
Government Exhibitions Administration	-	-	-	-	22.6	5.4
GORA	1013.3	257.3	2031.3	59.8	1392.0	37.7
Government Manufacturing Establishments (other than GORA)	3765.0	1679.8	1190.3	221.1	310.1	482.7
Ports Administration	180.4	364.2	277.7	168.7	325.4	391.8
Railways Administration	35.0	57.6	7.3	4.6	0.5	-
Grain Board	2.4	26.4	20.8	2.4	0.7	2.0
Public Transport (Bus) Services	2.4	21.2	34.4	18.3	26.1	14.8
Public Banks and the NIC	28.1	17.1	22.2	16.9	22.6	43.9
TOTAL Public GFCF in Machinery and Equipment :	8534.5	7284.6	8019.4	3666.8	5537.8	5963.5

TABLE III-13

DISTRIBUTION OF GFCF IN MACHINERY AND EQUIPMENT

BETWEEN PUBLIC AND PRIVATE SECTORS

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Imported Machinery and Equipment (other than Oil Companies)*	20269.2	15473.5	11645.7	12587.6	16253.6	21202.3
2	Less Total Public GFCF in Machinery and Equipment**	8534.5	7284.6	8019.4	3666.8	5537.8	5963.5
3	Private GFCF in Imported Machinery and Equipment (other than Oil Companies)	11734.7	8188.9	3626.3	8920.8	10715.8	15238.8
4	Plus Domestically made Agricultural Tools and Implements*	760.0	760.0	760.0	760.0	760.0	760.0
5	Private GFCF in Machinery and Equipment (other than Oil Companies)	12494.7	8948.9	4386.3	9680.8	11475.8	15998.8
6	Plus Oil Companies' Imports of Machinery and Equipment*	2308.0	1604.6	2600.3	3223.1	3379.0	541.5
7	Total Private GFCF in Machinery and Equipment	14802.7	10553.5	6986.6	12903.9	14854.8	16540.3
	TOTAL GFCF in Machinery and Equipment = 2 + 7 :	23337.2	17838.1	15006.0	16570.7	20392.6	22503.8

Sources: * See Table III-11 above.
** Public accounts.

3.2. GFCF in "Furniture and Fixtures"

Furniture and fixtures, whether wooden, metal or of any other material, are part of fixed capital formation provided it is used by sectors[1)] falling within the boundary of our definition of capital formation. This implies that not all furniture and fixtures can be considered as capital goods but only that part which is acquired by business enterprises, private or otherwise, and General Government.

In Iraq this item (i.e., furniture and fixtures) includes domestically manufactured and imported goods. No difficulty is involved in estimating the imported part since Foreign Trade Statistics provide the necessary details.

The domestic part, however, is manufactured by carpenters, blacksmiths and establishments producing wholly metal products whether doors, windows or furniture. Hence, we have to look for sources of information on the output of these establishments, i.e., an industrial or manufacturing census.

Since nearly all carpentry is done by very small establishments employing less than nine persons (usually one-man), it means that

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1) Excluding the sector "Ownership of Dwellings" the investment of which is only the building and its integral parts but not the movable contents.

unless the establishment employed ten or more persons, most of the industrial censuses undertaken in Iraq fall short of covering it. This is supported by the evidence obtained by comparing employment figures for carpentry given in the 1960 monthly Industrial Survey and the 1957 Population Census. The former gives the number engaged in carpentry as 830 persons, while the latter reported 8,582 persons so engaged. Another piece of evidence is the disparity between imports of wood usable in carpentry and the amount of wood shown in the 1960 Monthly Industrial Survey to be used in carpentry.[1)]

Metal furniture, on the other hand, is produced by modern and mechanized establishments which are covered in the industrial censuses, as well as by individual blacksmiths who are usually left outside the scope of the censuses.

Nevertheless, two of the many industrial censuses undertaken in Iraq can be considered as covering all establishments, even the smallest. These are the Industrial Census of 1954 (mostly in respect of 1953) and the Returns of the Monthly Industrial Survey of 1962, supplemented by the Returns of Industrial Survey of small establishments (employing nine or less persons) undertaken during January and June 1962. In the years between 1954 and 1962 the available industrial censuses either did not cover the whole country

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1) Kanaan, T., Input-Output and Social Accounts of Iraq, 1960-1963, (Published by the Ministry of Planning, Baghdad, September 1965) Ch. VIII, p.40.

or did not cover establishments employing less than ten persons.

In addition to these two censuses, a study on the input-output and social accounts of Iraq, which covered the period 1960-1963, and national income estimates covering the period 1953-1963, were also available. By using all these sources of information and the Foreign Trade Statistics, it was possible to estimate total supply of furniture and fixtures, and to determine the part which was considered to be a component of gross fixed capital formation. The procedure for this estimation was as follows :

1. From the Industrial Census of 1954, the gross output of carpentry and metal products for the year 1953 at factor cost prices was determined. The figure was then adjusted by 10% upwards to allow for possible understatement, and by 1% for changes in stock.[1)]

2. From the input-output study[2)] we derived the gross output of carpentry and metal products for the years 1960, 1961, and 1962 at factor cost prices.

3. Using the gross output of carpentry and metal products thus derived, and the gross output of the manufacturing sector (other than oil refining) at factor cost,[3)] the percentage ratios of carpentry and metal products' gross output to the gross output of manufacturing were determined

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1) Haseeb, K., The National Income of Iraq, 1953-1961, p.94.
2) Kanaan, T., Ibid.
3) Haseeb, K., Ibid.

for 1953, 1960, 1961 and 1962. And since these ratios remained fairly constant throughout the period, their simple average of 8.7% was taken and applied to the gross output of manufacturing in 1957, 1958 and 1959 and the gross output (at factor cost) of carpentry and metal products during these years was calculated. Table III-14 shows the estimation procedure described above.

4. Total supply of furniture and fixtures was estimated by adding imports of furniture and fixtures (including oil companies' imports)[1] to the domestically manufactured[2] products.

To determine the proportion of total supply of furniture and fixtures which should enter gross capital formation, we relied on the input-output study. It shows that on average about 18 per cent of total supply of furniture and related products went to private gross capital formation during 1960-1963; the rest was purchased by public bodies, private consumers (households), exported or used in construction.

Since expenditure of all public agencies on furniture and fixtures was directly obtained from their final accounts (see Table III-16), we estimated only private gross capital formation in furniture and fixtures

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1) For details of imports of furniture and fixtures see Appendix III Tables 1 and 2. The figures are marked-up and import duties are added.
2) Domestically manufactured furniture and fixtures were marked-up by 25% to bring the figures to market prices.

TABLE III-14

ESTIMATION OF GROSS OUTPUT OF CARPENTRY AND METAL PRODUCTS

(ID 000)

		1953	1960	1961	1962	1957	1958	1959
1	Gross Output of Manufacturing (excluding Oil Refining) at Factor Cost	35664.0	92494.0	101976.0	112622.0	61058.0	65257.0	77613.0
2	Gross Output of Carpentry and Metal Products at Factor Cost	2913.0	8564.0	8867.0	9653.0	5312.0	5677.4	6752.3
3	Percentage Ratio of (2) : (1)	8.2	9.3	8.7	8.6	8.7	8.7	8.7

as 18% of total supply at market prices as shown in Table III-15.

The control total of this type of asset, therefore, consists of the sum of private GFCF in Furniture and Fixtures, estimated as above, and public GFCF derived from public accounts. This is shown in Table III-17 below.

$ 4. THE CONTROL TOTAL OF GFCF IN TRANSPORT EQUIPMENT

In Iraq almost all transport equipment is imported. However, certain types of transport equipment are made domestically, e.g., barges, boats and a few indigenous horse-drawn passenger carriers and wagons; but they are relatively insignificant in value.[1] Car assembly, in the wider sense of the word, is non-existent, but a few imported chasis with engines and bodies (including cabs) are assembled in Iraq.

In estimating the domestic part, the manufacturing censuses were used to derive the value of barges and boats in the manner described in Chapter X below.

For the imported transport equipment (including chassis fitted with engines and bodies) the FTS was used to identify 32 types of transport

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1) Due to the introduction of Government bus services in almost all urban parts of Iraq, horse-drawn carriers and wagons are gradually disappearing, and hence no account of them is taken here.

TABLE III-15

SUPPLY OF FURNITURE AND FIXTURES, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Domestic Supply of Furniture and Fixtures at Factor Cost*	5312.0	5677.4	6752.3	8564.0	8867.0	9653.0
2	Plus 25% Mark-up	1328.0	1419.4	1688.1	2141.0	2217.0	2413.2
3	Domestic Supply of Furniture and Fixtures at Market Prices	6640.0	7096.8	8440.4	10705.0	11084.0	12066.2
4	Imported Furniture and Fixtures (including Oil Companies imports) at Market Prices**	3039.0	3525.0	3031.8	4623.8	4471.3	4094.1
5	TOTAL Supply of Furniture and Fixtures :	9679.0	10621.8	11472.2	15328.8	15555.3	16160.3
6	Private Gross Capital Formation (= 18% of (5)) :	1773.6	1963.0	2141.0	2656.2	2684.6	2791.9

Sources: * See Table III-14.
** See Appendix III.

TABLE III-16

PUBLIC GFCF in Furniture and Fixtures, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
Development and Planning Board	45.2	77.3	45.7	112.1	95.6	54.8
Central Government	239.8	289.1	319.1	355.2	269.8	201.3
Municipalities	14.0	13.8	19.3	14.7	17.6	19.8
Local Administrations	113.1	106.5	279.3	428.1	334.6	332.2
Electricity and Water Boards	7.1	14.2	26.6	17.4	50.6	11.6
Baghdad Sewage Services	0.5	1.2	3.1	3.5	2.0	2.8
Directorate-General of Exhibitions	-	-	6.1	2.0	7.0	3.3
Awqaf (Pious Bequests)	5.1	4.4	5.1	3.7	3.6	21.6
Tobacco Monopoly Administration	1.0	1.0	2.0	2.0	2.5	1.5
GORA	97.0	4.4	5.8	2.6	8.8	13.7
Government Manufacturing Establishments (other than GORA)	46.1	13.7	33.2	13.4	16.2	14.0
Ports Administration	-	-	-	47.6	23.4	5.1
Railways Administration	6.0	8.0	7.0	8.0	8.0	8.0
Grain Board	1.0	1.3	1.4	0.7	1.0	1.2
Public Transport (Bus) Services	3.4	4.8	6.3	7.5	4.4	5.4
Public Banks and the NIC	14.7	8.8	12.4	75.8	37.3	21.3
TOTAL Public GFCF in Furniture and Fixtures :	594.0	548.5	772.4	1094.3	882.4	717.6

TABLE III-17

THE CONTROL TOTAL OF GFCF IN FURNITURE AND FIXTURES, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Private GFCF in Furniture and Fixtures as estimated in Table III-15	1773.6	1963.0	2141.0	2656.2	2684.6	2791.9
2	Public GFCF in Furniture and Fixtures as identified from the accounts of Public Enterprises and General Government (Table III-16)	594.0	548.5	772.4	1094.3	882.4	717.6
3	CONTROL TOTAL of Furniture and Fixturès included in GDFCF :	2367.6	2511.5	2913.4	3750.5	3567.0	3509.5

equipment, as shown in Appendix IV Table 1.

However, not all transport equipment can be regarded as capital goods because certain types are acquired by private households, and these should be treated as consumers' durables.[1] To estimate the part of imported transport equipment which constitutes gross capital formation, oil companies' imports were separated and the control total calculated as follows:

1. The c.i.f. value of each type of transport equipment was marked-up by 33⅓% to cover the dealers' margin, transport charges, registration fees and other costs.[2] Import duties, where applicable, were then added.[3]

2. Transport equipment such as lorries, vans, buses, tractors for road haulage, ships, aircraft, locomotives, road sweepers and all other special purpose motor vehicles were considered as capital goods.

3. Motor cycles, auto-cycles, delivery tricycles and similar vehicles were added together, and 35 per cent of their value was considered

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1) U.N. Statistical Office: Studies in Methods, Series F, No. 3, Concepts and Definitions of Capital Formation, (New York, July 1953) para. 17, p.8.

2) According to the Government Regulations No. 7 of 1958, dealers' margin on imported transport equipment should not exceed 20% of the c.i.f. value, but in practice this margin reaches 25-30%.

3) Import duties are calculated at the rates prescribed in the Import Schedule annexed to the Law of Customs Tariff, No. 77 of 1955 and its amendment by Law No. 4 of 1956. Changes in the rates of import duties after 1958 were also taken into consideration.

to be capital formation.[1)]

4. 25 per cent of the value of saloon cars was considered to represent the value of taxis, and therefore within the definition of the capital formation estimates. This allocation was based on car registration statistics given in the Annual Abstract of Statistics, as shown in Appendix VIII Table 1.

5. Government, banks and insurance companies' purchases of saloon cars were added to the above estimates, and thus the control total for the imported transport equipment (other than oil companies) was calculated.

6. The estimated value of domestically-made barges and boats was added to the control total of imported transport equipment in order to obtain GFCF in Transport Equipment (other than oil companies).

7. To arrive at the control total of GFCF in this type of asset for the country as a whole, the oil companies' purchases of transport equipment (which were derived from their accounts) were added to the total derived in (6) above. The excess of the companies' imports over their purchases was considered to be consumers' durables used within the companies, as explained

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1) This 35% is based on information gathered from experts at the Railways Administration, the Directorate-General of Passenger Transport Services in Baghdad, the Post Office, and the Ministry of the Interior. (The Post Office uses this means of transportation for delivery of post, and the Ministry of the Interior for the Police Force.)

in Chapter VI.

Table III-18 shows the calculation procedure described in the above stages.

Distribution of GFCF in Transport Equipment between Public and Private Sectors

Public GFCF in "Transport Equipment" is estimated from the accounts of Government agencies. Only new purchases of these agencies of transport equipment were taken into consideration. Table III-19 shows the expenditure of public agencies on new transport equipment during 1957-1962.

Private GFCF (other than oil companies) is then derived by deducting public GFCF in this type of asset from the control total shown in (C) Table III-18 below. By adding oil companies' purchases of transport equipment (shown in (D) Table III-18) to this residual, total private GFCF was calculated. The calculation stages are shown in Table III-20 below.

TABLE III-18

THE CONTROL TOTAL OF GFCF IN TRANSPORT EQUIPMENT, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
A	Imported Transport Equipment (other than Oil Companies) included in GDFCF:						
	1. Lorries, vans, tractors for road haulage, ships, and other special purpose transport equipment	4561.6	5046.7	3601.5	7216.5	8767.8	7735.3
	2. Motor Cycles, auto-cycles and delivery cycles (35% only)	104.6	121.0	146.4	218.6	210.9	176.9
	3. Taxis (25% of imports of saloon cars)	1383.0	1169.0	975.1	1156.2	1692.0	1367.3
	4. Government and Bank and Insurance Companies purchases of Saloon Cars	359.9	306.0	512.1	447.5	396.1	242.1
	TOTAL 'A' :	6409.1	6642.7	5235.1	9038.8	11066.8	9521.6
B	Domestically made Barges and Boats	75.0	75.0	75.0	136.5	96.2	53.4

(Continued)

TABLE III-18 (continued)

C TOTAL (A + B) = GFCF in Transport Equipment (other than Oil Companies) :	6484.1	6717.7	5310.1	9175.3	11163.0	9575.0
D Oil Companies Purchases of Transport Equipment	573.2	434.0	476.8	490.9	429.6	68.5
CONTROL TOTAL of GFCF in Transport Equipment (= C + D) :	7057.3	7151.7	5786.9	9666.2	11592.6	9643.5
Total Imports of Transport Equipment (other than Oil Companies) (See Appendix IV Table 2)	10390.6	10095.9	7942.6	12491.8	16155.6	13737.6
Plus Oil Companies Imports (See Appendix IV Table 5)	1512.4	888.8	1237.0	681.0	613.3	73.6
TOTAL Imports of Transport Equipment:	11903.0	10984.7	9179.6	13172.8	16768.9	13811.2
Less Imported Transport Equipment included in GDFCF (A + D)	6982.3	7076.7	5711.9	9529.7	11496.4	9590.1
Transport Equipment considered as Consumers' Durables :	4920.7	3908.0	3467.7	3643.1	5272.5	4221.1

TABLE III-19

PUBLIC GFCF IN TRANSPORT EQUIPMENT, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
Development and Planning Board	76.0	72.5	70.8	114.0	154.3	62.0
Central Government	231.7	205.8	297.6	260.4	305.1	204.5
Local Administrations	61.2	25.6	99.7	138.7	80.7	54.7
Electricity and Water Boards	7.8	15.7	51.2	33.8	48.6	12.9
Baghdad Sewage Services	-	-	1.1	5.1	4.0	1.4
Directorate-General of Exhibitions	-	-	1.0	-	1.3	-
Tobacco Monopoly Administration	-	4.2	2.0	3.0	3.8	1.0
GORA	190.2	178.4	-	14.8	11.9	204.8
Government Manufacturing Establishments (other than GORA)	45.4	11.5	174.0	37.4	79.8	56.8
Ports Administration	337.8	349.5	470.3	890.0	97.0	27.5
Railways Administration	-	206.9	261.9	12.3	-	-
Grain Board	2.6	-	1.2	2.3	1.0	2.2
Public Transport (Bus) Services	185.4	433.3	875.1	301.2	735.5	1164.7
Public Banks and the NIC	1.7	1.3	1.2	2.5	1.6	4.7
TOTAL Public GFCF in Transport Equipment :	1139.8	1504.7	2307.1	1815.5	1524.6	1797.2

TABLE III-20

DISTRIBUTION OF GFCF IN TRANSPORT EQUIPMENT BETWEEN

PUBLIC AND PRIVATE SECTORS, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Total GFCF in Transport Equipment (other than Oil Companies)	6484.1	6717.7	5310.1	9175.3	11163.0	9575.0
2	Less Public GFCF in Transport Equipment	1139.8	1504.7	2307.1	1815.5	1524.6	1797.2
3	Private GFCF in Transport Equipment (other than Oil Companies)	5344.3	5213.0	3003.0	7359.8	9638.4	7777.8
4	Plus Oil Companies' GFCF in Transport Equipment	573.2	434.0	476.8	490.9	429.6	68.5
5	Total Private GFCF in Transport Equipment	5917.5	5647.0	3479.8	7850.7	10068.0	7846.3
	TOTAL GFCF in Transport Equipment = (2) + (5) :	7057.3	7151.7	5786.9	9666.2	11592.6	9643.5

Sources: Tables III-18 and III-19 above.

Section B: Estimation and Classification of GDFCF by Industry Group

$ 1. DEFINITION

Under this heading, the GDFCF estimate is classified by the industrial use of the asset, in accordance with the relevant United Nations' recommendations.

The economy is divided into eleven sectors designated as "Industry Groups" in a way similar to the national income estimates. Within each industry group, GFCF is classified by type of asset. Furthermore, wherever applicable, the two types of transactors - public and private sectors - in each industry group are shown separately. These "Industry Groups" are :

1. Agriculture
2. Mining and Quarrying
3. Manufacturing
4. Construction
5. Electricity and Water
6. Transportation, Storage and Communications
7. Wholesale and Retail Trade
8. Banking and Insurance

9. Ownership of Dwellings

10. Public Administration

11. Services

Broadly speaking, the delineation of the boundary of each industry group is akin to that laid down by the United Nations Statistical Office.

However, certain departures from the U.N.'s classification were made, where necessary to adapt it for the purpose of estimating GDFCF by industry group. Thus, while the GDP is classified according to the industry of origin, the GDFCF is classified according to the industry of use, irrespective of ownership or origin. For example, in measuring the GDP, the gross output of construction is usually assigned to the industry designated as "Construction", while in estimating the GDFCF this gross output is distributed among all or several industries. (For example, expenditure on the construction of roads, bridges, airports and the like is included in the industry "Transportation, Storage and Communications"; while the expenditure on the construction of non-residential buildings is allocated to several industry groups using this type of building.)

Another departure from the U.N. classification is in respect of the treatment of pipe-lines used for crude oil transport by the oil companies and the GORA. These pipe-lines are considered as part of the capital formation in "Mining and Quarrying" and "Manufacturing" respectively.

The Public Sector contributes to eight of the eleven industry groups indicated above. Its contribution in two industries - 'Electricity and Water" and "Public Administration" - is 100 per cent. These eight industry groups are :-

1. Agriculture
2. Manufacturing
3. Electricity and Water
4. Transportation, Storage and Communications
5. Wholesale and Retail Trade
6. Banking and Insurance
7. Public Administration
8. Services.

The Private Sector, on the other hand, contributes to nine industry groups; in three of them "Mining and Quarrying", "Construction", and "Ownership of Dwellings" - the contribution is 100 per cent. These nine industry groups are :-

1. Agriculture
2. Mining and Quarrying
3. Manufacturing
4. Construction
5. Transportation, Storage and Communications

6. Wholesale and Retail Trade

7. Banking and Insurance

8. Ownership of Dwellings

9. Services.

It is important to notice that the contribution of the public sector to the GFCF of a particular industry group does not necessarily entail its contribution to its GVA. For example, Table 10 of Appendix IX shows that the public sector has no contribution to the value added of Agriculture, though it has to its GFCF as shown in Table IV-17 below. Conversely, in the Mining and Quarrying sector, it has no contribution in the GFCF estimates, but it has a small contribution in the value added.

In the case of the private sector, the present classification by industry group is similar to that adopted for the National Income estimates.

$ 2. METHODS OF ESTIMATION

In estimating GDFCF by industry group two methods were employed: the expenditure approach and the commodity-flow approach. The first was used to estimate the GFCF by the Public Sector and the second to estimate the GFCF by the Private Sector in the industries whose capital formation could not be ascertained from the expenditure side.

In order to avoid double-counting and to confine the calculation to the control totals for the components of GDFCF derived earlier, it was found useful to draw up control totals for "Machinery and Equipment" and "Transport Equipment" for each industry group.[1] Thus, where the Public Sector or the Private Sector has no contribution in the GFCF in an industry group, the control totals of these two types of asset will represent the GFCF of the Private or the Public sectors in these assets. But where both sectors contribute in the GFCF of the particular industry, the Private sector's share in these two types of asset is the difference between the control totals and Public GFCF.

2.1. Distribution of Machinery and Equipment by Industry Group :

The distribution of "Machinery and Equipment" assigns each type of imported machinery, implements and equipment to a particular industry group.[2]

The distribution is greatly facilitated by the details given in the F.T.S. of Iraq. A definition of each type of imported machinery and

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1) The other components namely, Non-Residential Buildings, Dwellings, Other Construction and Works, and Furniture and Fixtures, need no control totals as can be seen from the methods of their classification by industry group.

2) Oil companies are not included in this distribution. Their capital formation in "Machinery and Equipment" is derived from their accounts and controlled by their own imports of this type of asset. For details of their imports see Appendix II Table 13.

equipment included in GDFCF is given in Appendix II Table 1, which shows that their allocation by industrial group is relatively simple. Table 2 of the same appendix gives the actual import figures of 110 types of equipment. Each type is ascribed to a certain industry group, indicated by the arabic numbers 1, 2, 3, ..., 11, which refer to the order listed on page 176 above. Thus, Agriculture is indicated by 1; Mining and Quarrying by 2; Manufacturing by 3, and so on, until number 11, which refers to Services.

When a particular machine or equipment is used by several industries, its value is distributed among the relevant users according to their percentage contribution to GDP, shown in Appendix IX Table 8. For instance, hoists, winches, cranes, pulley tackle and other lifting, loading and unloading machines are used in Manufacturing, Construction and in Transportation. This item is then distributed among these three industries in the manner described above. Other cases are treated similarly.

Tables 3 - 12 of Appendix II show the allocation of machinery and equipment to each industry group.[1)] It can be seen from Table 3 of this appendix that agricultural machinery such as pumps, lawn mowers, and the like, purchased by the municipalities and the Directorate-General of Agricultural Machines and Implements are deducted in toto, and then included in

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1) Except the industry designated as "Ownership of Dwellings", the capital formation of which embraces expenditure on the construction of residential buildings only.

Tables 11 and 12 of the same appendix. This is done because the main activities of the above two departments fall within the industries "Services" and "Public Administration", respectively. Similarly, construction machinery acquired by the Ministry of Works and Housing and by the municipalities is deducted from Table 6 Appendix II, but included in Tables 11 and 12.

A summary of the distribution of imported machinery and equipment by industry group is shown in Table III-21 below.

2.2. Distribution of Transport Equipment by Industry Group:

The distribution of imported transport equipment (other than oil companies) by industry group is broadly similar to that of machinery and equipment, in the sense that each type of transport equipment is attributed to one or several industry groups, depending on its nature. For example, railway locomotives and tenders, tramway passenger coaches, and the like are attributed to "Transportation, Storage and Communications"; while tractors (other than agricultural) are included in "Construction". Special purpose motor lorries such as fire-engines and road sweepers are considered as part of the "Services" sector because fire brigade and road cleansing are functions of the municipalities, whose activities fall mainly within the "Services" industry. Transport equipment capable of carrying ten or more passengers was considered as buses and attributed to the sector "Transportation, Storage and Communications".

TABLE III-21

THE CONTROL TOTALS OF GFCF IN IMPORTED MACHINERY AND EQUIPMENT, 1957-1962

DISTRIBUTED BY INDUSTRY GROUP*

(ID 000)

	Industry Group	1957	1958	1959	1960	1961	1962
1	Agriculture	3371.3	1712.7	954.6	1305.0	3171.4	4201.8
2	Mining and Quarrying:						
	(i) Oil Companies	2308.0	1604.6	2600.3	3223.1	3379.0	541.5
	(ii) Other Mining and Quarrying	199.4	217.3	129.8	215.2	254.1	150.9
	Total (2)	2507.4	1821.9	2730.1	3438.3	3633.1	692.4
3	Manufacturing	9984.8	7577.6	4991.1	6063.1	6863.3	10837.4
4	Construction	2165.7	844.5	923.7	460.6	1138.5	1062.3
5	Electricity and Water	1522.8	2182.7	2186.7	1833.1	1259.3	1701.7
6	Transportation, Storage and Communications	1258.6	1302.1	906.7	353.0	574.9	566.4
7	Wholesale and Retail Trade	19.6	23.8	17.1	19.0	12.4	15.2
8	Banking and Insurance**	79.3	70.8	50.1	24.0	54.4	126.6
10	Public Administration**	129.8	84.3	176.7	146.5	100.9	110.5
11	Services	1537.9	1457.7	1309.2	2168.1	2824.4	2429.5
	TOTAL :	22577.2	17078.1	14246.0	15810.7	19632.6	21743.8

* Note that in this classification no allocation of Machinery and Equipment is made for Industry Group Number 9 - Ownership of Dwellings.

** See the Notes on Table 2 of Appendix II.

Sources: For all industry groups except Oil Companies, see Tables 3 - 12 of Appendix II.
For Oil Companies, see Table 13 of Appendix II.

In the case of lorries, vans, dumpers and similar means of transporting goods and materials, a problem occurred regarding their distribution by industry group. These vehicles are used for industrial purposes as well as for hire. Car registration statistics did not resolve the problem. However, the Transport Census of 1957 - the only nation-wide one available - provided useful information on the number of lorries and vans used by industrial and commercial enterprises and those solely for hire, as shown below :-

TABLE III-22

NUMBER OF LORRIES AND VANS, 1957

		1957
1.	Number of Lorries and Vans for hire	8,723
2.	Number of Lorries and Vans owned by industrial and commercial enterprises	2,871
3.	TOTAL :	11,594
4.	Ratio of 1 : 3	75%
5.	Ratio of 2 : 3	25%

Sources : Census of Road Transport, 1957; PBS, Ministry of Economics, Baghdad.

As additional information was unobtainable it was assumed that the ratio of vehicles for hire to the total remained constant throughout the period of this study. Hence, 75 per cent of imported lorries, vans and similar kinds of transport equipment was allocated to the industry group "Transportation, Storage and Communications". The remaining 25 per cent was distributed among the industries : "Mining and Quarrying (other than oil companies)", "Manufacturing", "Construction", and "Wholesale and Retail Trade", according to their contribution to GDP. Taxis, which were estimated at 25 per cent of the value of imported saloon cars, were allocated to "Transportation, Storage and Communications".

Details on the distribution of each type of transport equipment by industry group is shown in Appendix IV Tables 3 and 4. Table 3 shows the way each type of transport equipment is allocated, while Table 4 shows the shares of each industry group in such an allocation.

As the tables show, the distribution covered only five industry groups, accounting for part of the control total of transport equipment shown in paragraph (A) of Table III-18 above. The difference between these two sets of data lies in the purchases of some Government agencies, banks and insurance companies of cars, the value of which was directly derived from their accounts. Subsequently, these purchases, together with those of oil companies and domestically-made barges and boats, added to the sectorally distributed transport equipment (shown in Table 4 of Appendix IV), all formed

the total transport equipment, distributed by industry group as shown in Table III-23 below.

Since the estimations of public and private GFCF in "Non-Residential Buildings", "Other Construction and Works", and "Furniture and Fixtures" were made independently, it is appropriate at this stage, to describe the methods of estimating public and private GFCF within each industry group.

2.3. Public GFCF by Industry Group

The estimation of public GFCF in each of the eight industry groups was made from the expenditure side. The first step of the estimating procedure was to allocate the capital expenditure of various Government agencies to the industry group for which the expenditure was made. This is different to allocating the agencies themselves to the industry group within which their main activities fall. For instance, the Development Board as such is classified in the industry group designated as "Public Administration", but its capital expenditure is allocated to several industry groups such as Agriculture, Manufacturing, Electricity and Water.

In some cases, however, the capital expenditure of a particular agency, and the agency itself, may fall within the same industry group. The Grain Board, the Railways Administration, the Ports Administration, and the GORA are good examples of such cases.

TABLE III-23

THE CONTROL TOTAL OF GFCF IN TRANSPORT EQUIPMENT, 1957 - 1962,

DISTRIBUTED BY INDUSTRY GROUP

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Imported Transport Equipment Distributed among the following Sectors as described in Appendix IV :						
a) Mining and Quarrying (other than Oil Companies)	17.9	17.9	11.8	22.0	25.7	26.6
b) Manufacturing	376.2	367.7	290.8	729.8	831.9	902.4
c) Construction	347.2	826.6	444.4	630.0	388.6	344.3
d) Transportation, Storage and Communications	4960.0	4825.9	3787.7	6631.0	8686.5	7379.5
e) Wholesale and Retail Trade	307.7	255.1	148.1	423.0	511.3	523.2
f) Services	40.2	43.5	40.2	155.5	226.7	103.4
Total (1)	6049.2	6336.7	4723.0	8591.3	10670.7	9279.6
2 Transport Equipment Purchased by the following Bodies as identified from their accounts:						
g) Government Transport Equipment included in "Agriculture"	-	-	-	25.0	3.3	-
h) Electricity and Water Boards	27.8	68.7	119.2	122.8	117.6	42.9
i) "Public Administration"	228.2	167.5	257.8	223.8	262.8	174.3

(Continued)

TABLE III-23 (continued)

2	j) Government Transport Equipment included in "Services"	99.5	62.9	132.9	69.1	3.1	20.2
	k) "Banking and Insurance"	4.4	6.9	2.2	6.8	9.3	4.7
	Total (2)	359.9	306.0	512.1	447.5	396.1	242.1
3	Total Imported Transport Equipment (other than Oil Companies) included in GDFCF = (1) + (2)	6409.1	6642.7	5235.1	9038.8	11066.8	9521.6
4	Oil Companies Purchases of Transport Equipment (Mining and Quarrying)	573.2	434.0	476.8	490.9	429.6	68.5
5	Domestically Manufactured Barges and Boats (Transportation, Storage and Communications)	75.0	75.0	75.0	136.5	96.2	53.4
6	CONTROL TOTAL of Transport Equipment included in GDFCF = (3) + (4) + (5) :	7057.3	7151.7	5786.9	9666.2	11592.6	9643.5

The distribution of the capital expenditure of public agencies by industry group is immensely facilitated by the elaborate details contained in their accounts. As shown in Appendix V, the capital expenditure of the Development and Planning Board (Development Budgets), Central Government (Ordinary Budgets), the Municipalities and the Local Administrations, needs to be distributed among several industry groups. The following table shows the public agencies and the industries to which their capital expenditure is allocated.

TABLE III-24

THE ALLOCATION OF PUBLIC AGENCIES

TO THE RELEVANT INDUSTRY GROUP

Public Agency	Industry Group
1. Development and Planning Board	Agriculture; Manufacturing; Electricity and Water; Transportation, Storage and Communications; Public Administration; Services.
2. Central Government	Agriculture; Manufacturing; Transportation, Storage and Communications; Public Administration; Services.
3. Municipalities	Electricity and Water; Transportation, Storage and Communications; Services.
4. Local Administrations	Public Administration; Services.

(Continued)

TABLE III-24 (Continued)

Public Agency	Industry Group
5. GORA (including Gas Distribution Bureau and Oil Products Distribution Services) and all other Government Manufacturing Establishments.	Manufacturing.
6. Baghdad Electricity Services, Baghdad Water Supply Board, Basrah Electricity and Water Supply Board, The National Electricity Administration, and all other Electricity and Water Boards.	Electricity and Water.
7. Ports Administration (including Bar Dredging Scheme at Fao).	Transportation, Storage and Communications.
8. Railways Administration (including Iraqi Airways).	Transportation, Storage and Communications.
9. The Grain Board	Transportation, Storage and Communications.
10. Public Transport (Bus) Services.	Transportation, Storage and Communications.
11. Tobacco Monopoly Administration.	Wholesale and Retail Trade.
12. Directorate-General of Exhibitions.	Services.
13. Government Banks and the NIC.	Banking and Insurance.
14. The Awgaf (Pious Bequest).	Services.
15. Baghdad Sewage Services.	Services.

Details of the distribution by industry group of capital expenditure of the Central Government's Ordinary Budget, the Development and Planning Board's Budgets, the Municipalities and the Local Administrations are shown in Appendix V.

A summary of the classification of Public GFCF by Industry Group at Constant (1957) Prices, is shown in Table IV-17, in Chapter IV. The classification of the figures by Industry Group and Type of Asset, at Current Prices is shown in Table IV-21.

2.4. Private GFCF by Industry Group

The estimation of the private sector's capital formation by industry group and from the expenditure side alone is almost impossible, due to the lack of basic data on expenditure of most of the nine industry groups to which the private sector contributes.

However, the burden of estimation was reduced to some extent by obtaining the capital expenditure of three industry groups from the expenditure side. They are: Mining and Quarrying(oil companies only), Banking and Insurance, and Ownership of Dwellings.[1)]

To calculate the GFCF in the remaining industries, the

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1) No difficulty was encountered in the case of "Ownership of Dwellings" since the GFCF of this industry consists of the value of constructing new residential dwelling units only.

following procedure was employed :

1. The Distribution of Private Non-Residential Urban Buildings.[1]

First the expenditure of oil companies[2] and that of private banks and insurance companies[3] on this type of asset were deducted from the control total of private non-residential buildings shown in Table III-5 above. The remainder was then distributed among the following industry groups (shown in Table III-25 below) according to their weighted percentage contribution to the Gross Domestic Product at Current Factor Cost during 1957-1962; (the weights being the number of business licences granted by the Government in 1960 and are classified according to the type of economic activity).[4]

This distribution, however, could have been more reliable had the number of business licences granted during 1957-1962 been used as weights instead of the 1960 ones only. But since the amount distributed in this way is less than 8 per cent of total private GFCF (see Table IV-13 below) and since one of the principal ways of financing capital expenditure by the

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1) Note that Private Non-Residential Farm Buildings, which constitute part of the capital formation in Agriculture, is estimated independently as explained in Chapter XIII below.
2) See Table VI-7 in Chapter VI.
3) See Table XII-9 in Chapter XII.
4) Information about the licences granted for various types of business activities were collected from the Ministry of Economics (DGRSC), Ministry of Municipal and Rural Affairs, Ministry of Justice, Ministry of Industry, and the Federation of Iraqi Industries. The figures were adjusted for double counting and for licences which were granted for the carrying out of banking and insurance activities.

private sector is through ploughing back profits, which constitute an element of the value added, the criterion used here for such a distribution can be looked upon as a satisfactory yardstick for estimating investment in these industry groups.[1)]

Table III-25 shows the distribution of Private GFCF in "Non-Residential Urban Buildings" by industry group.

2. The Distribution of "Other Construction and Works":

As was indicated earlier, private GFCF in this type of asset is confined to two industry groups namely, "Mining and Quarrying (oil companies)" and "Manufacturing". Hence no problem is involved in its classification by industry group.

3. The Distribution of "Machinery and Equipment" :

Private GFCF in "Machinery and Equipment" classified by industry group is derived by deducting public GFCF from the control totals set up for this type of asset in each industry group (shown in Table III-21

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1) This argument of investment/value added relationship cannot, however, be taken as a general rule applicable to all sectors of the economy, because in certain sectors the capital formation is financed from sources other than the profits originating therein. For example, in the "Ownership of Dwellings" sector, the ratio of GFCF to GVA always exceeded 100 per cent during 1957-1962 (see Table IV-27) because the financing of the capital expenditure is made from the profits originating in other sectors, by borrowing from the Mortgage Bank and from the Development Budgets (the revenue of which is part of the share of Government in the profits realized from oil extraction).

TABLE III-25

DISTRIBUTION OF PRIVATE GFCF IN NON-RESIDENTIAL URBAN BUILDINGS BY INDUSTRY GROUP

(ID 000)

	Sector	Weights	1957		1958		1959		1960		1961		1962	
			ID 000	%	ID 000	%	ID 000	%	ID 000	%	ID 000	%	ID 000	%
1	Mining and Quarrying (other than Oil Cos.)	1.5	57.3	1.5	56.0	1.7	75.8	1.7	28.0	1.3	65.0	1.3	61.0	1.3
2	Manufacturing	1.0	784.0	21.0	710.0	21.6	1112.3	24.7	536.0	25.5	1242.2	25.1	1209.5	26.2
3	Construction	0.5	306.0	8.2	289.5	8.8	366.5	8.2	117.2	5.6	259.0	5.2	183.3	4.0
4	Transportation	1.0	670.0	18.0	588.3	18.0	834.0	18.5	391.0	18.6	970.5	19.6	867.4	18.8
5	Wholesale and Retail Trade	2.0	1320.0	35.3	1064.5	32.5	1289.0	28.6	647.6	30.8	1552.8	31.3	1441.6	31.2
6	Services	1.0	602.4	16.0	569.5	17.4	821.6	18.3	379.4	18.2	867.0	17.5	855.2	18.5
7	TOTAL :		3739.7	100.0	3277.8	100.0	4499.2	100.0	2099.2	100.0	4956.5	100.0	4618.0	100.0

above). When the public sector has no share in a particular industry group, such as "Mining and Quarrying" and "Construction", the control total will then represent private GFCF.

In the case of the domestically-made agricultural implements, their value is considered as part of the private GFCF in addition to the difference between the control total of imported agricultural machinery and public GFCF.

4. The Distribution of "Furniture and Fixtures" :

The distribution by industry group of private GFCF in furniture and fixtures is made as follows :

1. From total private GFCF in this item (as estimated in Table III-15), we deducted expenditure of oil companies, private banks and insurance companies on furniture, which was identified from their accounts. The rest is then distributed among the following sectors :

a) Mining and Quarrying (other than oil companies)

b) Manufacturing

c) Construction

d) Transportation

e) Wholesale and Retail Trade

f) Services.

2. The distribution is made according to the percentage contribution of these sectors to Gross Domestic Product at Current Factor

Cost. But since it is possible that some of these sectors absorb varying amounts of (sometimes expensive) furniture and fixtures, depending on whether they render their services on their business premises (such as hotels, coffee bars, restaurants, retail shops, etc.,) or outside their premises (such as construction establishments), it was thought preferable to give certain weight to their percentage contribution to GDP.

However, none of the information necessary in order to derive a weighting system could be ascertained, but consultation with two chartered accountants, and the examination of the final accounts of a number of establishments in each sector of the economy revealed that furniture and fixtures constitute a minor part of the investment of construction establishments, and a major part of the investment of establishments falling within the two sectors "Wholesale and Retail Trade" and "Services" such as retail shops, hotels, cinemas, etc.

In the light of this information, we assigned to each of the above sectors a certain weight which was thought to result in a reasonable allocation of furniture and fixtures. The distribution is shown in Table III-26 below.

5. The Distribution of Transport Equipment :

The distribution of private GFCF in "Transport Equipment" by industry group is similar to that of "Machinery and Equipment". From the control totals of this type of asset in each industry group (see Table III-23

TABLE III-26

DISTRIBUTION OF PRIVATE GFCF IN FURNITURE AND FIXTURES BY INDUSTRY GROUP

(ID 000)

			1957	1958	1959	1960	1961	1962
1	Private Investment in Furniture and Fixtures (see Table III-15)		1773.6	1963.0	2141.0	2656.2	2684.6	2791.9
2	Less Purchases of Oil Companies (See Table VI-7)		122.1	170.7	230.5	74.5	51.6	28.2
3	Less Purchases of Private Banks and Insurance Companies (see Table XII-6)		49.5	35.3	16.5	14.7	39.0	53.7
4	TOTAL Furniture and Fixtures distributed among the following sectors :		1602.0	1757.0	1894.0	2567.0	2594.0	2710.0
		Weights						
	a) Mining and Quarrying (other than Oil Companies)	1	11.2	13.6	14.5	14.0	14.0	14.5
	b) Manufacturing	1	196.0	218.0	272.1	380.5	375.0	406.6
	c) Construction	0.5	89.6	105.6	105.2	93.0	92.6	72.6
	d) Transportation	1	196.0	214.5	240.0	325.0	347.4	343.6
	e) Wholesale and Retail Trade	3	580.0	582.3	555.0	808.0	834.0	856.7
	f) Services	3	529.2	623.0	707.2	946.5	931.0	1016.0
	TOTAL (a - f) :	9.5	1602.0	1757.0	1894.0	2567.0	2594.0	2710.0

above), public GFCF was deducted to derive private GFCF. However, there are two points which ought to be emphasized :

1. In the industry group "Transportation, Storage and Communications", taxis and domestically-made barges and boats are considered as part of private GFCF.

2. Imported transport equipment allotted to "Services" (see paragraphs f) and j) in Table III-23 above) comprises three types :

a) Fire engines, fire escapes and road sweepers (see Appendix IV Table 3, item 87.03/a)

b) Motor Cycles and Delivery Cycles (see Appendix IV Table 3, items 87.09, 8710/a and 87.10/b)

c) Saloon cars purchased by public agencies whose activities are classified in this industry group (see paragraph j) in Table III-23 above).

Since the first type is usually used by public authorities only, and the third type is directly derived from Government accounts, Private GFCF in transport equipment in the industry group "Services" is therefore confined to the second type only.

A summary of the classification of Private GFCF by Industry Group at Constant (1957) Prices is shown in Chapter IV Table IV-19. The classification by Type of Asset and Industry Group at Current and at Constant Prices is shown in Tables IV-23 and IV-24, respectively.

Section C: Estimation and Classification of GDFCF by Type of Purchaser[1)]

§ 1. DEFINITION

From the view point of capital formation, the economy is divided into three major purchasers of capital goods :

1. Private Enterprises and Non-Profit Institutions
2. Public Enterprises
3. General Government.

The GFCF of the first category is equal to that of the private sector. The GFCF of the second and third categories is equal to that of the public sector.

The definition of each category is similar to that laid down by the U.N. Statistical Office.[2)]

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1) See Tables IV-25 and IV-26 in Chapter IV below.

2) U.N. Statistical Office: Studies in Methods, Series F. No. 2, Rev. 2, A System of National Accounts and Supporting Tables, (New York 1964) pp.10-11; also, Series F. No. 3, Concepts and Definitions of Capital Formation, (New York, July 1953) pp.8-9.

1.1. Private Enterprises and Non-Profit Institutions :

Private Enterprises includes all forms of private commercial activities whether they are carried out by sole traders, co-operatives, corporations or partnerships. The term commercial activities covers the whole range of economic activities for producing goods and services for sale at a price intended approximately to cover the cost of production. Non-Profit Institutions are included here in their capacity as landlords only.

Moreover, since the ownership of dwellings is treated as a form of enterprise, the GFCF in dwelling units, irrespective of its source of finance, is included under this category.

1.2. Public Enterprises :

Public enterprises are defined to cover those Government agencies which participate directly in productive activities similar to those which are or could be carried out commercially by private concerns. Hence, they differ from other Government agencies in that they charge for what they provide according to use and are thus able to meet all or most of their operation costs from sale proceeds.

It should be noted, however, that an intention to make a profit is not an essential characteristic for distinguishing public enterprises from General Government, because the activities of a public enterprise may be

carried on deliberately at a loss - like the Post Office.

In Iraq, public enterprises represent a mixture of Government enterprises and public corporations. The former includes public enterprises which are financially integrated with General Government and do not keep their own reserves apart from working balances. The Directorate-General of Post and Telephone is a good example of Government enterprises. Public Corporations, on the other hand, include corporations formally established and regulated by public law, and their management is chosen by public authorities but they enjoy a substantial degree of financial independence of the public authority.

The following are the Government agencies considered as public enterprises in this study :

1. Government Oil Refineries Administration (GORA)
2. All Government Manufacturing Establishments
3. Electricity and Water Boards and Administrations
4. The Railways Administration (including Iraqi Airways)
5. The Ports Administration
6. The Post Office
7. The Grain Board
8. Public Transport (Bus) Services
9. Tobacco Monopoly Administration
10. Government Banks (including the Central Bank) and the National Insurance Company.

1.3. General Government

When the "Public Sector" is shorn off the agencies designated as "PublicEnterprises", its remain agencies are included under the category "General Government". Thus, this heading covers Government agencies which undertake all forms of regulatory services : administration, education, health and similar community services. In other words, it includes agencies the function of which is to organize for, but not normally to sell to, the community those common services which cannot otherwise conveniently and economically be provided, and to act, within its power to enforce compliance, as the administrative agency for economic and social policy in the general interest.

The essential characteristic which distinguishes "General Government" agencies from "Public Enterprises" is that their cost of operation is not financed by meeting an economic demand confirmed in the open market by the willingness of people to pay for what these agencies have to offer. Their expenditure is primarily financed by specific appropriations from General Government budgets, or by specific compulsory contributions levied and applied in accordance with legislative requirements.

Therefore, Government capital expenditure on the construction of agricultural projects, roads, highways, bridges, schools,hospitals, prison buildings and law courts, radio and television centres and similar

projects are all considered part of the GFCF of General Government.

$ 2. METHODS OF ESTIMATION

2.1. GFCF by Private Enterprises and Non-Profit Institutions :

GFCF by private enterprises and non-profit institutions is equivalent to that of the private sector which was estimated in the manner described in the previous sections.

It is to be noted that GFCF in dwellings and in non-residential buildings are merged together and their aggregate shown under "Buildings" in Tables IV-25 and IV-26.

2.2. GFCF by Public Enterprises :

GFCF by public enterprises is derived from the accounts of Government Agencies listed on page 201 above. Expenditure by the Development and Planning Board, Central Government and other Government agencies on projects used by public enterprises are also included.

It can also be derived from Tables IV-21 below by adding up public GFCF in Manufacturing, Electricity and Water, Transportation, Storage and Communications (less expenditure on the construction of roads, bridges, airports and similar community projects included in this industry

group[1]), Wholesale and Retail Trade, and Banking and Insurance.

2.3. GFCF by General Government:

GFCF by General Government is derived from the accounts of agencies embraced by this heading. It is, in fact, the difference between Public GFCF and the GFCF by Public Enterprises.

From Table IV-21, General Governments' GFCF can be derived by adding up the figures relating to "Agriculture", "Public Administration", "Services", and the expenditure on roads, bridges, airports and the like - which, for the present purpose of classification are excluded from the industry group "Transportation, Storage and Communications".

* * * * *

1) Government expenditure on the construction of roads, bridges, airports and the like during 1957-1962 is as follows :

(ID 000)

1957	1958	1959	1960	1961	1962
~~1430.3~~ 14130.3	9904.9	9348.3	10242.2	11665.4	8493.5

CHAPTER IV

SUMMARY OF THE RESULTS; COMPARISON WITH OTHER ESTIMATES; AND RELIABILITY

This chapter is designed to present, in a very concise form, the results of our estimates of the Gross Domestic Fixed Capital Formation in Iraq during the six years 1957 - 1962. The arrangement of the chapter is as follows :

A. Summary of the Results

B. Comparison with Other Estimates

C. Reliability of the Estimates

D. Concluding Remarks.

$ A. SUMMARY OF THE RESULTS

The estimates of GDFCF are shown in various forms of classification in twenty-eight tables, starting with aggregate figures and continuing to their breakdown by sector, type of asset, industry group, and type of purchaser. Table IV-1 relates to the gross proportions of GDFCF to GDP and GNP, at current factor cost and at market prices.

Tables IV-2 to IV-4 show the classification of aggregate

GDFCF by sector (i.e., Public and Private), at current and at constant prices. Within the private sector, Tables IV-2 and IV-3 show the share of the oil companies.

The classification of GDFCF by type of asset is shown in Tables IV-5 to IV-13. The first two tables present the figures for the country as a whole, while the third table shows the percentage contribution of each type of asset to GDFCF at constant prices. The remaining tables, i.e. IV-8 to IV-13, relate to the classification by type of asset of public and private GFCF.

GDFCF by industry group is given in Table IV-14. Its counterpart at constant prices is given in Table IV-15. The classification of public and private GFCF by industry group is shown in Tables IV-17 to IV-20, all at constant prices.

Detailed classification of public and private GFCF by type of asset and industry group, is shown in Tables IV-21 and IV-23, respectively. Each of these two tables has its counterpart at constant prices.

Classification of GDFCF by type of asset and type of purchaser is presented in Tables IV-25 and IV-26. The former shows the estimates at current prices, while the latter shows them at constant prices.

The sectoral investment-value added ratios at current and at constant prices are shown in Tables IV-27 and IV-28, respectively.

It is to be observed that the term "constant prices" refers to

the prices of 1957 as was explained in Chapter II above.

1. As can be seen from Table IV-1, over the period 1957 - 1962, GDFCF accounted for a fairly stable proportion of GNP at current market prices. It accounted, on average for one-fifth of GDP at current market prices, and for about one-quarter of GNP at current factor cost. The trend in the ratio, however, is downward; from 23 per cent in 1957 to a little over 17 per cent in 1962. The highest ratio was registered in the initial year and the lowest in the terminal year.

In absolute terms, the 1958 and 1959 figures are the lowest, which partially explains how sensitively GDFCF reacted to the political instability prevalent during the two years in question.

2. From Table IV-3, we observethat at constant prices, GDFCF rose from ID 106.3 m. to about ID 118.0 m. (i.e. 11 per cent) from the initial to the terminal year. The rise, however, was greater in 1961 which recorded a percentage increase of over 24 per cent.

3. In the distribution of GDFCF by category of users, i.e. public and private sectors, the share of the public sector (in constant prices) declined from 55.3 per cent in 1957 to 48.7 per cent in 1962 (see Table IV-4); in absolute terms, however, the share remained fairly constant at the level of ID 56 m per year. Compared with 1957, public investment during the period shows a slightly declining trend (see Table IV-3).

With reference to the private sector's share, the statistical

evidence of Table IV-3 shows that private investment (except oil companies) dropped markedly in 1959. The decline was mainly in Agriculture, Manufacturing and Transportation (see Table IV-20). The enforcement of the agrarian reform law, the introduction of some import restrictions (especially on motor vehicles), and the political turmoil during 1959 may explain this sudden drop in private investment.

Excluding 1958 and 1959, private GFCF (other than Oil Companies) shows a rising trend from nearly ID 43 m. in 1957 to over ID 55 m. in 1962.

The Oil Companies' investment during the first two years and the terminal year were almost the same, amounting to an annual investment of ID 5 m. During 1959-1961, however, the companies made substantial investments; especially in the form of fixed plant and pipe-lines.[1)] This increase in the companies' investment, therefore, offset the decline in private GFCF during 1959. Thus, while private investment, other than oil companies, declined by 15 per cent in 1959, the inclusion of the oil companies' investment made private investment 8 per cent higher than its 1957 level.

4. The classification of GDFCF by type of asset reveals that the share of "construction" (i.e., buildings plus other construction and works) in GDFCF increased. At constant prices, it increased from 69 per cent in 1957 to 71 per cent in 1962; but between these two years, its share was as

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1) For details on the oil companies see Chapter VI.

high as 75 per cent (see Table IV-7). In absolute terms, the average annual investment in new construction was about ID 84 m. at constant and current prices, out of an average annual GDFCF of ID 113 m.

If investment in new construction is broken down into three variables, namely, dwellings, non-residential buildings and other construction (see Table IV-7), the average contribution of these variables to total investment in construction becomes 26 per cent, 20 per cent and 54 per cent, respectively. Their average percentage share to total GDFCF, however, becomes 20, 14 and 40.

5. The share of "Machinery and Other Equipment" in GDFCF at constant prices declined from 24 per cent in 1957 to 22 per cent in 1962. The decline was even greater between these two years, especially in 1959 (see Table IV-7). It was mainly in the private sector, where the percentage ratio of this type of asset to total private GFCF at constant prices dropped from 35 per cent in 1957 to 17 per cent in 1959, as can be seen from Table IV-13.

6. The share of "Transport Equipment" in GDFCF at constant prices remained almost stable at about 7 per cent; with the exception of the year 1959 when it declined to about 5 per cent. Again, this drop was in the private sector when in that particular year private investment in this type of asset dropped from 12 per cent in 1957 and 1958 to 6 per cent in 1959 (see Table IV-13).

7. Assuming that the value of imported construction materials embodied in investment in "Construction" is offset by the value of domestically-made equipment and furniture included in "Machinery and Other Equipment" and "Transport Equipment", we may infer, albeit roughly, that during 1957-1962 about 75 per cent of GDFCF in Iraq was in domestically-made capital assets and 25 per cent in imported capital assets.

8. From Tables IV-8, 9 and 10, which contain the classification of public GFCF by type of asset, we observe that, at constant prices, "construction" accounted for about 85 per cent of total public investment, while "machinery and other equipment" and "transport equipment" accounted for about 12 and 3 per cent, respectively. Table IV-10 shows that more than 62 per cent of annual public investment was in "other construction and works" in the form of roads, bridges, irrigation projects, railway lines and similar construction. The share of "non-residential buildings" was second, accounting for about 22 per cent of total public investment.

9. The classification of private GFCF by type of asset is presented in Tables IV-11, 12 and 13. The most noteworthy feature in private investment is that it is overwhelmingly dominated by building construction, which accounted for nearly 48 per cent of the annual private investment at constant prices. Within this, however, residential construction (dwellings) accounted for the major part. In absolute terms, building construction shows a rising trend from ID 23 m. in 1957 to more than ID 29 m. in 1962 (see Table IV-12).

Investment in "other construction and works", which pertains mainly to the oil companies, shows a participation in total private GFCF by 4 and 8 per cent in 1957 and 1962, respectively. A notable increase in the participation of about 25 per cent was made during 1959-1961 (see Table IV-13).

Investment in "machinery and equipment" in absolute terms, rose from ID 16.5 m. in 1957 to about ID 20 m. in 1962 (both at current and at constant prices); but this category's relative contribution to private capital formation declined until the end of 1961, and slightly rose in 1962. The only significant decline, however, occurred in 1959, when machinery and equipment proper accounted for 13 per cent of total private investment (17.4 per cent including furniture and fixtures).

In so far as "transport equipment" is concerned, we observe from Table IV-12 that at constant prices, private annual investment in this type of asset was about ID 6 m. Its relative importance remained almost at a stable level of 12 per cent of total private investment. But the 1959 figure was as low as ID 3 m.

10. The classification of GDFCF by industry group (sectors) (tables IV-14 to 16) reveals that at constant prices "transportation, storage and communications" and the "ownership of dwellings" made the largest contributions to the GDFCF. The former sector contributed by an annual average of 22 per cent, the latter by about 20 per cent.

Of the other sectors, agriculture and manufacturing each accounted for about 13 per cent per annum. A notable feature in the contributions of these two sectors is that while the agricultural sector's contribution shows a continuous decline from 17.3 per cent in 1957 to 9.4 per cent in 1962, the manufacturing sector's contribution fluctuated between 16 and 8 per cent during 1957-1960, but rose to 18 per cent in 1962.

The share of mining and quarrying increased from 4.6 per cent in 1957 to 16.7 per cent in 1960, but dropped to just over 4 per cent in 1962. The share of the secotr's construction, wholesale and retail trade, and public administration fluctuated between 2 to 4 per cent throughout the period; but a rising trend can be observed in the contribution of the services sector, where it increased from 7 per cent in 1957 to more than 11 per cent in 1962. The lowest contribution (less than 1 per cent), however, is registered by the banking sector.

11. Tables IV-17 and IV-18, which present the classification of public GFCF by industry group at constant prices, show that the transportation sector accounted for 30 to 37 per cent of annual public capital formation. In absolute terms, public expenditure on transport projects increased from ID 18 m. in 1957 to ID 21 m. in 1962.

The agricultural sector ranked second throughout 1957-1961, but dropped to third place in 1962. Its contribution to total public capital formation declined from 24 per cent in 1957 to about 11 per cent in 1962.

Manufacturing accounted for 19 per cent of public investment in 1957 and for 18 per cent in 1962, but within these two dates, its contribution fluctuated, dropping to 2.2 per cent in 1960. The striking decrease in this year, however, was due mainly to the revision of the "Provisional Economic Plan" and the introduction of a detailed one.

It is interesting to note that from 1958 onwards public investment in this sector was relatively and absolutely lower than in 1957.

Electricity and water accounted, on average, for 11 per cent of public investment. In the trade sector public investment was 1.7 per cent in 1957 and 0.1 per cent in 1962, while in the banking sector it remained fairly constant at 1 per cent.

A notable sphere in which public investment shows an increasing trend is the services sector, where public investment rose from 8 per cent in 1957 to 17 per cent in 1962.

If public investment is divided between "Public Enterprises" and "General Government" (see Table IV-26), then it can be seen that on average 40 per cent of public investment is within the first category, and 60 per cent within the second.

If, on the other hand, we classify public investment into two sectors, the "commodity-producing sector" (i.e. Agriculture and Manufacturing), and the "complementary sector" (i.e. the remaining sectors shown in Table IV-18), then it can be seen from Table IV-18 that, on average, 33 per

cent of annual public investment falls within the first sector and 67 per cent within the second sector.

12. The classification of private GFCF by industry group at constant prices (Tables IV-19 and IV-20) shows that the dominating sector is the "ownership of dwellings". It accounted, on average, for 40 per cent of annual private investment. In absolute terms, it increased from ID 19 m. in 1957 to more than ID 24 m. in 1962.

The contribution of the mining sector, which mainly represents oil companies investment, rose from 10 per cent in the initial year to 30 per cent in 1961, but fell to 8 per cent in 1962.

Between the initial and the terminal years, the share of the manufacturing sector in total private investment rose from 12 per cent to 18 per cent, but in the intervening years, its share fluctuated, dropping to 5 per cent in 1959.

The most marked decline in private investment occurred in the agricultural sector, where in 1959 and 1960 the contribution of this sector dropped to 3 and 3.2 per cent respectively.

Private investment in the transport sector remained fairly stable, accounting for 10 per cent of annual investment. An exception to this, however, is the year 1959 in which the contribution of this sector decreased to 6 per cent.

If private investment is divided into two sectors : commodity-

producing sector (i.e. agriculture, mining, manufacturing and construction), and "complementary sector" (i.e. the remaining sectors shown in Table IV-20), then it can be seen from Table IV-20 that on average 42 per cent of annual private capital formation is made in the first category, and 58 per cent in the second. If, however, we exclude the mining sector (which mainly represents oil companies' investment) from the first category, then private investment in the commodity-producing sector will drop to about 21 per cent.

13. The investment-value added ratios for each industry group (sector) at current and at constant prices are shown in Tables IV-27 and IV-28, respectively.

Since the gross value added of each industry is a measure of its productive activity, these ratios enable us to see each industry's investment activity within the context of its productive activity. When the percentage ratio of GFCF to GVA in a particular industry exceeds 100 per cent, as in the case of electricity and water and ownership of dwellings, it means that the financing of capital formation is made either from accumulated profits from previous years, or some other sources of finance must have been found.

These ratios, however, are not as accurate as if they were calculated for the public and the private sectors separately. This is because public investment is mainly financed from the share of Government in oil revenue which originates in the mining industry.

TABLE IV-1

GDP, GNP, AND GDFCF, 1957 - 1962 (at Current Prices)

(ID 000)

Year	GDP at Factor Cost	GNP at Factor Cost	GDP at Market Prices	GNP at Market Prices	GDFCF	(5:1) %	(5:2) %	(5:3) %	(5:4) %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1957	430060.0	383660.0	461536.0	415136.0	106290.1	24.7	27.7	23.0	25.6
1958	484700.0	406250.0	512258.0	433808.0	97872.7	20.2	24.1	19.1	22.6
1959	509620.0	423890.0	533595.0	447865.0	103594.1	20.3	24.4	19.4	23.1
1960	565360.0	470030.0	596337.0	501007.0	120239.9	21.3	25.6	20.2	24.0
1961	615060.0	520860.0	652319.0	558119.0	137216.8	22.3	26.3	21.0	24.6
1962	658420.0	564550.0	693750.0	599880.0	119233.5	18.1	21.1	17.2	19.9

Explanatory Notes:

1. GDP and GNP at Factor Cost are Haseebs estimates, shown in Appendix IX Table 2.
2. GDP and GNP at Market Prices are derived by adjusting the figures in Columns (1) and (2) for net indirect taxes. Indirect taxes and Subsidies are shown in Appendix IX Table 15.

TABLE IV-2

CLASSIFICATION OF GDFCF BY SECTOR, 1957 - 1962

(at Current Prices)

(ID 000)

Year	Public GFCF	Private GFCF			TOTAL GDFCF (1) + (4)	
		Private GFCF (except Oil Companies)	Oil Companies	Total (2) + (3)		1957 = 100
	(1)	(2)	(3)	(4)	(5)	
1957	58824.0	42801.0	4665.1	47466.1	106290.1	100.0
1958	55235.8	37071.3	5565.6	42636.9	97872.7	92.1
1959	52378.1	36367.9	14848.1	51216.0	103594.1	97.5
1960	51870.6	45555.3	22814.0	68369.3	120239.9	113.1
1961	59634.1	55105.0	22477.7	77582.7	137216.8	129.1
1962	58102.3	56420.7	4710.5	61131.2	119233.5	112.2

TABLE IV-3

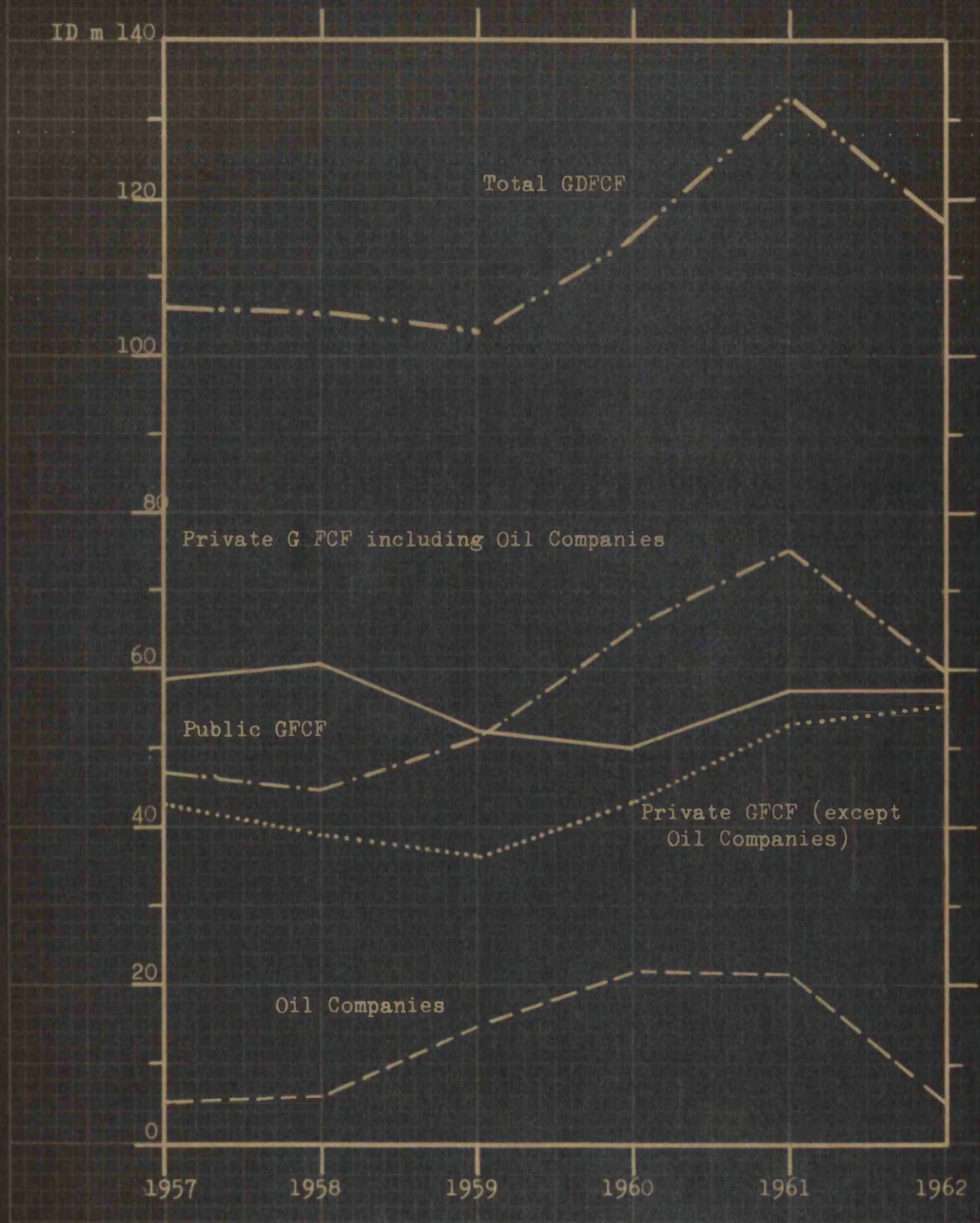
CLASSIFICATION OF GDFCF BY SECTOR, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

Year	Public GFCF		Private GFCF						TOTAL GDFCF (1) + (4)	
			Private GFCF (except Oil Companies)		Oil Companies		Total (2) + (3)			
	(1)	1957 = 100	(2)	1957 = 100	(3)	1957 = 100	(4)	1957 = 100	(5)	1957 = 100
1957	58824.0	100	42801.0	100	4665.1	100	47466.1	100	106290.1	100.0
1958	60393.6	103	39184.4	92	5907.3	127	45091.7	95	105485.3	99.2
1959	52309.5	89	36381.5	85	14826.1	318	51207.6	108	103517.1	97.4
1960	49778.8	85	43449.4	102	21901.8	470	65351.2	138	115130.0	108.3
1961	57644.2	98	52868.2	124	21689.8	465	74558.0	157	132202.2	124.4
1962	57631.5	98	55280.2	129	4677.2	100	59957.4	126	117588.9	110.6

C H A R T 1



GDFCF by Sector (at Constant Prices)

Sources: Table IV-3

TABLE IV-4

PERCENTAGE CONTRIBUTION OF PUBLIC AND PRIVATE SECTORS TO THE GDFCF, 1957-1962

Year	At Current Prices			At Constant (1957) Prices		
	Public Sector	Private Sector	Total	Public Sector	Private Sector	Total
1957	55.3	44.7	100.0	55.3	44.7	100.0
1958	56.4	43.6	100.0	57.3	42.7	100.0
1959	50.6	49.4	100.0	50.5	49.5	100.0
1960	43.1	56.9	100.0	43.2	56.8	100.0
1961	43.5	56.5	100.0	43.6	56.4	100.0
1962	48.7	51.3	100.0	49.0	51.0	100.0

Sources: Tables IV-2 and IV-3 above.

TABLE IV-5

CLASSIFICATION OF GROSS DOMESTIC FIXED CAPITAL FORMATION BY TYPE OF ASSET, 1957-1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
I	Buildings						
	1. Dwellings	18992.7	16990.2	22303.5	23075.2	25806.4	24193.3
	2. Non-Residential Buildings	15971.1	13488.2	15297.2	13741.4	20231.6	19637.1
	Total I :	34963.8	30478.4	37599.7	36816.6	46038.0	43830.4
II	Other Construction and Works	38564.2	39893.0	42288.1	53435.9	55626.6	39746.3
III	Machinery and Other Equipment						
	1. Machinery and Equipment	23337.2	17838.1	15006.0	16570.7	20392.6	22503.8
	2. Furniture and Fixtures	2367.6	2511.5	2913.4	3750.5	3567.0	3509.5
	Total III:	25704.8	20349.6	17919.4	20321.2	23959.6	26013.3
IV	Transport Equipment	7057.3	7151.7	5786.9	9666.2	11592.6	9643.5
V	Gross Domestic Fixed Capital Formation at Current Prices :-	106290.1	97872.7	103594.1	120239.9	137216.8	119233.5

TABLE IV-6

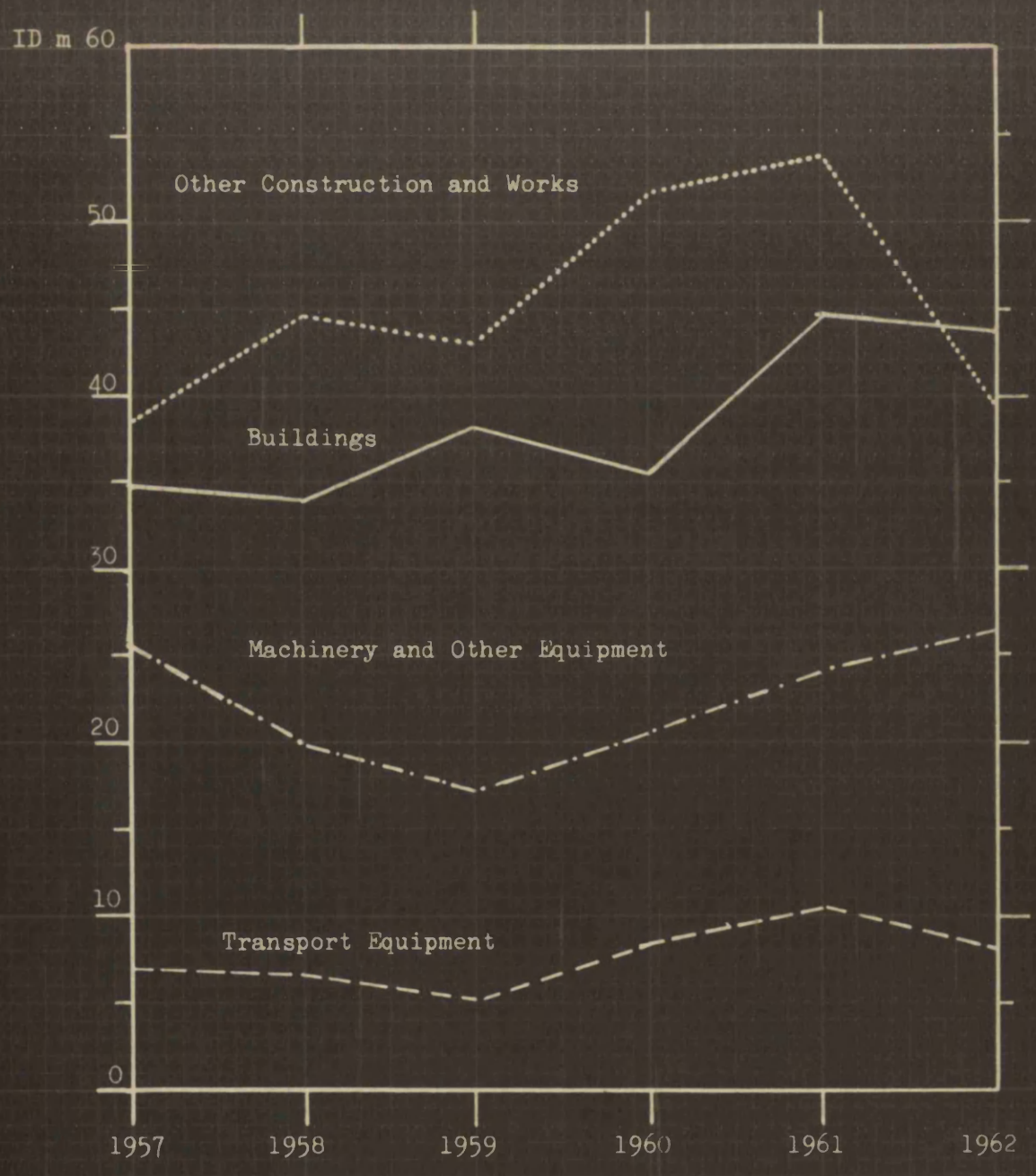
CLASSIFICATION OF GROSS DOMESTIC FIXED CAPITAL FORMATION BY TYPE OF ASSET, 1957-1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
I	Buildings						
	1. Dwellings	18992.7	18971.6	22663.5	22149.3	24937.3	24097.3
	2. Non-Residential Buildings	15971.1	15058.9	15544.4	13191.8	19550.9	19559.3
	Total I :	34963.8	34030.5	38207.9	35341.1	44488.2	43656.6
II	Other Construction and Works	38564.2	44573.2	42975.6	51282.0	53745.8	39588.6
III	Machinery and Other Equipment						
	1. Machinery and Equipment	23337.2	17389.3	14049.1	16170.1	19747.1	22035.7
	2. Furniture and Fixtures	2367.6	2589.1	3177.0	4032.5	4114.2	4163.1
	Total III:	25704.8	19978.4	17226.1	20202.6	23861.3	26198.8
IV	Transport Equipment	7057.3	6903.2	5107.5	8304.3	10106.9	8144.9
V	GDFCF at Constant Prices:	106290.1	105485.3	103517.1	115130.0	132202.2	117588.9

C H A R T 2



G.D.F.C.F. by Type of Asset (at Constant Prices)

Sources: Table IV-6

TABLE IV-7

PERCENTAGE CONTRIBUTION OF EACH TYPE OF ASSET TO GDFCF, 1957 - 1962

(at Constant (1957) Prices)

	1957	1958	1959	1960	1961	1962
I BUILDINGS:						
1. Dwellings	17.9	18.0	22.0	19.2	18.9	20.5
2. Non-Residential Buildings	15.0	14.3	15.0	11.5	14.8	16.6
Total I :	32.9	32.3	37.0	30.7	33.7	37.1
II OTHER CONSTRUCTION AND WORKS:	36.3	42.2	41.5	44.5	40.7	33.7
III MACHINERY AND OTHER EQUIPMENT:						
1. Machinery and Equipment	22.0	16.5	13.6	14.0	14.9	18.8
2. Furniture and Fixtures	2.2	2.5	3.0	3.5	3.1	3.5
Total III :	24.2	19.0	16.6	17.5	18.0	22.3
IV TRANSPORT EQUIPMENT:	6.6	6.5	4.9	7.3	7.6	6.9
V TOTAL:	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Table IV-6 above.

TABLE IV-8

CLASSIFICATION OF PUBLIC GFCF BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
I	Non-Residential Buildings	11903.6	9691.2	10247.4	11182.9	14818.8	14533.6
II	Other Construction and Works	36652.1	36206.8	31031.8	34111.1	36870.5	35090.4
III	Machinery and Other Equipment						
	1. Machinery and Equipment	8534.5	7284.6	8019.4	3666.8	5537.8	5963.5
	2. Furniture and Fixtures	594.0	548.5	772.4	1094.3	882.4	717.6
	Total III:	9128.5	7833.1	8791.8	4761.1	6420.2	6681.1
IV	Transport Equipment	1139.8	1504.7	2307.1	1815.5	1524.6	1797.2
V	TOTAL Public GFCF at Current Prices :	58824.0	55235.8	52378.1	51870.6	59634.1	58102.3

TABLE IV - 9

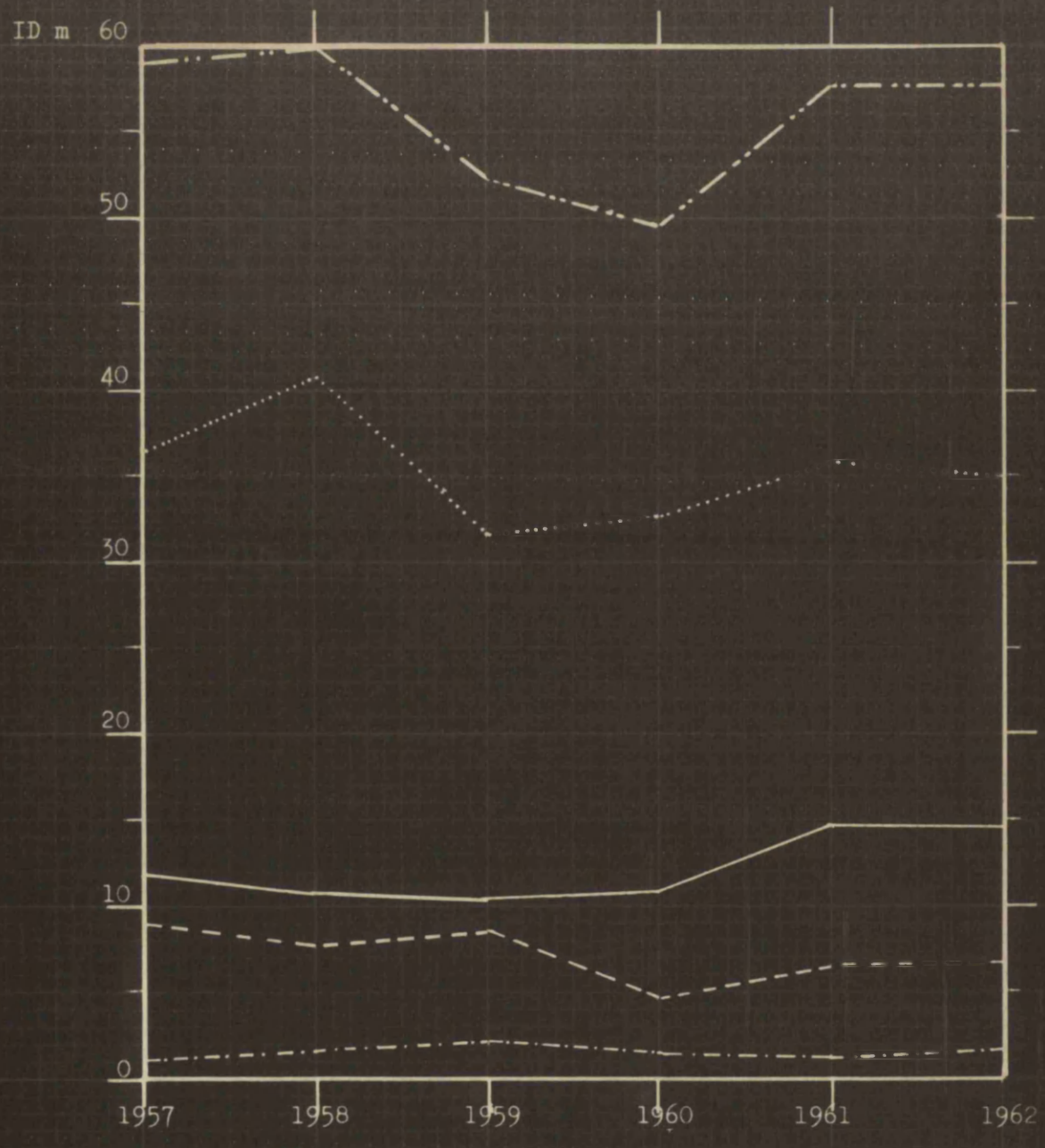
CLASSIFICATION OF PUBLIC GFCF BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
I	Non-Residential Buildings	11903.6	10828.3	10414.0	10732.2	14317.6	14475.7
II	Other Construction and Works	36652.1	40454.5	31536.3	32736.2	35623.9	34951.3
III	Machinery and Other Equipment						
	1. Machinery and Equipment	8534.5	7093.1	7480.7	3573.9	5355.8	5835.2
	2. Furniture and Fixtures	594.0	565.4	842.3	1176.7	1017.7	851.4
	Total III:	9128.5	7658.5	8323.0	4750.6	6373.5	6686.6
IV	Transport Equipment	1139.8	1452.3	2036.2	1559.8	1329.2	1517.9
V	TOTAL Public GFCF at Constant Prices :	58824.0	60393.6	52309.5	49778.8	57644.2	57631.5

CHART 3



Sources: Table IV-9

Public G.F.C.F. by Type of Asset (at Constant Prices)

- Total
- Other construction and works
- Non-residential buildings
- Machinery and other equipment
- Transport equipment

TABLE IV-10

PERCENTAGE CONTRIBUTION OF EACH TYPE OF ASSET TO PUBLIC GFCF, 1957 - 1962

(at Constant (1957) Prices)

	1957	1958	1959	1960	1961	1962
I NON-RESIDENTIAL BUILDINGS:	20.2	18.0	20.0	21.6	24.8	25.1
II OTHER CONSTRUCTION AND WORKS:	62.3	67.0	60.2	65.7	61.8	60.6
III MACHINERY AND OTHER EQUIPMENT:						
1. Machinery and Equipment	14.5	11.7	14.3	7.2	9.3	10.1
2. Furniture and Fixtures	1.0	0.9	1.6	2.4	1.8	1.5
Total III:	15.5	12.6	15.9	9.6	11.1	11.6
IV TRANSPORT EQUIPMENT:	2.0	2.4	3.9	3.1	2.3	2.7
TOTAL:	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Table IV-9 above.

TABLE IV-11

CLASSIFICATION OF PRIVATE GFCF BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
I	Buildings:						
	1. Dwellings	18992.7	16990.2	22302.5	23075.2	25806.4	24193.3
	2. Non-Residential Buildings	4067.5	3797.0	5049.8	2558.5	5412.8	5103.5
	Total I :	23060.2	20787.2	27352.3	25633.7	31219.2	29296.8
II	Other Construction and Works	1912.1	3686.2	11256.3	19324.8	18756.1	4655.9
III	Machinery and Other Equipment						
	1. Machinery and Equipment	14802.7	10553.5	6986.6	12903.9	14854.8	16540.3
	2. Furniture and Fixtures	1773.6	1963.0	2141.0	2656.2	2684.6	2791.9
	Total III:	16576.3	12516.5	9127.6	15560.1	17539.4	19332.2
IV	Transport Equipment	5917.5	5647.0	3479.8	7850.7	10068.0	7846.3
V	TOTAL Private GFCF at Current Prices :	47466.1	42636.9	51216.0	68369.3	77582.7	61131.2

TABLE IV-12

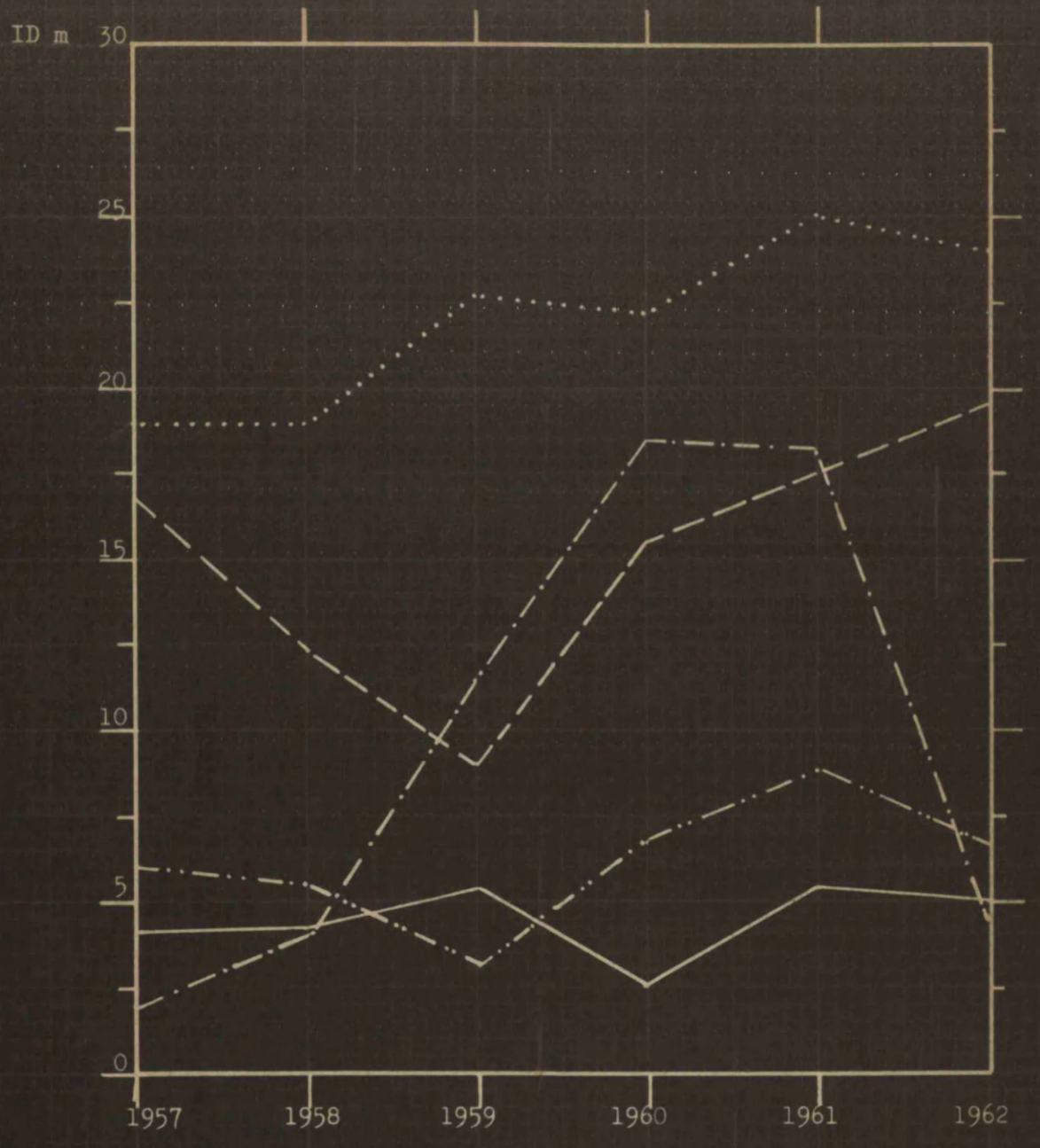
CLASSIFICATION OF PRIVATE GFCF BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
I	Buildings:						
	1. Dwellings	18992.7	18971.6	22663.5	22149.3	24937.3	24097.3
	2. Non-Residential Buildings	4067.5	4230.6	5130.4	2459.6	5233.3	5083.6
	Total I :	23060.2	23202.2	27793.9	24608.9	30170.6	29180.9
II	Other Construction and Work	1912.1	4118.7	11439.3	18545.8	18121.9	4637.3
III	Machinery and Other Equipment						
	1. Machinery and Equipment	14802.7	10296.2	6568.4	12596.2	14391.3	16200.5
	2. Furniture and Fixtures	1773.6	2023.7	2334.7	2855.8	3096.5	3311.7
	Total III:	16576.3	12319.9	8903.1	15452.0	17487.8	19512.2
IV	Transport Equipment	5917.5	5450.9	3071.3	6744.5	8777.7	6627.0
V	TOTAL Private GFCF at Constant Prices :	47466.1	45091.7	51207.6	65351.2	74558.0	59957.4

CHART 4



Sources: Table IV-12

Private G.F.C.F. by Type of Asset (at Constant Prices)

- Dwellings
- Non-residential buildings
- Other construction and works
- Machinery and other equipment
- Transport equipment

TABLE IV-13

PERCENTAGE CONTRIBUTION OF EACH TYPE OF ASSET TO PRIVATE GFCF, 1957 - 1962

(at Constant (1957) Prices)

	1957	1958	1959	1960	1961	1962
I BUILDINGS:						
1. Dwellings	40.0	42.1	44.3	34.0	33.4	40.2
2. Non-Residential Buildings	8.6	9.4	10.0	3.7	7.0	8.5
Total I:	48.6	51.5	54.3	37.7	40.4	48.7
II OTHER CONSTRUCTION AND WORKS:	4.0	9.1	22.3	28.4	24.3	7.7
III MACHINERY AND OTHER EQUIPMENT:						
1. Machinery and Equipment	31.2	22.8	12.8	19.3	19.3	27.0
2. Furniture and Fixtures	3.7	4.5	4.6	4.3	4.2	5.5
Total III:	34.9	27.3	17.4	23.6	23.5	32.5
IV TRANSPORT EQUIPMENT:	12.5	12.1	6.0	10.3	11.8	11.1
V TOTAL:	100.0	100.0	100.0	100.0	100.0	100.0

TABLE IV-14

CLASSIFICATION OF GROSS DOMESTIC FIXED CAPITAL FORMATION BY INDUSTRY GROUP 1957-1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Agriculture	18403.9	15629.0	12457.3	12643.3	14923.7	11183.8
2	Mining and Quarrying	4950.9	5870.4	15080.0	23093.2	22836.5	4963.5
3	Manufacturing	16746.8	13556.6	11311.4	9039.9	12814.2	20888.4
4	Construction	2908.5	2066.2	1839.8	1300.8	1878.7	1662.5
5	Electricity and Water	6431.0	8912.4	5019.1	7774.7	5030.6	4867.2
6	Transportation, Storage and Communications	23567.1	21864.4	20683.2	25493.0	32098.2	28947.8
7	Wholesale and Retail Trade	3216.7	2102.7	2168.2	2141.6	2994.0	2921.7
8	Banking and Insurance	792.3	978.8	836.7	519.1	878.3	1275.7
9	Ownership of Dwelling	18992.7	16990.2	22302.5	23075.2	25806.4	24193.3
10	Public Administration	3086.3	2450.6	2725.2	3224.4	4092.1	5062.9
11	Services	7193.9	7451.4	9170.7	11934.7	13864.1	13266.7
	GDFCF at Current Prices:	106290.1	97872.7	103594.1	120239.9	137216.8	119233.5

TABLE IV-15

CLASSIFICATION OF GROSS DOMESTIC FIXED CAPITAL FORMATION BY INDUSTRY GROUP 1957-1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Agriculture	18403.9	17115.6	12566.1	12185.6	14451.0	11068.9
2	Mining and Quarrying	4950.9	6212.8	15050.4	22172.3	22036.9	4925.2
3	Manufacturing	16746.8	13981.0	11063.7	8738.6	12385.4	20566.0
4	Construction	2908.5	2052.7	1741.1	1202.7	1796.9	1598.9
5	Electricity and Water	6431.0	9628.2	4907.0	7483.6	4874.5	4819.7
6	Transportation, Storage and Communications	23567.1	23477.0	20446.8	23835.8	30257.3	27768.2
7	Wholesale and Retail Trade	3216.7	2256.8	2223.7	2106.4	3001.3	2993.7
8	Banking and Insurance	792.3	1078.6	847.9	508.4	862.0	1282.0
9	Ownership of Dwellings	18992.7	18971.6	22663.5	22149.3	24937.3	24097.3
10	Public Administration	3086.3	2694.0	2731.7	3092.9	3951.9	5040.6
11	Services	7193.9	8017.0	9275.2	11654.4	13647.7	13428.4
	GDFCF at Constant Prices:	106290.1	105485.3	103517.1	115130.0	132202.2	117588.9

TABLE IV-16

PERCENTAGE CONTRIBUTION OF EACH INDUSTRY GROUP TO THE GDFCF, 1957 - 1962

(at Constant (1957) Prices)

		1957	1958	1959	1960	1961	1962
1	Agriculture	17.3	16.2	12.1	10.6	10.9	9.4
2	Mining and Quarrying	4.6	6.0	14.5	19.2	16.7	4.2
3	Manufacturing	15.8	13.2	10.7	7.6	9.3	17.5
4	Construction	2.7	2.0	1.7	1.0	1.4	1.4
5	Electricity and Water	6.0	9.1	4.7	6.5	3.7	4.1
6	Transportation, Storage and Communications	22.2	22.3	19.8	20.8	22.9	23.6
7	Wholesale and Retail Trade	3.0	2.1	2.1	1.8	2.3	2.5
8	Banking and Insurance	0.7	1.0	0.8	0.4	0.6	1.1
9	Ownership of Dwellings	18.0	18.0	22.0	19.2	18.9	20.5
10	Public Administration	2.9	2.5	2.6	2.7	3.0	4.3
11	Services	6.8	7.6	9.0	10.2	10.3	11.4
	TOTAL :	100.0	100.0	100.0	100.0	100.0	100.0

TABLE IV-17

CLASSIFICATION OF PUBLIC GFCF BY INDUSTRY GROUP, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Agriculture	14173.8	14586.7	11058.4	10081.1	10578.0	6090.3
2	Manufacturing	10895.1	8184.0	8449.4	1076.4	5668.7	10070.3
3	Electricity and Water	6431.0	9628.2	4907.0	7483.6	4874.5	4819.7
4	Transportation, Storage and Communications	17804.0	18666.1	17249.9	18285.6	21857.6	21092.0
5	Wholesale and Retail Trade	989.4	201.7	163.5	237.0	84.5	85.8
6	Banking and Insurance	597.6	832.2	720.7	412.5	668.2	917.9
7	Public Administration	3086.3	2694.0	2731.7	3092.9	3951.9	5040.6
8	Services	4846.8	5600.7	7028.9	9109.7	9960.8	9514.9
	TOTAL Public GFCF at Constant Prices :	58824.0	60393.6	52309.5	49778.8	57644.2	57631.5

TABLE IV-18

PERCENTAGE CONTRIBUTION OF EACH INDUSTRY GROUP TO PUBLIC GFCF, 1957 - 1962

(at Constant (1957) Prices)

	1957	1958	1959	1960	1961	1962
1 Agriculture	24.1	24.2	21.1	20.3	18.4	10.6
2 Manufacturing	18.5	13.6	16.2	2.2	9.7	17.5
3 Electricity and Water	10.9	15.9	9.4	15.0	8.5	8.4
4 Transportation, Storage and Communications	30.3	30.9	33.0	36.7	38.0	36.6
5 Wholesale and Retail Trade	1.7	0.3	0.3	0.5	0.1	0.1
6 Banking and Insurance	1.0	1.4	1.4	0.8	1.2	1.6
7 Public Administration	5.3	4.4	5.2	6.2	6.8	8.7
8 Services	8.2	9.3	13.4	18.3	17.3	16.5
TOTAL :	100.0	100.0	100.0	100.0	100.0	100.0

TABLE IV-19

CLASSIFICATION OF PRIVATE GFCF BY INDUSTRY GROUP, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Agriculture	4230.1	2528.9	1507.7	2104.5	3873.0	4978.6
2	Mining and Quarrying	4950.9	6212.8	15050.4	22172.3	22036.9	4925.2
3	Manufacturing	5851.7	5797.0	2614.3	7662.2	6716.7	10495.7
4	Construction	2908.5	2052.7	1741.1	1202.7	1796.9	1598.9
5	Transportation, Storage and Communications	5763.1	4810.9	3196.9	5550.2	8399.7	6676.2
6	Wholesale and Retail Trade	2227.3	2055.1	2060.2	1869.4	2916.8	2907.9
7	Banking and Insurance	194.7	246.4	127.2	95.9	193.8	364.1
8	Ownership of Dwellings	18992.7	18971.6	22663.5	22149.3	24937.3	24097.3
9	Services	2347.1	2416.3	2246.3	2544.7	3686.9	3913.5
	TOTAL Private GFCF at Constant Prices :	47466.1	45091.7	51207.6	65351.2	74558.0	59957.4

TABLE IV-20

PERCENTAGE CONTRIBUTION OF EACH INDUSTRY GROUP TO PRIVATE GFCF, 1957 - 1962

(at Constant (1957) Prices)

	1957	1958	1959	1960	1961	1962
1 Agriculture	9.0	5.6	3.0	3.2	5.2	8.3
2 Mining and Quarrying	10.4	13.8	29.4	34.0	29.6	8.2
3 Manufacturing	12.3	12.9	5.1	11.7	9.0	17.5
4 Construction	6.1	4.5	3.4	1.8	2.4	2.7
5 Transportation, Storage and Communications	12.1	10.7	6.2	8.5	11.3	11.2
6 Wholesale and Retail Trade	4.7	4.5	4.0	2.9	3.9	4.8
7 Banking and Insurance	0.4	0.5	0.2	0.1	0.3	0.6
8 Ownership of Dwellings	40.0	42.1	44.3	34.0	33.4	40.2
9 Services	5.0	5.4	4.4	3.8	4.9	6.5
TOTAL :	100.0	100.0	100.0	100.0	100.0	100.0

TABLE IV-21

CLASSIFICATION OF PUBLIC GROSS FIXED CAPITAL FORMATION, 1957 - 1962

BY TYPE OF ASSET AND INDUSTRY GROUP

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
I BUILDINGS:						
1. Agriculture	-	-	13.2	202.4	697.6	380.0
2. Manufacturing	3886.1	2119.8	1392.9	573.5	1405.9	2464.0
3. Electricity and Water	141.8	333.6	535.3	661.7	446.2	570.4
4. Transportation, Storage and Communications	289.1	320.2	1036.3	2336.1	2704.0	1439.7
5. Wholesale and Retail Trade	778.4	76.0	100.0	162.0	31.0	30.0
6. Banking and Insurance	553.1	720.7	674.5	325.4	623.0	849.0
7. Public Administration	2449.1	2036.5	2013.9	2546.2	3449.0	4464.6
8. Services	3806.0	4084.4	4481.3	4375.6	5462.1	4335.9
Total I :	11903.6	9691.2	10247.4	11182.9	14818.8	14533.6
II OTHER CONSTRUCTION AND WORKS:						
1. Agriculture	14172.8	13055.1	10626.8	10246.8	10185.8	5734.8
2. Manufacturing	983.7	1917.3	3123.2	158.2	1687.4	4273.8
3. Electricity and Water	4714.9	6260.1	2114.3	5095.3	3079.8	2508.6
4. Transportation, Storage and Communications	16105.0	14518.7	13785.0	15249.8	18678.1	18272.0

(Continued)

TABLE IV-21 (continued)

II 5. Wholesale and Retail Trade	210.0	100.0	57.0	80.0	50.0	53.5
6. Banking and Insurance	-	-	-	-	-	-
7. Public Administration	156.5	86.3	122.5	145.4	157.7	175.4
8. Services	309.2	269.3	1203.0	3135.6	3031.7	4072.3
Total II :	36652.1	36206.8	31031.8	34111.1	36870.5	35090.4
III MACHINERY AND OTHER EQUIPMENT :						
A) Machinery and Equipment						
1. Agriculture	1.0	-	263.1	32.4	61.7	-
2. Manufacturing	5640.7	3547.7	3919.0	319.5	2627.6	3115.1
3. Electricity and Water	1522.8	2182.7	2186.7	1833.1	1259.3	1701.7
4. Transportation, Storage and Communications	870.7	1140.7	801.6	304.4	439.6	427.9
5. Wholesale and Retail Trade	-	-	-	-	-	-
6. Banking and Insurance	28.1	17.1	22.2	16.9	22.6	43.9
7. Public Administration	129.8	84.3	176.7	146.5	100.9	110.5
8. Services	341.4	312.1	650.1	1014.0	1026.1	564.4
Sub-Total III-A:	8534.5	7284.6	8019.4	3666.8	5537.8	5963.5
B) Furniture and Fixtures						
1. Agriculture	-	-	-	-	-	-
2. Manufacturing	149.0	34.6	46.3	16.7	34.5	53.2
3. Electricity and Water	23.7	67.3	63.6	61.8	127.7	43.6
4. Transportation, Storage and Communications	13.4	19.7	18.5	70.6	40.6	25.7

(Continued)

TABLE IV-21 (continued)

III 5. Wholesale and Retail Trade	1.0	1.0	2.0	2.0	2.5	1.5
6. Banking and Insurance	14.7	8.8	12.4	75.8	37.3	21.3
7. Public Administration	122.7	76.0	154.3	162.5	121.7	138.1
8. Services	269.5	341.1	475.3	704.9	518.1	434.2
Sub-Total III-B:	594.0	548.5	772.4	1094.3	882.4	717.6
Total III :	9128.5	7833.1	8791.8	4761.1	6420.2	6681.1
IV TRANSPORT EQUIPMENT:						
1. Agriculture	-	-	-	25.0	3.3	-
2. Manufacturing	235.6	189.9	174.0	52.2	113.7	293.6
3. Electricity and Water	27.8	68.7	119.2	122.8	117.6	42.9
4. Transportation, Storage and Communications	525.8	989.7	1608.5	1205.8	833.5	1194.4
5. Wholesale and Retail Trade	-	4.2	2 0	3.0	3.8	1.0
6. Banking and Insurance	1.7	1.3	1.2	2.5	1.6	4.7
7. Public Administration	228.2	167.5	257.8	223.8	262.8	174.3
8. Services	120.7	83.4	144.4	180.4	188.3	86.3
Total IV :	1139.8	1504.7	2307.1	1815.5	1524.6	1797.2
V TOTAL Public GFCF at Current Prices :	58824.0	55235.8	52378.1	51870.6	59634.1	58102.3
I as % of V :	20.2	17.5	19.6	21.5	24.8	25.0
II as % of V :	62.3	65.6	59.2	65.8	61.8	60.4
III as % of V :	15.5	14.2	16.8	9.2	10.8	11.5
IV as % of V :	2.0	2.7	4.4	3.5	2.6	3.1
Total :	100.0	100.0	100.0	100.0	100.0	100.0

TABLE IV-22

CLASSIFICATION OF PUBLIC GROSS FIXED CAPITAL FORMATION, 1957 - 1962

BY TYPE OF ASSET AND INDUSTRY GROUP

(at Constant (1957) Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
I BUILDINGS:						
1. Agriculture	-	-	13.4	194.2	674.0	378.5
2. Manufacturing	3886.1	2368.5	1415.6	550.4	1358.3	2454.2
3. Electricity and Water	141.8	372.7	544.0	635.0	431.1	468.1
4. Transportation, Storage and Communications	289.1	357.8	1053.1	2242.0	2612.5	1434.0
5. Wholesale and Retail Trade	778.4	85.0	101.6	155.5	30.0	29.9
6. Banking and Insurance	553.1	805.2	685.5	312.3	601.9	845.6
7. Public Administration	2449.1	2275.4	2046.6	2443.6	3332.4	4446.8
8. Services	3806.0	4563.7	4554.2	4199.2	5277.4	4318.6
Total I :	11903.6	10828.3	10414.0	10732.2	14317.6	14475.7
II OTHER CONSTRUCTION AND WORKS:						
1. Agriculture	14172.8	14586.7	10799.6	9833.8	9841.4	5711.8
2. Manufacturing	983.7	2142.2	3173.9	151.8	1630.4	4256.8
3. Electricity and Water	4714.9	6994.5	2148.7	4890.0	2975.7	2498.6
4. Transportation, Storage and Communications	16105.0	16222.0	14009.1	14635.1	18046.5	18200.0

(Continued)

TABLE IV-22 (continued)

II 5. Wholesale and Retail Trade	210.0	111.7	57.9	76.8	48.3	53.3
6. Banking and Insurance	-	-	-	-	-	-
7. Public Administration	156.5	96.4	124.5	139.5	152.4	174.7
8. Services	309.2	301.0	1222.6	3009.2	2929.2	4056.1
Total II :	36652.1	40454.5	31536.3	32736.2	35623.9	34951.3
III MACHINERY AND OTHER EQUIPMENT:						
A) Machinery and Equipment						
1. Agriculture	1.0	-	245.4	31.6	59.7	-
2. Manufacturing	5640.7	3454.4	3655.8	311.4	2541.2	3048.0
3. Electricity and Water	1522.8	2125.3	2039.8	1786.6	1217.9	1665.1
4. Transportation, Storage and Communications	870.7	1110.7	747.8	296.7	425.1	418.7
5. Wholesale and Retail Trade	-	-	-	-	-	-
6. Banking and Insurance	28.1	16.7	20.7	16.5	21.9	43.0
7. Public Administration	129.8	82.1	164.8	142.8	97.6	108.1
8. Services	341.4	303.9	606.4	988.3	992.4	552.3
Sub-Total III-A:	8534.5	7093.1	7480.7	3573.9	5355.8	5835.2
B) Furniture and Fixtures						
1. Agriculture	-	-	-	-	-	-
2. Manufacturing	149.0	35.6	50.5	18.0	39.7	63.3
3. Electricity and Water	23.7	69.4	69.3	66.5	147.3	51.7
4. Transportation, Storage and Communications	13.4	20.3	20.2	75.9	46.8	30.5

(Continued)

TABLE IV-22 (continued)

III 5. Wholesale and Retail Trade	1.0	1.0	2.2	2.1	2.9	1.8
6. Banking and Insurance	14.7	9.1	13.5	81.5	43.0	25.3
7. Public Administration	122.7	78.4	168.3	174.7	140.4	163.8
8. Services	269.5	351.6	518.3	758.0	597.6	515.0
Sub-Total III-B:	594.0	565.4	842.3	1176.7	1017.7	851.4
Total III :	9128.5	7658.5	8323.0	4750.6	6373.5	6686.6
IV TRANSPORT EQUIPMENT:						
1. Agriculture	-	-	-	21.5	2.9	-
2. Manufacturing	235.6	183.3	153.6	44.8	99.1	248.0
3. Electricity and Water	27.8	66.3	105.2	105.5	102.5	36.2
4. Transportation, Storage and Communications	525.8	955.3	1419.7	1035.9	726.7	1008.8
5. Wholesale and Retail Trade	-	4.0	1.8	2.6	3.3	0.8
6. Banking and Insurance	1.7	1.2	1.0	2.2	1.4	4.0
7. Public Administration	228.2	161.7	227.5	192.3	229.1	147.2
8. Services	120.7	80.5	127.4	155.0	164.2	72.9
Total IV :	1139.8	1452.3	2036.2	1559.8	1329.2	1517.9
V TOTAL Public GFCF at Constant Prices :	58824.0	60393.6	52309.5	49778.8	57644.2	57631.5

TABLE IV-23

CLASSIFICATION OF PRIVATE GROSS FIXED CAPITAL FORMATION, 1957 - 1962

BY TYPE OF ASSET AND INDUSTRY GROUP

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
I BUILDINGS:						
A) Dwellings	18992.7	16990.2	22302.5	23075.2	25806.4	24193.3
B) Other Buildings						
1. Agriculture	99.8	101.2	102.7	104.1	105.6	107.2
2. Mining and Quarrying	194.0	337.7	442.7	310.8	300.4	218.9
3. Manufacturing	784.0	710.0	1112.3	536.0	1242.2	1209.5
4. Construction	306.0	289.5	366.5	117.2	259.0	183.3
5. Transportation, Storage and Communications	670.0	588.3	834.0	391.0	970.5	867.4
6. Wholesale and Retail Trade	1320.0	1064.5	1289.0	647.6	1552.8	1441.6
7. Banking and Insurance	91.3	136.3	81.0	72.4	115.3	220.4
8. Services	602.4	569.5	821.6	379.4	867.0	855.2
Sub-Total I-B:	4067.5	3797.0	5049.8	2558.5	5412.8	5103.5
Total I :	23060.2	20787.2	27352.3	25633.7	31219.2	29296.8

(Continued)

TABLE IV-23 (continued)

II OTHER CONSTRUCTION AND WORKS:						
1. Agriculture	-	-	-	-	-	-
2. Mining and Quarrying	1525.1	3074.6	11173.6	18742.7	18382.1	3914.4
3. Manufacturing	387.0	611.6	82.7	582.1	374.0	741.5
4. Construction	-	-	-	-	-	-
5. Transportation, Storage and Communications	-	-	-	-	-	-
6. Wholesale and Retail Trade	-	-	-	-	-	-
7. Banking and Insurance	-	-	-	-	-	-
8. Services	-	-	-	-	-	-
Total II :	1912.1	3686.2	11256.3	19324.8	18756.1	4655.9
III MACHINERY AND OTHER EQUIPMENT:						
A) Machinery and Equipment						
1. Agriculture	4130.3	2472.7	1451.5	2032.6	3869.7	4961.8
2. Mining and Quarrying	2507.4	1821.9	2730.1	3438.3	3633.1	692.4
3. Manufacturing	4344.1	4029.9	1072.1	5743.6	4235.7	7722.3
4. Construction	2165.7	844.5	923.7	460.6	1138.5	1062.3
5. Transportation, Storage and Communications	387.9	161.4	105.1	48.6	135.3	138.5
6. Wholesale and Retail Trade	19.6	23.8	17.1	19.0	12.4	15.2
7. Banking and Insurance	51.2	53.7	27.9	7.1	31.8	82.7
8. Services	1196.5	1145.6	659.1	1154.1	1798.3	1865.1
Sub-Total III-A:	14802.7	10553.5	6986.6	12903.9	14854.8	16540.3

(Continued)

TABLE IV-23 (continued)

III B) Furniture and Fixtures						
1. Agriculture	-	-	-	-	-	-
2. Mining and Quarrying	133.3	184.3	245.0	88.5	65.6	42.7
3. Manufacturing	196.0	218.0	272.1	380.5	375.0	406.6
4. Construction	89.6	105.6	105.2	93.0	92.6	72.6
5. Transportation, Storage and Communications	196.0	214.5	240.0	325.0	347.4	343.6
6. Wholesale and Retail Trade	580.0	582.3	555.0	808.0	834.0	856.7
7. Banking and Insurance	49.5	35.3	16.5	14.7	39.0	53.7
8. Services	529.2	623.0	707.2	946.5	931.0	1016.0
Sub-Total III-B:	1773.6	1963.0	2141.0	2656.2	2684.6	2791.9
Total III :	16576.3	12516.5	9127.6	15560.1	17539.4	19332.2
IV TRANSPORT EQUIPMENT:						
1. Agriculture	-	-	-	-	-	-
2. Mining and Quarrying	591.1	451.9	488.6	512.9	455.3	95.1
3. Manufacturing	140.6	177.8	116.8	677.6	718.2	608.8
4. Construction	347.2	826.6	444.4	630.0	388.6	344.3
5. Transportation, Storage and Communications	4509.2	3911.2	2254.2	5561.7	7949.2	6238.6
6. Wholesale and Retail Trade	307.7	250.9	146.1	420.0	507.5	522.2
7. Banking and Insurance	2.7	5.6	1.0	4.3	7.7	-
8. Services	19.2	23.0	28.7	44.2	41.5	37.3
Total IV :	5917.5	5647.0	3479.8	7850.7	10068.0	7846.3

(Continued)

TABLE IV-23 (continued)

V TOTAL Private GFCF at Current Prices :	47466.1	42636.9	51216.0	68369.3	77582.7	61131.2
I as % of V	48.6	48.8	53.4	37.5	40.2	48.0
II as % of V	4.0	8.6	22.0	28.3	24.2	7.6
III as % of V	35.0	29.4	17.8	22.7	22.6	31.6
IV as % of V	12.4	13.2	6.8	11.5	13.0	12.8
Total:	100.0	100.0	100.0	100.0	100.0	100.0

TABLE IV-24

CLASSIFICATION OF PRIVATE GROSS FIXED CAPITAL FORMATION, 1957 - 1962

BY TYPE OF ASSET AND INDUSTRY GROUP

(at Constant (1957) Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
I BUILDINGS:						
A) Dwellings	18992.7	18971.6	22663.5	22149.3	24937.3	24097.3
B) Other Buildings						
1. Agriculture	99.8	101.2	102.7	104.1	105.6	107.2
2. Mining and Quarrying	194.0	377.3	449.9	298.3	290.2	218.0
3. Manufacturing	784.0	793.3	1130.4	514.4	1200.2	1204.7
4. Construction	306.0	323.5	372.5	112.5	250.2	182.6
5. Transportation, Storage and Communications	670.0	657.3	847.6	375.2	937.7	864.0
6. Wholesale and Retail Trade	1320.0	1189.4	1310.0	621.5	1500.3	1435.8
7. Banking and Insurance	91.3	152.3	82.3	69.5	111.4	219.5
8. Services	602.4	636.3	835.0	364.1	837.7	851.8
Sub-Total I-B:	4067.5	4230.6	5130.4	2459.6	5233.3	5083.6
Total I :	23060.2	23202.2	27793.9	24608.9	30170.6	29180.9

(Continued)

TABLE IV-24 (continued)

II OTHER CONSTRUCTION AND WORKS:						
1. Agriculture	-	-	-	-	-	-
2. Mining and Quarrying	1525.1	3435.3	11355.3	17987.2	17760.5	3898.8
3. Manufacturing	387.0	683.4	84.0	558.6	361.4	738.5
4. Construction	-	-	-	-	-	-
5. Transportation, Storage and Communications	-	-	-	-	-	-
6. Wholesale and Retail Trade	-	-	-	-	-	-
7. Banking and Insurance	-	-	-	-	-	-
8. Services	-	-	-	-	-	-
Total II :	1912.1	4118.7	11439.3	18545.8	18121.9	4637.3
III MACHINERY AND OTHER EQUIPMENT:						
A) Machinery and Equipment						
1. Agriculture	4130.3	2427.7	1405.0	2000.4	3767.4	4871.4
2. Mining and Quarrying	2507.4	1774.0	2546.8	3351.1	3513.6	677.4
3. Manufacturing	4344.1	3924.0	1000.1	5598.0	4096.4	7556.0
4. Construction	2165.7	822.3	861.7	449.0	1101.1	1039.4
5. Transportation, Storage and Communications	387.9	157.2	98.0	47.4	130.9	135.5
6. Wholesale and Retail Trade	19.6	23.2	16.0	18.5	12.0	14.9
7. Banking and Insurance	51.2	52.3	26.0	6.9	30.7	80.9
8. Services	1196.5	1115.5	614.8	1124.9	1739.2	1825.0
Sub-Total III-A:	14802.7	10296.2	6568.4	12596.2	14391.3	16200.5

(Continued)

TABLE IV-24 (continued)

III B) Furniture and Fixtures						
1. Agriculture	-	-	-	-	-	-
2. Mining and Quarrying	133.3	190.0	267.2	95.1	75.7	50.6
3. Manufacturing	196.0	224.7	296.7	409.1	432.5	482.3
4. Construction	89.6	108.9	114.7	100.0	106.8	86.1
5. Transportation, Storage and Communications	196.0	221.1	261.7	349.5	400.7	407.6
6. Wholesale and Retail Trade	580.0	600.3	605.2	868.6	962.0	1016.2
7. Banking and Insurance	49.5	36.4	18.0	15.8	45.0	63.7
8. Services	529.2	642.3	771.2	1017.7	1073.8	1205.2
Sub-Total III-B:	1773.6	2023.7	2334.7	2855.8	3096.5	3311.7
Total III :	16576.3	12319.9	8903.1	15452.0	17487.8	19512.2
IV TRANSPORT EQUIPMENT:						
1. Agriculture	-	-	-	-	-	-
2. Mining and Quarrying	591.1	436.2	431.2	440.6	396.9	80.4
3. Manufacturing	140.6	171.6	103.1	582.1	626.2	514.2
4. Construction	347.2	798.0	392.2	541.2	338.8	290.8
5. Transportation, Storage and Communications	4509.2	3775.3	1989.6	4778.1	6930.4	5269.1
6. Wholesale and Retail Trade	307.7	242.2	129.0	360.8	442.5	441.0
7. Banking and Insurance	2.7	5.4	0.9	3.7	6.7	-
8. Services	19.0	22.2	25.3	38.0	36.2	31.5
Total IV :	5917.5	5450.9	3071.3	6744.5	8777.7	6627.0
V TOTAL Private GFCF at Constant Prices :	47466.1	45091.7	51207.6	65351.2	74558.0	59957.4

TABLE IV-25

CLASSIFICATION OF GDFCF BY TYPE OF ASSET AND TYPE OF PURCHASER, 1957 - 1962

(at Current Prices)

(ID 000)

Type of Asset / Type of Purchaser		Private Enterprises and Non-Profit Institutions	Public Enterprises	General Government	TOTAL
I BUILDINGS:	1957	23060.2	5648.5	6255.1	34963.8
	1958	20787.2	3570.3	6120.9	30478.4
	1959	27352.3	3739.0	6508.4	37599.7
	1960	25633.7	4058.7	7124.2	36816.6
	1961	31219.2	5210.1	9608.7	46038.0
	1962	29296.8	5353.1	9180.5	43830.4
II OTHER CONSTRUCTION AND WORKS :	1957	1912.1	7883.3	28768.8	38564.2
	1958	3686.2	12891.2	23315.6	39893.0
	1959	11256.3	9731.2	21300.6	42288.1
	1960	19324.8	10341.1	23770.0	53435.9
	1961	18756.1	11829.9	25040.6	55626.6
	1962	4655.9	16614.4	18476.0	39746.3

(Continued)

TABLE IV-25 (continued)

III MACHINERY AND OTHER EQUIPMENT :	1957	16576.3	8264.1	864.4	25704.8
	1958	12516.5	7019.6	813.5	20349.6
	1959	9127.6	7072.3	1719.5	17919.4
	1960	15560.1	2700.8	2060.3	20321.2
	1961	17539.4	4591.7	1828.5	23959.6
	1962	19332.2	5433.9	1247.2	26013.3
IV TRANSPORT EQUIPMENT:	1957	5917.5	790.9	348.9	7057.3
	1958	5647.0	1253.8	250.9	7151.7
	1959	3479.0	1904.9	402.2	5786.9
	1960	7850.7	1386.3	429.2	9666.2
	1961	10068.0	1070.2	454.4	11592.6
	1962	7846.3	1536.6	260.6	9643.5
V TOTAL :	1957	47466.1	22586.8	36237.2	106290.1
	1958	42636.9	24734.9	30500.9	97872.7
	1959	51216.0	22447.4	29930.7	103594.1
	1960	68369.3	18486.9	33383.7	120239.9
	1961	77582.7	22701.9	36932.2	137216.8
	1962	61131.2	28938.0	29164.3	112933.5

TABLE IV-26

CLASSIFICATION OF GDFCF BY TYPE OF ASSET AND TYPE OF PURCHASER, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

Type of Asset \ Type of Purchaser		Private Enterprises and Non-Profit Institutions	Public Enterprises	General Government	TOTAL
I BUILDINGS:	1957	23060.2	5648.5	6255.1	34963.8
	1958	23202.2	3989.2	6839.1	34030.5
	1959	27793.9	3799.8	6614.2	38207.9
	1960	24608.9	3895.2	6837.0	35341.1
	1961	30170.6	5033.8	9283.8	44488.2
	1962	29180.9	5331.8	9143.9	43656.6
II OTHER CONSTRUCTION AND WORKS :	1957	1912.1	7883.3	28768.8	38564.2
	1958	4118.7	14403.4	26051.1	44573.2
	1959	11439.3	9889.3	21647.0	42975.6
	1960	18545.8	9924.3	22811.9	51282.0
	1961	18121.9	11430.0	24193.9	53745.8
	1962	4637.3	16549.0	18402.3	39588.6

(Continued)

TABLE IV-26 (continued)

III MACHINERY AND OTHER EQUIPMENT :	1957	16576.3	8264.1	864.4	25704.8
	1958	12319.9	6842.5	816.0	19978.4
	1959	8903.1	6619.8	1703.2	17226.1
	1960	15452.0	2655.2	2095.4	20202.6
	1961	17487.8	4485.8	1887.7	23861.3
	1962	19512.2	5347.4	1339.2	26198.8
IV TRANSPORT EQUIPMENT:	1957	5917.5	790.9	348.9	7057.3
	1958	5450.9	1210.1	242.2	6903.2
	1959	3071.3	1681.3	354.9	5107.5
	1960	6744.5	1191.0	368.8	8304.3
	1961	8777.7	933.0	396.2	10106.9
	1962	6627.0	1297.8	220.1	8144.9
V TOTAL :	1957	47466.1	22586.8	36237.2	106290.1
	1958	45091.7	26445.2	33948.4	105485.3
	1959	51207.6	21990.2	30319.3	103517.1
	1960	65351.2	17665.7	32113.1	115130.0
	1961	74558.0	21882.6	35761.6	132202.2
	1962	59957.4	28526.0	29105.5	117588.9

TABLE IV-27

INVESTMENT - VALUE ADDED RATIOS (PERCENTAGES), 1957 - 1962

(at Current Prices)

		1957	1958	1959	1960	1961	1962
1	Agriculture	16.5	16.8	15.2	12.9	12.8	8.0
2	Mining and Quarrying	4.3	3.3	7.9	11.0	10.8	2.3
3	Manufacturing	47.5	36.8	25.2	16.6	21.5	32.1
4	Construction	10.5	6.9	6.4	5.6	7.9	8.5
5	Electricity and Water	240.0	320.6	169.0	214.8	101.4	88.0
6	Transportation, Storage and Communications	78.8	71.4	60.3	64.2	69.8	61.6
7	Wholesale and Retail Trade	10.8	7.6	8.3	6.6	8.2	7.6
8	Banking and Insurance	12.0	13.2	10.2	6.0	7.9	11.2
9	Ownership of Dwellings	148.4	135.8	192.6	194.1	212.7	194.3
10	Public Administration	9.6	6.5	6.0	7.0	8.0	8.5
11	Services	26.7	25.1	27.5	31.3	33.5	28.5

The Ratios are derived by dividing GFCF by GVA at Sectoral levels. It is to be noted that GFCF is at current cost to the final purchaser while GVA is at current Factor Cost.

Sources: Table IV-14 for GFCF, and Table 2 Appendix IX for GVA.

TABLE IV-28

INVESTMENT - VALUE ADDED RATIOS (PERCENTAGES), 1957 - 1962*

(at Constant (1957) Prices)

		1957	1958	1959	1960	1961	1962
1	Agriculture	16.5	20.0	19.6	16.6	15.5	10.1
2	Mining and Quarrying	4.3	3.3	6.9	8.9	8.5	1.9
3	Manufacturing	47.5	36.8	24.4	15.8	20.6	31.5
4	Construction	10.5	7.5	7.1	6.1	8.8	9.6
5	Electricity and Water	240.0	337.8	158.8	202.8	100.1	83.5
6	Transportation, Storage and Communications	78.8	78.2	63.0	62.9	69.6	61.2
7	Wholesale and Retail Trade	10.8	8.3	8.8	6.9	8.2	7.7
8	Banking and Insurance	12.0	14.5	11.7	6.6	11.0	15.6
9	Ownership of Dwellings	148.4	144.7	168.0	159.8	175.0	164.8
10	Public Administration	9.6	7.2	6.2	7.2	7.7	8.4
11	Services	26.7	27.7	28.5	31.5	30.8	29.2

* The ratios are derived by dividing GFCF in each industry group (shown in Table IV-15) by the GVA in the same industry (shown in Table 4 Appendix IX).

$ B. COMPARISON WITH OTHER ESTIMATES

It is expedient to compare our estimates of GDFCF and its components with the available estimates. This comparison will aid us in the evaluation of our figures. The comparison, however, is partial and incomplete because there are no detailed and comprehensive capital formation estimates covering the 1957 - 1962 period, other than the present study. Hence, the comparison is either with a particular component of capital formation during the relevant period, or with aggregate capital formation in certain years. In what follows, the comparison is made with three sets of estimates:

1. Haseeb's estimates of the Gross Output of Construction during 1957-1961 ;
2. Kanaan's estimates of GDFCF during 1960-1962 ;
3. Abu El-Haj's estimates of GDFCF during 1957.

B.1. Comparison with Haseeb's Estimates of Gross Output of Construction, 1957 - 1961. [1)]

Both Haseeb's and the present estimates of the gross output of construction were based on the same sources of date, but our approach of

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1) Note: The comparison is confined to the period 1957-1961 due to the fact that Haseeb's figures for 1962 could not be ascertained.

estimation, and the definition of what constitutes capital expenditure, may differ. This is because Haseeb was primarily concerned with the value added in construction, and not with the conceptual differences in the treatment of certain types of construction in the capital formation estimates.

Since our estimates of rural construction were based on Haseeb's figures, the comparison is confined to urban construction only.

(i) At first, let us compare the estimates of urban buildings for which we both relied on the "Statistics of Building Permits". The relevant estimates and the average costs of construction are shown in Tables IV-29 and IV-30, respectively.

From Table IV-29, it can be seen that Haseeb's estimates are strikingly higher than ours. The explanation for this sizable difference is that for the period 1957-1959 we applied the average cost of a new building (shown in Col. 1, Table IV-30) to the number of permits issued for new buildings during that period. Then the result was adjusted for the six months' time-lag. The average costs used were those reported in the "Statistics of Building Permits", but uplifted by 10 per cent.

For the remaining period, our estimates were arrived at by using the cost of building construction (reported in the "Statistics of Building Permits"), after the necessary adjustment for the time-lag and under-estimation, as explained in Chapter III above.[1)]

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1) For more details, see Chapter XIII.

TABLE IV-29

EXPENDITURE ON THE CONSTRUCTION OF URBAN BUILDINGS, 1957-1961

(Based on the "Statistics of Building Permits")

(ID 000)

Year	HASHIM* (1)	HASEEB* (2)	DIFFERENCE (2) - (1)
1957	16446.9	21014.0	+ 4567.1
1958	15318.4	21978.0	+ 6659.6
1959	20171.5	30921.0	+ 10749.5
1960	19011.6	37056.0	+ 18044.4
1961	25259.8	45159.0	+ 19899.2

* Excluding expenditure on repair work.

Sources: a) Figures in Col. (1) represent the sum of Private GFCF in Dwellings (shown in Table XIII-5, para. 3) and GFCF in Non-Residential Buildings (shown in Table III-2).

b) Figures in Col. (2) are derived from Table 62 in Haseeb's National Income of Iraq, 1953-1961, (R.I.I.A., Oxford University Press, 1964) p.108.

TABLE IV-30

AVERAGE COSTS OF CONSTRUCTION, 1957 - 1961

(ID)

Year	HASHIM (1)	HASEEB (2)	As Reported in the "Statistics of Building Permits" (3)
1957	1705	2172	1550
1958	1650	2379	1500
1959	1716	2638	1560
1960	1273	2572	1157
1961	1436	2572	1306

Haseeb, on the other hand, arrived at his estimates (for 1957-1961) by first adjusting the number of building permits for the six months' time-lag, and then applying the 1956 average cost which he estimated at ID 2172. The figures were then "revalued at current prices by using an index based on information obtained from contractors in Mosul and Baghdad on the average cost of building per square metre"[1] during that period.

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1) Haseeb, K., The National Income of Iraq, 1953-1961, R.I.I.A., (Oxford University Press, 1964) p.109.

My conclusion is that Haseeb's estimates are upward biased, for two main reasons. Firstly, he calculated the average cost of a new building at 1956 prices on the basis of information from contractors. This average cost seems to be too high compared with the one reported officially in 1957,[1] even when allowance is made for underestimation. Secondly, the official annual average cost (shown in Col. 3 Table IV-30), and the price index of building materials (shown in Table II-2) show a downward trend in the cost of construction, while Haseeb's methods of revaluation resulted in an upward trend in the average cost.

(ii) The next stage is a comparison of our estimates of urban buildings as a whole with those of Haseeb.

Since Haseeb assumed that the "Statistics of Building Permits" covered all buildings, whether public or private,[2] his estimates of urban buildings are the only ones shown in Table IV-29, Col. 2. But, as pointed out in Chapter XIII, the "Statistics of Building Permits" did not cover buildings belonging to the public sector. Hence, if we add public expenditure on the construction of urban buildings to our estimates of urban buildings shown in Table IV-29, Col. 1, Haseeb's figures become lower than ours, as can be

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1) Ibid., p.108. Note that Haseeb assumed that there was no change in the average cost between 1956 and 1957.

2) Haseeb, K., An Estimate of the National Income of Iraq, 1953-1956, Ph.D. Dissertation submitted in the University of Cambridge, 1959, p.333.

seen from Table IV-31.

TABLE IV-31

URBAN BUILDINGS (Private and Public)

(ID 000)

Year	HASHIM (1)	HASEEB (2)	DIFFERENCE (2) - (1)
1957	34764.2	21014.0	- 13750.2
1958	30276.0	21978.0	- 8298.0
1959	37394.3	30921.0	- 6473.3
1960	36608.4	37056.0	+ 447.6
1961	45824.8	45159.0	- 665.8

Sources: 1. Figures in Col. 1 are derived from Table IV-5 total (1) less rural buildings shown in Chapter XIII Table XIII-12.
2. Figures in Col. 2 are from Table IV-29 above.

(iii) The comparison between Haseeb's and our estimates of expenditure on construction, other than buildings (i.e. other construction and works), is shown in Table IV-32. It is evident from this table that within the private sector Haseeb's figures are higher than ours for the first three years, and substantially lower for the last year. Within the public sector, Haseeb's

TABLE IV-32

OTHER CONSTRUCTION AND WORKS

(ID 000)

Year	HASHIM		HASEEB		DIFFERENCE	
	Private	Public	Private	Public	Private (3) - (1)	Public (4) - (2)
	(1)	(2)	(3)	(4)	(5)	(6)
1957	1912.1	36652.1	7403.0	44350.0	+ 5490.9	+ 7697.9
1958	3686.2	36206.8	11874.0	48353.0	+ 8187.8	+ 12146.2
1959	11256.3	31031.8	12298.0	39884.0	+ 1041.7	+ 8852.2
1960	19324.8	34111.1	18870.0	35347.0	- 454.8	+ 1235.9
1961	18756.1	36870.5	9792.0	34262.0	- 8964.1	- 2608.5

Sources: 1. Figures in Col. (1) are derived from Table IV-11 above.

2. Figures in Col. (2) are derived from Table IV-8 above.

3. Figures in Col. (3) and (4) are derived from Haseeb's National Income of Iraq, 1953-1961, Table 64.

are higher than ours, except for 1961.

The explanation for these differences may be summarized as follows :

a) Private Sector. The difference is due to Haseeb's over-estimation of the oil companies' expenditure during 1957-1959, and his under-estimation during 1960-1961. Though both estimates were derived from the same source of data, i.e. the companies' capital expenditure statements, it is not possible to discern how Haseeb had arrived at the figures shown in Col. 3 of the above table. In fact, his estimates for 1957 and 1958 are even higher than the oil companies' total GFCF.

For the year 1961, the reason for Haseeb's low figure may be a calculation error, since the oil companies' expenditure in this year was nearer to ID 19 m. than the ID 9 m. given by Haseeb.

It is noteworthy to indicate here that the two estimates of the oil companies' expenditure were shown to several people of authority at the companies' London office who confirmed that our figures are more definite than Haseeb's.

b) Public Sector. For the year 1961, Haseeb's figures are mostly budgetary estimates while ours are based on actual expenditure.

For the period 1957-1960, Haseeb's high estimates are mainly due to the fact that they include (while ours exclude) expenditure on repair work and on construction for military purposes. Another reason for the

discrepancy may be attributed to difference in classification methods. Thus, what is classified here as "non-residential buildings" might be considered in Habeeb's figures as "other construction and works".

(iv) The overall comparison between the two estimates of the gross output of construction is made in Table IV-33. It reveals that if we exclude from Haseeb's figures items which were not originally included in ours (i.e., military construction and repair work), then they are lower than our estimates (except in 1958).

However, since Haseeb's estimates of urban buildings did not include public buildings, and, furthermore, he used inflated average costs in his estimation, the conclusion is that the present estimates are more accurate. Hence, the proper estimates of the gross output of construction, for the purpose of deriving the value added in the construction sector, should be our figures shown in Col. 1 Table IV-33, plus the figures shown in Col. 3 of the same table.

TABLE IV-33

COMPARISON BETWEEN HASEEB'S AND OUR ESTIMATES OF THE GROSS OUTPUT OF CONSTRUCTION, 1957-1960*

(ID 000)

Year	HASHIM	HASEEB	Expenditure on Repair Work and Military Construction	HASEEB (2)-(3)	DIFFERENCE (4) - (1)
	(1)	(2)	(3)	(4)	(5)
1957	73528.0	75103.0	9644.5	65458.5	- 8069.5
1958	70371.4	84555.0	7360.1	77194.9	+ 6823.5
1959	79887.8	84543.0	12867.2	71675.8	- 8212.0
1960	90252.5	93124.0	10832.6	82291.4	- 7961.1

* The year 1961 is not considered here on the grounds that Haseeb's estimates of public construction were mainly budgetary estimates.

Sources: 1. Figures in Col. (1) are the sum of items I and II of Table IV-5 above.

2. Figures in Col. (2) are derived from Haseeb's National Income estimates, 1953-1961 (R.I.I.A., Oxford University Press, 1964), Table 67, p.114.

3. Figures in Col. (3) are from Table 4, Appendix VII below.

B.2. Comparison with Kanaan's Estimates of GDFCF, 1960-1962 :

Kanaan's estimates of GDFCF overlap with ours for the years 1960, 1961 and 1962. His estimates can be classified into two components, namely, machinery and equipment (including furniture, fixtures and transport equipment) and construction, as shown in Table IV-34.

TABLE IV-34

KANAAN'S ESTIMATES OF GDFCF IN IRAQ, 1960 - 1962

(ID 000)

	1960	1961	1962
1 Construction:			
a. Private Urban Construction	22471.0	31307.0	32002.0
b. Public Urban Construction	33367.0	31902.0	26868.0
Total Urban Construction:	55838.0	63209.0	58870.0
c. Rural Construction	1458.0	1476.0	1494.0
Total GFCF in Construction :	57296.0	64685.0	60364.0
2 Machinery and Equipment, Furniture and Fixtures, and Transport Equipment :	25889.0	31082.0	33153.0
TOTAL GDFCF :-	83185.0	95767.0	93517.0

Sources: Kanaan, T.H., Input-Output and Social Accounts of Iraq, 1960-1963, Ministry of Planning, Baghdad, September 1965.

Since Kanaan's figures and our estimates for rural construction are primarily based on Haseeb's work, comparison here is confined to urban construction and machinery and related equipment.[1)]

(i) GFCF in "Machinery and Other Equipment" and "Transport Equipment. The comparison between Kanaan's and our estimates of GFCF in the above items is shown in Table IV-35 below. It can be seen that Kanaan's estimates are lower than ours by ID 4 m. in the first two years, and by ID 2.5 m. in the terminal year. This discrepancy may be due to differences in the utilization of basic data of imports, or to differences in the marking up of their c.i.f. values. Furthermore, our estimates include (while Kanaan's exclude) Government purchases of saloon cars, and the value of domestically-made agricultural implements.

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1) Note that rural construction in Kanaan's estimates is inclusive of expenditure on repair and rebuilding, while ours excludes such expenditure. For further details see Chapter XIII, Table XIII-24.

TABLE IV-35

"MACHINERY AND OTHER EQUIPMENT"

AND "TRANSPORT EQUIPMENT"

(ID 000)

Year	HASHIM* (1)	KANAAN (2)	DIFFERENCE (2) - (1)
1960	29987.4	25889.0	- 4098.4
1961	35552.3	31082.0	- 4470.3
1962	35656.8	33153.0	- 2503.8

* Figures in this column represent total GFCF in "Machinery and other Equipment" and "Transport Equipment" shown in Table IV-5 above.

(ii) GFCF in Urban Construction. The comparison between the two sets of estimates of urban construction is of significance in the sense that it does not only reveal differences in the "estimates" themselves, but also shows how the "Construction Surveys", upon which Kanaan has relied in making his estimates, suffer from serious deficiencies in their coverage of construction activity in Iraq.

Tables IV-36 and IV-37 show the comparison between Kanaan and our estimates of private and public construction, respectively. The

tables show striking differences between the estimates, with the exception of private investment in 1962 when Kanaan's and our figures were surprisingly close.

From Table IV-36, it can be observed that during 1960 and 1961 our estimate of "Buildings" (Col. 1) and Kanaan's estimate of 'total private construction' (Col. 4) were more or less the same, while during 1962 both estimates of "total private construction" were very close. This reveals the fact that during 1960 and 1961, Kanaan's estimates had failed to cover the oil companies' substantial investment in construction.[1)]

From Table IV-37, on the other hand, the discrepancy between the two estimates invites attention. Thus, in the case of private construction, the discrepancy narrowed between 1960 and 1962; while it widened in the case of public construction during the same period.

In discussing these significant differences with Dr. Kanaan, he pointed out that our estimates are more sound and accurate than his on the grounds that the construction surveys fail to cover construction works which use minimal amounts of building materials, such as works in agricultural

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1) The same observation was pointed out in a letter from Kanaan.

development, the construction of parks, and the like.[1)]

TABLE IV-36

PRIVATE CONSTRUCTION (URBAN)

(ID 000)

Year	H A S H I M			KANAAN	DIFFERENCE (4) - (3)
	Buildings	Other Construction	TOTAL		
	(1)	(2)	(3)	(4)	(5)
1960	25425.4	19324.8	44750.2	22471.0	- 22279.2
1961	31007.9	18324.8	49332.7	31307.0	- 18025.7
1962	29082.5	4655.9	33738.4	32002.0	- 1736.4

Sources : a) Figures in Col. 1 and 2 represent total item I and II of Table IV-11 above less rural buildings shown in Chapter XIII, Table XIII-12.
b) Figures in Col. 4 are from Table IV-35 above.

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1) In his letter dated 5th May 1966 to the writer, Dr. Kanaan says : "... that by virtue of the fact that my estimates are based on the construction survey, certain kinds of work, especially in agriculture, are not adequately accounted for. In my study, I pointed out definitive evidence which showed that the construction survey suffered from incomplete coverage. My method of adjustment - namely, using supplies of basic construction materials as indicators of the extent of under-coverage, now seems to me insufficient to account for construction work which uses minimal amounts of such materials, e.g. works in agriculture."

TABLE IV-37

PUBLIC CONSTRUCTION

(ID 000)

Year	HASHIM			KANAAN	DIFFERENCE (4) - (3)
	Buildings	Other Construction	TOTAL		
	(1)	(2)	(3)	(4)	(5)
1960	11182.9	34111.1	45294.0	33367.0	- 11927.0
1961	14818.8	36870.5	51689.3	31902.0	- 19787.3
1962	14533.6	35090.4	49624.0	26868.0	- 22756.0

Sources : a) Figures in Col. 1 and Col. 2 are from Table IV-8 above.
b) Figures in Col. 4 are from Table IV-35 above.

B.3. Comparison with Abu El-Haj's Estimates of GDFCF in 1957

It was indicated in Chapter I that Abu El-Haj admits the limitations of his estimates, and their tendency to under-estimate the actual capital formation in Iraq. Nevertheless, we found it useful to make a comparison between his and our estimates, in order to single out the particular component under-estimated by Abu El-Haj. In making such a comparison, the estimates are broken down into three components, namely,

private building construction, public building construction, and other investment, as shown in Table IV-38 below.

TABLE IV-38

COMPARISON BETWEEN ABU EL-HAJ'S

AND OUR ESTIMATES OF GDFCF, 1957

(ID 000)

	HASHIM (1)	ABU EL-HAJ (2)	DIFFERENCE (2) - (1) (3)
1 Building Construction:			
a. Private	23060.2	6883.0	- 16177.2
b. Public	11903.6	4300.0	- 7603.6
Total 1 :	34963.8	10183.0	- 23780.8
2. Other investment	71326.3	72534.0	+ 1207.7
TOTAL GDFCF :-	106290.1	82717.0	- 23573.1

Sources: a) Figures in Col. 1 are derived from : Table IV-11 (for private buildings), Table IV-8 (for public buildings), and Table IV-5 (for "other", which represents total investment in "other construction and works", "machinery and other equipment" and "transport equipment").

b) Figures in Col 2 are derived from Appendix IX Table 12.

The table shows that Abu El-Haj under-estimated both private and public building construction by ID 16 m. and ID 8 m., respectively.

It is interesting to note at this point that Abu El-Haj's estimate of private building construction is not only lower than ours, but also substantially lower than Haseeb's figures given in Table IV-29 above.

In so far as "other investment" is concerned, Abu El-Haj's estimate is slightly higher than ours, which can be explained by the fact that it includes imports of parts and accessories of capital goods, while ours excludes such items.

$ C. RELIABILITY OF THE ESTIMATES

The discussion on the sources of data and the exposition of methods underlying the measurement of the GDFCF presented in Chapter III may have helped to shed light on the reliability of the figures.

However, the first question that should be answered is why we cannot assess the reliability of estimates like the present one with statistical measures of reliability. The broad answer is that statistical margins of error cannot be calculated unless the basic data is randomly selected for a scientifically designed sample, while in the present study, as well as all other studies in the field of national accounts, the constituent components are obtained from information which does not come from scientific samples,

but from several sources which sometimes are partial and incomplete.

The sampling errors, however, are not the major errors against which one has to guard in using the estimates. Non-sampling errors in the basic sources - such as undercoverage, overcoverage or faulty reporting - and errors in the estimating procedure or in the way of classifying and distributing the components which we have explained earlier, are much more significant than pure sampling errors in the evaluation of the reliability of the estimates, but these types of error cannot in general be quantified.

Nevertheless, the absence of precise mathematical measures of reliability is compensated in part by an alternative approach, which consists of a study of the definitions, the sources of data and the estimating approach by which the final figures were arrived at.

The description of the statistical sources will help in revealing the areas where the estimates are weak and where dubious estimating techniques had to be used in order to bridge the gaps left by inadequate data. The need to describe the estimating methods needs hardly be emphasized. It sheds light on the adjustments that are made to the basic data, and provides the users of the estimates with a feasible basis for judging the reliability of the figures and their consistency with the basic definition.[1)]

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1) Gilbert, Milton, "Statistical Sources and Methods in National Accounts,

An idea of the reliability of the present estimates could be formed through their comparison with other estimates and the evidence introduced in supporting the present estimates. It is also feasible, although far from conclusive, to make a general check on the estimates by comparing them with the National Income figures. Thus, it can be seen from Table IV-1 above that there is a remarkably stable relationship between the GDFCF and the GDP or GNP estimates.

However, from the knowledge we have formed of the basic data incorporated in this study, it is possible to assess the reliability of the present estimates in two ways. First, quantitatively by attaching a subjective margin of error to each component (i.e. type of asset) of the GDFCF and then combining these error margins together to derive the error in the global total. Second, qualitatively, by expressing the reliability of the classification of GDFCF by industry group in terms of whether the classification is "reliable" or "more reliable". These two methods of reliability assessment are described below.

Estimates and the Problem of Reliability", Income and Wealth, Series III, International Association of Research in Income and Wealth, (Bowes and Bowes, Cambridge, 1953) pp.1-18.

C.1. Reliability of the Estimates of GDFCF by Type of Asset and by Sector

For the reasons outlined above, it is not surprising to find that estimators in the field of national accounts have generally been reluctant to express the reliability of their estimates in quantitative terms. One of the methods they usually use is to classify the components constituting the aggregate into "reliability categories" without setting quantitative limits to these categories.[1] Though this procedure is useful in that it helps the users of the estimates to form an idea of the reliability of each component, it seldom gives the means of assessing the reliability of the aggregate components.[2]

In a detailed calculation of the reliability of the U.S. national income, Kuznets allocated the constituent items to error classes, but the methods he used appear to have resulted in over-stating the error margin in the global estimates.[3]

R. C. Desai, on the other hand, assessed the reliability of his estimates of consumer expenditure in India[4] by classifying the constituent

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1) Eire Government, National Income and Expenditure, 1938-1944, White Paper, No. 7356, (1946), p.23.
2) Chapman, A.L., and Knight, R., Wages and Salaries in the U.K. 1920-1938, (Cambridge University Press, 1953) p.230.
3) Kuznets, S., National Income and its Composition, 1919-1938, N.B.E.R., (New York, 1954) Chapter 12; also see Stone, R., Economic Journal, April 1943, pp.68-9.
4) Desai, R.C., "Consumer Expenditure in India, 1931/2 to 1940/1", J.R.S.S. Vol. CXI, Part IV, 1948, pp.271-273.

items into four "reliability categories", and then assigning to each category a value for the mean error per cent. The percentage error in the aggregate was then arrived at after making certain assumptions as to the coefficients of correlation between the errors in certain components.

In assessing the reliability of the present estimates in quantitative terms, we have broadly followed Desai's approach with some amendments. The estimates of all the components of GDFCF for the years 1957-1962, at current and at constant prices are classified into three reliability categories as follows :

A. Firm Estimates

B. Good Estimates

C. Fair Estimates.

In order to calculate the error margin in the aggregate figures of GDFCF[1)] quantitative limits were attached to each of the above categories as follows :

(i) If it is thought that there was a 95% chance of the error in a component being 5% or less, the component is put in Category A.

(ii) If it is thought that there was a 95% chance of the

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1) Note that throughout the calculation procedure we shall be using the GDFCF estimates given in Tables IV-5, 6, 8, 9, 11 and 12 above.

error in a component being more than 5% up to 10%, the component is put in category B.

(iii) Components with 95% chance of an error more than 10% up to 20% are put in category C.

Before putting each of the components of the GDFCF estimates into one of the three categories of reliability, it was considered that there is likely to be less bias in assigning the component estimates of public GFCF and private GFCF to reliability categories separately, than in choosing reliability categories for the aggregate public and private GFCF in each component. This is because public investment was estimated from sources independent of the sources used in estimating private investment. Table IV-39 shows the reliability categories into which each component of public and private GFCF is assigned throughout the period 1957-1962.

TABLE IV-39

RELIABILITY CATEGORIES OF THE COMPONENTS OF GDFCF

Type of Asset	Reliability Category	
	Public Sector	Private Sector
1. Buildings	A	B
2. Other Construction and Works	A	A
3. Machinery and Equipment	A	B
4. Furniture and Fixtures	B	C
5. Transport Equipment	B	B

The calculation procedure of the error margins is as follows:

(1) Since each of the above five components (and their sub-division between public and private sectors) of the GDFCF was, in general, estimated independently from the other, it was assumed, therefore, that there are no intercorrelations between the errors of the components constituting total public or private investment; or between the errors in the sub-division of a particular component to public and private sectors. In other words, the assumption here is that an error in public (private) investment in, say, buildings is independent of the error in public (private) investment in machinery or any other component; and an error in public investment in a certain type of asset is also independent of the error in private investment in that particular type of asset.

(2) To calculate the error in total public GFCF, the errors of all components were combined together by the square root formula, (i.e. by taking the square root of the sum of their squares), this gives the absolute margin of error, which, when related to total public GFCF, gives us the percentage error in the total.

The same procedure was applied in deriving the error in total private GFCF.

(3) The derivation of the error margins in each component of GDFCF was made on the same principle as in (2) above. Thus, for example, the absolute error in GFCF in "Buildings" is :

$$E_1 = \sqrt{X_1^2 a_1^2 + Y_1^2 a_2^2}$$

where X_1 = public investment in buildings

Y_1 = private investment in buildings

a_1 = percentage error in X_1

a_2 = percentage error in Y_1 .

When E_1 is related to total investment in buildings, the percentage error in the estimates of this particular type of asset is then arrived at. The calculation of error margins in the remaining components of GDFCF was made in a similar way.

(4) The calculation of the percentage error in the global estimates of GDFCF was made by combining the errors of all components derived in (3) above. The combination of these error margins was made in the same manner as in (2) above, i.e. by taking the square root of the sum of their squares, and then relating the result to total GDFCF. Thus, putting

E_1 = absolute error in GFCF in Buildings

E_2 = absolute error in GFCF in Other Construction and Works

E_3 = absolute error in GFCF in Machinery and Equipment

E_4 = absolute error in GFCF in Furniture and Fixtures

E_5 = absolute error in GFCF in Transport Equipment.

then : $E_t = \sqrt{\sum_{i=1}^{5} E_i^2}$ = absolute error in total GDFCF,

and $\frac{E_t}{T}$ = ratio error in GDFCF, where T = Total GDFCF.

Tables IV-40, 41 and 42 show the percentage errors calculated for GDFCF at current and at constant prices. The first table shows the error margins calculated for public GFCF, private GFCF and total GDFCF. Tables IV-41 and IV-42 show the error margins calculated for each type of asset constituting GDFCF.

It needs no emphasis that the error margins shown in these tables do not represent absolute certainty, and that they are subjective assessments.

TABLE IV-40

RELIABILITY OF GDFCF CLASSIFIED BY SECTOR, 1957-1962; AT CURRENT AND AT CONSTANT PRICES

(Percentage Errors)

Year	At Current Prices			At Constant (1957) Prices		
	Public	Private	TOTAL	Public	Private	TOTAL
1957	± 3.4	± 6.0	± 3.2	± 3.4	± 6.0	± 3.2
1958	± 3.5	± 5.7	± 3.2	± 3.5	± 5.8	± 3.2
1959	± 3.2	± 5.7	± 3.3	± 3.3	± 5.8	± 3.3
1960	± 3.5	± 4.6	± 3.0	± 3.5	± 4.7	± 3.1
1961	± 3.4	± 4.8	± 3.1	± 3.4	± 4.9	± 3.2
1962	± 3.3	± 5.7	± 3.3	± 3.3	± 5.8	± 3.4

TABLE IV - 41

RELIABILITY OF GDFCF CLASSIFIED BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(Percentage Error)

	Type of Asset	1957	1958	1959	1960	1961	1962
1	Buildings	± 6.8	± 7.0	± 7.4	± 7.1	± 7.0	± 6.9
2	Other Construction and Works	± 4.8	± 4.6	± 3.9	± 3.7	± 3.7	± 4.5
3	Machinery and Equipment	± 6.6	± 6.3	± 5.4	± 7.9	± 7.4	± 7.5
4	Furniture and Fixtures	± 15.2	± 15.7	± 15.0	± 14.5	± 15.3	± 16.0
5	Transport Equipment	± 8.5	± 8.2	± 7.2	± 8.3	± 8.8	± 8.4
6	TOTAL GDFCF :-	± 3.2	± 3.2	± 3.3	± 3.0	± 3.1	± 3.3

TABLE IV-42

RELIABILITY OF GDFCF CLASSIFIED BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(Percentage Error)

	Type of Asset	1957	1958	1959	1960	1961	1962
1	Buildings	± 6.8	± 7.0	± 7.4	± 7.1	± 7.0	± 6.9
2	Other Construction and Works	± 4.8	± 4.6	± 4.0	± 3.7	± 3.7	± 4.5
3	Machinery and Equipment	± 6.6	± 6.3	± 5.4	± 7.9	± 7.4	± 7.5
4	Furniture and Fixtures	± 15.2	± 15.8	± 15.0	± 14.4	± 15.3	± 16.0
5	Transport Equipment	± 8.5	± 8.2	± 7.2	± 8.3	± 8.8	± 8.4
	TOTAL GDFCF :-	± 3.2	± 3.2	± 3.3	± 3.1	± 3.2	± 3.4

C.2. Reliability of the Classification of GDFCF by Industry Group and by Sector

A qualitative assessment of the reliability of the classification of GDFCF by industry group is made by grading GFCF in each industry under one of two headings : "Reliable" or "More Reliable", depending on the methods employed to arrive at the investment estimates in each industry. Hence, when total or part of the investment in a particular industry was estimated by the expenditure approach, it is considered to be "more reliable" than if the investment was estimated by the commodity-flow approach or a combination of the expenditure and commodity-flow approaches. In this sense, all public investment in the various industries falls under the first heading, while private investment in some industries falls under the first heading, and in some other industries under the second heading, as shown in Table IV-43 below.

It is important to observe, however, that the error margins in total GFCF of all industries (i.e. GDFCF) or the aggregate of all industries GFCF in a particular type of asset remains the same as those shown in Tables IV-40 to IV-42 above.

Finally, if the above error margins are accepted, then the error in our estimates of public GFCF is unlikely to be more than 3.5% and hence the estimates fall within the first reliability category. Error in private GFCF on the other hand, is unlikely to be more than 6% and hence the

TABLE IV-43

RELIABILITY OF THE CLASSIFICATION OF GDFCF BY INDUSTRY GROUP AND SECTOR

Reliable	More Reliable
1. Private GFCF in Agriculture.	1. Public GFCF in all industry groups.
2. Private GFCF in Mining and Quarrying (other).	2. Private GFCF in Crude Oil Extraction, i.e. mining and quarrying, oil companies only.
3. Private GFCF in Manufacturing other than the sample.	3. Private GFCF in the sample of 155 manufacturing establishments.
4. Private GFCF in Construction	4. Private GFCF in Banking and Insurance
5. Private GFCF in Wholesale and Retail Trade	5. Private GFCF in Ownership of Dwellings
6. Private GFCF in Transportation, Storage and Communications.	
7. Private GFCF in Services.	

estimates fall in the second category of reliability. For total GDFCF the error is unlikely to be more than 3.5% which puts the estimates in the first reliability category.

However, it may be argued that the discrepancy between our estimates and those of other scholars (see Section B above) calls for higher error margins than we have calculated. This argument is counter-balanced by the fact that the discrepancy (especially between Haseeb's and our estimate of gross output of construction) was due to the inaccuracy of previous estimates, and that was due to differences in the methods of estimating urban construction on the one hand, and to basic differences in the treatment of certain types of construction, e.g., military construction. Furthermore, previous estimates, whether of gross output of construction or of GDFCF, constituted one of several components which the estimators were concerned with, and thus they could not have paid the same attention and made the same scrutiny of the basic data as we did in this study.

$ D. CONCLUDING REMARKS

It is evident from the description of the sources of data presented in Chapter III above and in succeeding chapters that in Iraq there exists a considerable amount of statistics with sufficient details to facilitate objective quantitative descriptions of the economy. Most of the data sources

used in this study were previously utilized by other scholars in the field of national accounts. The deficiencies of some of these sources and the weakness of many others are pointed out in various parts of this study as well as in the studies of Haseeb[1] and Kanaan.[2] Several recommendations were suggested by Haseeb to improve the publications of the Central Bureau of Statistics. Some of these recommendations were taken into account by the C.B.S. and various mistakes and obscurities were subsequently avoided in most of the publications. Furthermore, from 1959 onwards, the Iraqi Government has been taking the advice of outside specialists on the improvement of official statistics, especially in the fields of agriculture and industry, and on the co-ordination between the statistical departments in various ministries and the Central Bureau of Statistics.

In our remarks on the statistical sources, we do not intend to repeat what has already been said and recommended, but to make some suggestions which ought to be useful for future capital formation estimates.

1. Statistics of Building Permits

One outcome of our field work in Iraq during the summer of 1965 was the discovery that "Statistics of Building Permits" do not cover

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1) Haseeb, K., An Estimate of the National Income of Iraq, 1953-1956, Ph.D. dissertation, Cambridge University, 1959.

2) Kanaan, T.H., Input-Output and Social Accounts of Iraq 1960-1963, Ministry of Planning, Baghdad, September 1965.

public buildings, despite the law that no building activity could be carried out without the required permits. This fact, however, is also supported by Dr. Kanaan who investigated the returns of building permits in 1962 and 1963 and found that "with few insignificant exceptions, no licences were issued to public buildings, in spite of the fact that major public buildings were annually started under the Economic Plan and by various public bodies".[1)]

Moreover, if a comparison is made between the number of building permits for private construction given in the "Construction Survey" of 1961 and 1962 and the number of permits given in the "Statistics of Building Permits" for the same period one would find no significant differences; which means that the Central Bureau of Statistics implicitly admits that the "Statistics of Building Permits" cover those issued for private buildings only.

It is, therefore, recommended that the C.B.S. should indicate explicitly that the Statistics of Building Permits exclude public buildings. It would be more useful if a separate table were given in the Statistics of Building Permits showing the number of permits issued for public buildings, with the same detail as that given for private buildings, i.e. their costs, type and the province in which these buildings are to be erected. This procedure would help comparison between what is shown in this table and actual Government expenditure on these buildings shown in Government accounts.

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1) Kanaan, Ibid., Appendix 1015, pp.2-3.

2. The Construction Surveys

In the course of comparing our estimates with Kanaan's, it was pointed out that the "Construction Surveys" undertaken by the C.B.S. suffered from incomplete coverage. As an example of this under-coverage, the following table shows that during 1961 and 1962 the Construction Surveys' estimates of private construction failed to cover a substantial part of oil companies' construction. The figures shown in Column (1) are those given in the Construction Surveys, where it is claimed by the C.B.S. to represent the whole of oil companies' construction; while Column (2), which contains oil companies' actual expenditure on construction activity[1] during the two years in question, reveals that the C.B.S.' claim is not substantiated.

The Construction Surveys not only underestimate private construction, but also public construction as well. And it seems to us that despite the extensive upward adjustment of the construction surveys performed by Dr. Kanaan in his study, they nevertheless fail to cover the construction activity in the country as a whole.

It seems necessary, therefore, that the Central Bureau of Statistics should take these points into consideration and try to revise its

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1) Note: Figures of Col.(2) include, in addition to non-residential buildings and other construction and works, oil companies' expenditure on the construction of dwelling units which is shown in Table VI-2 in Chapter VI below.

previous surveys to avoid future deficiencies, which otherwise make its surveys completely unreliable.

TABLE IV-44

COMPARISON BETWEEN THE CONSTRUCTION SURVEYS' ESTIMATES AND OUR ESTIMATES OF OIL COMPANIES' EXPENDITURE ON CONSTRUCTION, 1961 - 1962

(ID000)

Year	Construction Survey (1)	Ours (2)	Difference (1) - (2) (3)
1961	1773.4	18718.4	- 16945.0
1962	870.0	4142.6	- 3272.6

3. The Monthly Industrial Surveys

The "Monthly Industrial Surveys" undertaken by the C.B.S. from 1960 onwards do not provide information on the gross investment of the establishments which they cover. It is, however, increasingly important that the C.B.S. should collect annual data on expenditure for fixed assets from all establishments already covered by its surveys, or from a sample of

establishments.

The collection of this type of information could be made by sending out a specially designed questionnaire to these establishments. The questionnaire might be sent out in December of each year, but the data required should cover the whole year. In fact, we believe that almost all the establishments can provide information on their capital investment more easily and accurately than the information on their production, inputs, sales, etc., because investment expenditure is not very frequent and is usually posted to one account, viz., the capital account, and the derivation of the figures from this account is in practice less tedious than the derivation of output and input figures from several accounts.

Recently, the C.B.S. made a successful attempt to estimate the capital formation of large manufacturing establishments during 1963/64. The questionnaire sent out to these establishments was designed so that detailed information could be obtained on each establishment's capital expenditure on new and used assets, sales of old assets, cost of installation, transport charges, and similar relevant information. If a similar questionnaire, or a simplified one were sent annually to all establishments employing ten or more persons, and to a sample of establishments with nine employees or less, we believe that the C.B.S. will be able to make annual estimates of the capital formation of a large segment of the economy.

4. The Agricultural Census:

Recently, the C.B.S. has started a semi-annual sample survey of agriculture. Information on various aspects of agriculture are collected by enumerators who visit all holdings in the selected areas and complete the questionnaire forms with the required information. The information collected, however, does not cover farmers' capital expenditure.

Since no direct information is available on capital formation in rural areas, it is of utmost importance that the C.B.S. should start collecting this information from the agricultural holdings covered by its present sample, or from a more intensive survey of a smaller sample of holdings to be undertaken each year. It is equally important that the sample should be a stratified one, because of differences in agricultural techniques and methods of irrigation between the northern region and the central and southern regions of Iraq.

5. Foreign Trade Statistics (F.T.S.)

Generally speaking, the F.T.S. are one of the most widely used and important of official statistics. In studies of commodity supplies, commodity flows, and commodity markets, the F.T.S. are indispensible. Another field where the F.T.S. provide useful information is the measurement of transport activity or of the load on the transport industry.

In part one of Chapter III we discussed in some detail the

nature of Iraq's foreign trade statistics and pointed out their weaknesses in many respects.

It is recommended here that the C.B.S. should correct its statement in the F.T.S. about the valuation basis of imports, which, in fact, is c.i.f. and not C. & F. as it is claimed in each foreign trade bulletin published by the C.B.S. Moreover, it is important that the C.B.S. should check the aggregates given in the bulletins before and after publication.

Finally, it is relevant to point out that the C.B.S. should make the shortest possible time-lag between collection of data from the primary sources and its publication. This is because the benefits of a well planned and directed programme for disseminating statistical information are that it will add utility to the statistics and in so doing foster and develop co-operation on the part of those supplying information.

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CHAPTER V

AGRICULTURE

§ 1. INTRODUCTION

In Iraq, no less than 1.8 million or about 70 % of the working population is directly engaged in agriculture. The present rural population is roughly 4.6 million, nearly all of which derive their means of subsistence wholly or mainly from land.

The contribution of Agriculture to the National Product (1953-1963) was, on average, 23 per cent. This contribution, which amounted to 33 per cent in 1953 started to decline until it reached a level of less than 17 per cent in 1963. This decline, however, is not due to more diversification of the economy, but to the stagnation of agriculture, as can be seen from Tables 5 and 7 in Appendix IX.

From the standpoint of foreign trade, Iraq's exports of principal agricultural products account for about 71 per cent of the country's total non-oil exports. In 1957 out of ID 13 million total exports[1] about ID 9 m. were agricultural products, and out of ID 19 m. total exports[1] in

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1) Excluding exports of Crude Oil.

1962 agricultural products contributed more than ID 16 m. The two chief agricultural products which constitute a large part of Iraq's exports are dates and barley whose percentage contribution to total exports of principal agricultural products amounted to just over 72 per cent in 1957, and over 80 per cent in 1962.

Water Availability and Irrigation Methods

Despite the abundance of water resources in Iraq, the inefficiency of its utilization causes the shortage of irrigation water at certain times of the year in certain parts of the country.

Shortage of water, particularly in summer is considered to be one of the major problems which the agricultural sector encounters, especially in the central and southern parts of the country.

Before the completion of the major flood-control projects, only 26.1 billion cubic metres of water (out of more than 56) could be utilized per annum, but with the completion of these projects another 13.7 billion cubic metres became available.[1)]

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1) 10.5 and 3.2 billion cubic metres on the Tigris and the Euphrates respectively as follows:

	Billion Cubic Metres
Dokan Dam	6.8
Derbendi-Khan	3.7
Habbaniya	3.2
Total:	13.7

In the matter of irrigation, Iraq may be divided into two regions:

a. The rainfed land (northern region). This region covers the mountainous areas of the north, the foothills and some plain areas lying at their base. Its boundaries coincide with the administrative units of Mosul, Sulaimaniya, Kirkuk and Arbil, with a total area of some 65,000 square kilometres. The main characteristic of this region is its high rainfall, which ranges between 300-600 mm. per year.

b. The irrigated land (central and southern region). This region embraces the remaining ten provinces of Iraq. Its rainfall is little (5 - 200 mm. per year) compared with the northern part of the country. Thus, pump-irrigation is the main method which is used here.

In general, the irrigation methods used by Iraqi farmers are, in fact, imposed on them as a result of the salinity of Iraq's soil. Thus, we may distinguish three main methods of irrigating the land:

(i) The Wild flood method.

(ii) The Paddy irrigation method.

(iii) The use of ocean tide method.

The first one is usually practiced where the land is not levelled and for the purpose of pushing salt out of the surface and the root zone.

This method, however, leaves the land in the end, in a worse condition, especially where there are no drains. The dangers of salination

become greater, but since farmers practice the fallow cultivation system they usually move to other land until natural forces and weeds have lowered the ground water table and dried the soil.

The second method involves the same practice as before with the exception that it is characterized by widely spaced furrows, essential for moving away part of the irrigation water from the roots of the plants. During this process certain evaporation takes place and salt is eventually deposited on the surface of a strip which is not reached by the irrigation water.

The third method of irrigation involves the use of ocean tide for irrigating the land in the Basrah area. But farmers in this area find it necessary, however, to use pumps so that they can practice surface irrigation.

Table V-1 shows the various methods of irrigation and the area irrigated by each method. It shows that less than 20% of the total area is irrigated by pumps, and more than 51% by rain. From this, it can be seen that agriculture in Iraq is dependent on weather conditions more than anything else.

Table V-2, on the other hand, shows the number of water pumps used for irrigation purposes.

TABLE V-1

METHODS OF IRRIGATION AND AREA IRRIGATED, 1958

Method of Irrigation	Area Irrigated (Meshara 000)	Percentage
Area Irrigated by Rainfall	15445.3	51.23
" " " " Flow	8662.0	28.74
" " " " Water Pumps	5795.4	19.23
" " " " Water Wheels	201.3	0.67
" " " " Na'oor*	28.3	0.09
" " " " Other means	13.3	0.04
TOTAL :	30145.6	100.00

* Na'oor is a Water Wheel driven by the water currents of rivers.

Sources: Agricultural and Livestock Census, 1958-1959, C.B.S., Ministry of Planning, Baghdad, 1961.

TABLE V-2

NUMBER OF WATER PUMPS USED FOR IRRIGATION PURPOSES IN IRAQ, 1956-1962

Year	Number of Water Pumps	Total Horse-Power	Average Horse-Power
1956	5264	200279	38.05
1957	5444	206260	37.88
1958	5650	213191	37.71
1959	5796	216910	37.48
1960	6129	224863	36.80
1961	6654	233154	35.04
1962	6982	239202	34.25

Remarks: 1. Pumps belonging to the District Water Board, and those left aside for a period of more than one year, and also pumps used for purposes other than irrigation, such as electricity, windmills, etc. are excluded from the figures appearing in the above table.

2. Pumps which receive water from artesian wells are excluded, from this table.

Sources: Primary data from : Annual Statistical Abstract, 1956, 1958, 1960, 1962; C.B.S., Ministry of Planning, Baghdad.

Agricultural Equipment and Technology

According to the various information given by the Directorate General of Agricultural Machinery there were some 3000 agricultural tractors in Iraq as at the end of 1956. Nearly 66 per cent of these tractors were in the rainfed zone of the northern part. In recent years, however, the irrigated zone has taken a much higher percentage of tractors imported. For example, out of 377 agricultural tractors sold during 1957, 159 were sold in the northern region (42%) and 218 were sold in the central and southern part (58%).

In 1962, 1096 agricultural tractors were sold; 50 per cent in the northern part and 50 per cent in the remaining part of the country.

The relatively large-scale use of tractors and other agricultural machinery and implements (except water pumps) is however recent and the Iraqi fellah generally uses indigenous implements of a limited range and type; but to discuss the types and nature of these traditional implements we should need to devote a large section of this chapter to that purpose. Instead, a few examples are given.

Ploughing, for instance, is usually done by using a wooden plough with an iron point and pulled by one draft animal, generally a horse or donkey. This is said to be of some advantage under saline conditions when continued farming depends on natural drainage and drying of the soil by weeds; but under conditions of intensive farming, fully reclaimed land, and deep-

rooted plants this method is unsatisfactory.

Harvesting, on the other hand, especially of wheat and barley, is done mostly with hand-sickles; moreover, it is not surprising to find that certain crops are being pulled up by the stalks.

Threshing is usually done by animals trampling on the sheaves and treading out grain.

These traditional methods are obviously too wasteful of time and labour and incompatible with modern intensive farming. The introduction of modern and efficient agricultural machinery and tools on a large scale is therefore necessary.

Table V-3 shows the number and type of agricultural machinery and implements sold in Iraq during 1957 - 1962.

TABLE V-3

NUMBER AND TYPE OF AGRICULTURAL MACHINERY AND IMPLEMENTS SOLD IN IRAQ, 1957 - 1962

	1957	1958	1959	1960	1961	1962
1. Tractors	377	254	129	422	743	1096
2. Ploughs	222	201	99	299	529	552
3. Cultivators	138	62	62	162	323	446
4. Combines	335	82	181	62	343	253
5. Other Agricultural Machinery	203	152	102	241	419	387

Sources: Annual Statistical Abstract, 1957, 1958, 1959, 1960, 1961, 1962; C.B.S., Ministry of Planning, Baghdad, 1959, 1960, 1961, 1962, and 1963, respectively.

§ 2. SOURCES AND METHODS OF ESTIMATION

Investment in the Agricultural Sector of Iraq is largely made by the Government, where an average annual amount of about ID 10 m. is spent on irrigation, drainage and flood control projects.

As it was pointed out at the outset of this study, this sector received priority in all the development plans that were prepared by the Development and Planning Board. Since 1951 until the end of 1962, Government allocations for the development of this sector amounted to ID 232.3 m., out of which ID 114.0 m. or about 50 per cent of the allocated amount was actually spent, as shown in Table I-2 above.

In the Government's latest "Five Year Economic Plan, 1965 - 1969[1)] a sum of ID 173.6 m. (about 26% of total allocation) is appropriated to this sector. It is claimed that this amount will help increase employment opportunities for some 145,000 persons during 1965-1969. It is also said that this amount, added to previous investment will raise the gross value added of agriculture by ID 48 m.

With regard to private investment, it can be seen from Tables V-4 and V-5 that its contribution is small compared with public investment,

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1) The Five-Year Economic Plan, 1965-1969; Law No. 87 of 1965, Ministry of Guidance, July 1965.

amounting to just over ID 3 m. per year, or about 20 per cent of the total investment in agriculture.

Generally speaking, private investment consists manily of agricultural machinery, such as tractors, harvesting and threshing machinery, ploughs and other implements, which are mainly imported. Accordingly, we have regarded imports of agricultural machinery and implements, less oil companies imports of such machines, less Government purchases, plus private non-residential farm buildings, and an estimated value of locally produced wooden ploughs and threshers, sickles and shovels as a reasonable measure of private investment in fixed assets in this sector.

A close look at Tables V-4 and V-5 below reveals that public investment amounted to about 80 per cent of total investment during 1957 - 1961, and 55 per cent in 1962. It also shows that total investment has declined by 40 per cent in 1962 compared with 1957, both at current and at constant prices. The cause of this drop was due mainly to a sudden decrease in public expenditure from the average annual expenditure of more than ID 10 m. to ID 6 m.

It is interesting to note that while public investment is showing a continuous decline over the period, where it reaches by the end of 1962 a level of only 43 per cent of the 1957 level as shown in Table V-6, private investment on the other hand, shows a rise of about 18 per cent at the end of 1962, compared with 1957 at constant prices, and 20 per cent at current

prices as shown in Table V-7. The table also shows that private investment dropped significantly in the years 1958, 1959 and 1960, which, to a large extent, was caused by the introduction of the Agrarian Reform Law and the political uncertainties during these years which weakened confidence in the private sector. It was only in 1961 and 1962 that the private sector's investment started regaining its 1957 level.

TABLE V-4

GFCF IN AGRICULTURE, 1957 - 1962

(at Current Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	14173.8	77.0	4230.1	23.0	18403.9	100.0	100.0
1958	13055.1	83.5	2573.9	16.5	15629.0	100.0	85.0
1959	10903.1	87.5	1554.2	12.5	12457.3	100.0	67.7
1960	10506.6	83.0	2136.7	17.0	12643.3	100.0	68.7
1961	10948.4	73.3	3975.3	26.7	14923.7	100.0	81.1
1962	6114.8	55.0	5069.0	45.0	11183.8	100.0	60.8

Sources: Tables V-10 and V-13 below.

TABLE V-5

GFCF IN AGRICULTURE, 1957 - 1962

(at Constant (1957) Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	14173.8	77.0	4230.1	23.0	18403.9	100.0	100.0
1958	14586.7	85.2	2528.9	14.8	17115.6	100.0	93.0
1959	11058.4	88.0	1507.7	12.0	12566.1	100.0	68.3
1960	10081.1	82.7	2104.5	17.3	12185.6	100.0	66.2
1961	10578.0	73.2	3873.0	26.8	14451.0	100.0	78.5
1962	6090.3	55.0	4978.6	45.0	11068.9	100.0	60.1

Sources: Tables V-12 and V-14 below.

TABLE V-6

PUBLIC GFCF IN AGRICULTURE, 1957 - 1962

Year	At Current Prices			At Constant (1957) Prices		
	Public GFCF in Agriculture ID 000	Increase over Preceding Year %	1957 = 100	Public GFCF in Agriculture ID 000	Increase over Preceding Year %	1957 = 100
1957	14173.8	-	100.0	14173.8	-	100.0
1958	13055.1	- 7.9	92.1	14586.7	+ 2.9	102.9
1959	10903.1	- 16.5	77.0	11058.4	- 24.2	78.0
1960	10506.6	- 3.6	74.1	10081.1	- 8.8	71.1
1961	10948.4	+ 4.2	77.2	10578.0	+ 4.9	74.6
1962	6114.8	- 44.1	43.1	6090.3	- 42.4	43.0

Sources: Tables V-10 and V-12 below.

TABLE V-7

PRIVATE GFCF IN AGRICULTURE, 1957 - 1962

Year	At Current Prices			At Constant (1957) Prices		
	Privato GFCF in Agriculture ID 000	Increase over Preceding Year %	1957 = 100	Private GFCF in Agriculture ID 000	Increase over Preceding Year %	1957 = 100
1957	4230.1	-	100.0	4230.1	-	100.0
1958	2573.9	- 39.2	60.8	2528.9	- 40.2	59.8
1959	1554.2	- 39.6	36.7	1507.7	- 40.4	35.6
1960	2136.7	+ 37.5	50.5	2104.5	+ 39.6	49.8
1961	3975.3	+ 86.0	94.0	3873.0	+ 84.0	91.6
1962	5069.0	+ 27.5	120.0	4978.6	+ 28.5	117.7

Sources: Tables V-13 and V-14 below.

TABLE V-8

CLASSIFICATION OF GFCF IN AGRICULTURE BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings	99.8	101.2	115.9	306.5	803.2	487.2
2 Other Construction and Works						
A) Flood Control, Irrigation and Drainage Schemes	13560.4	12178.2	9801.9	9870.7	8786.3	4816.5
B) Land Reclamation	544.4	829.3	742.8	263.9	360.9	323.9
C) Other	68.0	47.6	82.1	112.2	1038.6	594.4
Total 2 :	14172.8	13055.1	10626.8	10246.8	10185.8	5734.8
3 Machinery and Other Equip-						
(i) Imported	3371.3	1712.7	954.6	1305.0	3171.4	4201.8
(ii) Locally Produced	760.0	760.0	760.0	760.0	760.0	760.0
Total 3 :	4131.3	2472.7	1714.6	2065.0	3931.4	4961.8
4 Transport Equipment	-	-	-	25.0	3.3	-
TOTAL GFCF in Agriculture :	18403.9	15629.0	12457.3	12643.3	14923.7	11183.8

Sources: Tables V-10 and V-13 below.

2.1. Public GFCF

Public capital expenditure in this sector is derived from Government Accounts, the nature of which is fully discussed in Chapter III.

The Development Budgets are, by far, the main sources from which we derived the expenditure of the Government in this sector. Expenditure on drainage, afforestation and forests demarcation which are given in the Ordinary Budgets[1)] are also included in this sector.

Certain capital expenditures which are given in the Development Budgets as investment in Agriculture, were completely taken out of this sector and included elsewhere. For instance, the construction of Grain Silos is regarded in the Development Budgets as part of agricultural investment, while in our estimate it is included in the sector 'Transportation, Storage and Communications', since these silos are used for the storage of grain (mainly wheat and barley). Moreover, expenditure on the maintenance of artesian wells, machines, and all other expenditures of a current nature are excluded from our estimate. Hence, because of these adjustments, public investment in this sector shown in Table V-10, as well as in other tables, differs slightly from that given in Table I-2 above.

The detail in which the Development Budgets expenditure on

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1) See Appendix V, Table 2.

agricultural projects is given makes it possible to present Table V-10 below with more than 100 sub-classifications, but since we are interested only in the type of capital expenditure, our classification is confined to four main headings as follows:

1. Non-Residential Buildings (Table V-10, heading 1)

This heading represents Government expenditure on the construction of Tractor Hiring Stations, buildings for livestock-keeping and the like. The heading covers expenditure on the buildings proper but not the value of tractors and machinery or other equipment which does not constitute an integral part of the buildings.

2. Other Construction and Works (Table V-10, heading 2)

This heading is divided into three sub-headings because this is the most important channel in which more than 90 per cent of the Government's capital expenditure in agriculture is sunk. Sub-heading 2-A shows that out of more than ID 14 m. total public investment in agriculture in 1957, more than ID 13 m. (95.7%) was on flood control and irrigation projects. Though this amount declined over the following years, its relative importance remained very high. For instance, when Government capital expenditure dropped to ID 6 m. in 1962 about 5 million was on flood control, irrigation and drainage schemes. This does not mean, however, that in recent years the Government is paying less attention to this sector; it simply means that most of those schemes which started in early 1951 have now been completed,

and their full effect on increasing agricultural productivity has to be anticipated in the near future.

Expenditure on reclaiming agricultural land, reforestation and tree plantation (sub-heading 2-B), accounts for about 5 per cent of total Government investment in agriculture.

Item (2B-i) embraces expenditure on soil preparation and improvement, but it does not include expenditure on fertilisers because we believe that although fertilisers improve the productivity of land, they do not hold this improvement for a period long enough to justify their inclusion as capital expenditure.

Item (2B-ii), on the other hand, represents expenditure on forest demarcation and tree plantation.

Item (C-i), represents expenditure on aerial and general surveys of agricultural land. The inclusion of this type of expenditure in capital formation may raise some objections on the ground that it does not involve expenditure for durable structures. Due to the benefits of such surveys to Iraq as a first step toland settlement and improvement of agriculture, however, we believe that this type of expenditure should be considered as part of the country's capital formation if, and only if, such surveys of a particular area of land are made once and for all, or for a duration long enough to justify their cost as capital expenditure. But if these surveys are repeated every year for the same area, then the expenditure incurred should

surely be treated as current expenditure.

From the Development Budgets it is difficult to observe which area of land is and which is not surveyed every year, but since these surveys are unlikely to be carried out on a particular area of land more than once, we considered expenses incurred in the course of aerial and general surveys of agricultural land as direct capital expenditure connected with the improvement of the lands or with their acquisition by the farmers.

Item (C-ii) represents expenditure on the construction of five Government experimental farms. They are: the Cotton farm at Suwaira Qadha (District); Sugar beet farm at Eski-Kelek; Rain-fall grain farm, Rice farm, and the Medical Plantation farm at Abi-Ghraib.

3. Machinery and Other Equipment (Table V-10, heading 3)

This heading shows expenditure on agricultural machinery (mainly pumps and tractors); and although the Government acquired more agricultural machinery after the enforcement of the Land-Reform Law in 1959, we believe that originally they were machines at the disposal of private land owners which were later sequestrated by the Government. Table V-9 shows the number of agricultural machines owned by various Government agricultural departments pre-1958 and at the end of 1962.

Purchases by Municipalities, Local Administrations and other Government departments (the investment of which is classified in other sectors) of some agricultural machinery such as lawn mowers, pumps and the like are,

however, not included in this sector but in their relevant sectors.

TABLE V-9

NUMBER OF AGRICULTURAL MACHINES

OWNED BY THE GOVERNMENT

Type of Machine	Pre-1958	End of 1962
Pumps	-	616
Tractors	121	452
Combines	61	198
Ditchers	-	22
Bulldozers	-	26
Ploughs	-	332
Harrows	-	115
Cultivators	-	59
Threshing Machines	-	73
Other	-	30

Sources: Data supplied by the Ministry of Agrarian Reform to the writer.

4. Transport Equipment (Table V-10, heading 4)

This heading represents expenditure for the acquisition of motor vehicles used solely in agricultural activities (mainly for the Government experimental farms). It does not include transport equipment owned by the Ministries of Agriculture or Agrarian Reform which are included in the sector "Public Administration".

TABLE V-10

DETAILS OF PUBLIC GFCF IN AGRICULTURE, 1957 - 1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings	-	-	13.2	202.4	697.6	380.0
2 Other Construction and Works						
A. Flood Control, Irrigation and Drainage Schemes	13560.4	12178.2	9801.9	9870.7	8786.3	4816.5
B. Land Reclamation:						
(i) Agricultural Land	380.9	682.6	537.5	69.6	153.1	186.6
(ii) Reforestation and Tree Plantation	163.5	146.7	205.3	194.3	207.8	137.3
Total 2B :	544.4	829.3	742.8	263.9	360.9	323.9
C. Other:						
(i) Aerial and General Surveys of Agricultural Land	68.0	47.6	78.0	1.6	45.6	174.4
(ii) Government Experimental Farms	-	-	4.1	110.6	993.0	420.0
Total 2C :	68.0	47.6	82.1	112.2	1038.6	594.4
TOTAL 2 :	14172.8	13055.1	10626.8	10246.8	10185.8	5734.8

(Continued)

TABLE V-10 (continued)

3 Agricultural Machinery and Equipment	1.0	-	263.1	32.4	61.7	-
4 Transport Equipment	-	-	-	25.0	3.3	-
TOTAL PUBLIC GFCF in Agriculture :	14173.8	13055.1	10903.1	10506.6	10948.4	6114.8

TABLE V-11

PERCENTAGE CONTRIBUTION OF EACH TYPE OF ASSET TO TOTAL PUBLIC GFCF IN AGRICULTURE

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings:	-	-	0.1	1.9	6.4	6.2
2	Other Construction and Works						
	A. Flood Control, Irrigation and Drainage Schemes	95.7	93.3	90.0	94.0	80.2	78.8
	B. Land Reclamation	3.8	6.3	6.7	2.5	3.3	5.3
	C. Other	0.5	0.4	0.8	1.1	9.5	9.7
3	Agricultural Machinery and Equipment:	-	-	2.4	0.3	0.6	-
4	Transport Equipment:	-	-	-	0.2	-	-
5	TOTAL :	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Table V-10 above.

TABLE V-12

DETAILS OF PUBLIC GFCF IN AGRICULTURE, 1957 - 1962 AT CONSTANT (1957) PRICES

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings:	-	-	13.4	194.2	674.0	378.5
2	Other Construction and Works:						
	a. Flood Control, Irrigation and Drainage Schemes	13560.4	13606.9	9961.3	9472.8	8489.2	4797.2
	b. Land Reclamation	544.4	926.6	754.9	253.3	348.7	322.6
	c. Other	68.0	53.2	83.4	107.7	1003.5	592.0
	Total 2:	14172.8	14586.7	10799.6	9833.8	9841.4	5711.8
3	Agricultural Machinery and Implements:	1.0	-	245.4	31.6	59.7	-
4	Transport Equipment:	-	-	-	21.5	2.9	-
5	TOTAL Public GFCF in Agriculture :-	14173.8	14586.7	11058.4	10081.1	10578.0	6090.3

Sources: Figures of Table V-10 deflated by the Price Index Numbers shown in Chapter II.

2.2. Private GFCF

Private investment, as we indicated earlier, consists of expenditure on the construction of non-residential farm buildings and purchases of agricultural machinery and implements.

To arrive at total private investment in agriculture, two methods of estimation were applied, namely the expenditure approach and the commodity-flow approach. The expenditure approach, which is confined to the estimation of non-residential farm buildings and to locally produced agricultural implements, is used in an indirect way because of the lack of data on farmers' expenditure.[1)]

The commodity-flow method is used to estimate expenditure on imported agricultural machinery and implements. From Iraq's "Foreign Trade Statistics" we obtained particulars of annual imports of such machines and implements which are solely or mainly used for agricultural purposes.[2)] Their c.i.f. values were then adjusted to bring the figures to market prices in the manner described in Chapter III above.

Table III-21 above shows the control total of imported agricultural machinery and equipment attributed to this sector. The table, however,

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1) The estimation of non-residential farm buildings is fully described in Chapter XIII below where we deal with investment in rural dwellings.
2) See Appendix II Table 3.

does not distinguish between those purchased by the Government and those bought privately. To make such a distinction, Government expenditure on agricultural machinery (shown in Table V-10) is deducted in toto from total imports shown in Table III-21 and total private investment in imported agricultural machinery is thus arrived at.

No information is available regarding the value or quantity of domestically made agricultural implements. With a view to obtaining information on the annual expenditure which farmers incur on such implements and the average life of these implements, we sent a simple questionnaire to the CBS and three people of knowledge on agricultural techniques in Iraq. The questionnaire contained questions on the following points :

1. Types of domestically made agricultural tools and implements.
2. Average cost of each type.
3. Average economic life of each type.
4. Number and type of each of these implements purchased by farmers per year for each agricultural holding with an area of about 130 meshara.

In reply to our enquiry, the CBS listed seven types of domestically-made agricultural implements, with their average lives ranging from 3 - 8 years. The CBS also indicated that each agricultural holding of an average area of 127 meshara requires three of each type of implement with a total cost amounting to some ID 22 if all are bought at once. But since the

lifetime of these implements varies, it is unlikely that each agricultural holding would buy them all, and the CBS suggested that a sum of ID 6 would be reasonable for the annual expenditure.

However, in comparing the information provided by the CBS with the information provided by one of the three persons to whom we sent the same questionnairre, and in order to allow for the annual scrapping of short-lived implements it was thought prudent to take only ID 3 as the annual expenditure on domestically-made agricultural implements necessary for each agricultural holding.

The total number of agricultural holdings in Iraq was obtained from the "Agricultural Census of 1958/1959". The Census gives this total to be 253,254 with an average area of 127 meshara per holding. Multiplying this total by the average annual expenditure per holding as suggested above, the total expenditure on locally-produced agricultural implements was thus arrived at. This total was assumed to be the same throughout the period of the study.

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TABLE V-13

DETAILS OF PRIVATE GFCF IN AGRICULTURE, 1957 - 1962 AT CURRENT PRICES

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings[1]:	99.8	101.2	102.7	104.1	105.6	107.2
2 Agricultural Machinery and Equipment :						
(i) Imported[2]	3370.3	1712.7	691.5	1272.6	3109.7	4201.8
(ii) Locally Produced	760.0	760.0	760.0	760.0	760.0	760.0
Total 2 :	4130.3	2472.7	1451.5	2032.6	3869.7	4961.8
TOTAL Private GFCF in Agriculture at Current Prices :-	4230.1	2573.9	1554.2	2136.7	3975.3	5069.0

1) See Chapter XIII Table XIII-13.

2) Excluding public investment in this type of asset.

TABLE V-14

DETAILS OF PRIVATE GFCF IN AGRICULTURE, 1957 - 1962 AT CONSTANT (1957) PRICES *

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings:	99.8	101.2	102.7	104.1	105.6	107.2
2	Agricultural Machinery and Equipment:						
	(i) Imported	3370.3	1667.7	645.0	1240.4	3007.4	4111.4
	(ii) Locally Produced	760.0	760.0	760.0	760.0	760.0	760.0
	Total 2:	4130.3	2427.7	1405.0	2000.4	3767.4	4871.4
3	TOTAL Private GFCF in Agriculture at Constant (1957) Prices :-	4230.1	2528.9	1507.7	2104.5	3873.0	4978.6

* 1) Non-Residential buildings (item 1) is not deflated because the cost of construction is assumed to have remained constant throughout the period;
2) Locally produced agricultural implements (item 2(ii)) is also not deflated because a fixed amount of money is taken to represent the expenditure on these implements throughout the period.

CHAPTER VI

MINING AND QUARRYING

This sector, according to the International Standard Industrial Classification of all Economic Activities (I.S.I.C.) should embrace the following activities (Group 110-199) :

1. Coal Mining
2. Metal Mining
3. Crude Petroleum and Natural Gas
4. Stone Quarrying, Clay and Sand Pits
5. Other non-metallic mining and quarrying, such as salt, gypsum, asbestos, sulphur.

In Iraq, where neither coal nor metal mining exists the relevant activities in this sector can be confined to the following :

1. Crude Oil Extraction (C.O.E.)
2. Stone Quarrying, Clay and Sand Pits
3. Non-metallic mining and quarrying n.e.c. (salt).

For the purpose of estimating Fixed Capital Formation the activities of this sector are divided into two parts :

A. Crude Oil Extraction (Oil Companies); and

B. Other Mining and Quarrying

because we think that any further sub-division is unnecessary, especially when the C.O.E. alone contributes by more than 99% to the total value added in this sector, as can be seen from Table VI-1 below.

TABLE VI-1

GROSS VALUE ADDED IN MINING AND QUARRYING, 1957 - 1962

(at Current Factor Cost)

(ID 000)

Year	C.O.E.*	Other Mining and Quarrying	TOTAL	(1):(3) %	(2):(3) %
	(1)	(2)	(3)	(4)	(5)
1957	113024.0	1735.0	114759.0	98.5	1.5
1958	175355.0	1846.0	177201.0	99.0	1.0
1959	189916.0	1813.0	191729.0	99.0	1.0
1960	207989.0	1916.0	209905.0	99.1	0.9
1961	208956.0	2398.0	211354.0	98.9	1.1
1962	210153.0	1860.0	212013.0	99.1	0.9

* Excluding the value added of K.O.C.

Sources: Haseeb, K., The National Income of Iraq, 1953-1961, (R.I.I.A., Oxford University Press, 1964); also The National Income of Iraq, 1962-1963, The Central Bank of Iraq, Mimeographed, May 1964.

Moreover, capital formation in C.O.E. is confined to the three foreign oil companies, IPC, MPC, and BPC, while the capital formation of the KOC., if any, is included in the manufacturing sector with Government Oil Refineries, for the following reasons :

1. During1957 and 1958, the KOC did not make any capital expenditure which could be considered as part of the capital formation in this sector.

2. In 1959, the concession of the KOC was terminated, and the Company was bought by the Iraqi Government in order to produce crude oil for Alwand refinery. From that year it is not possible to segregate the Government capital expenditure in KOC from that in Oil Refineries, and hence, any capital expenditure in KOC will implicitly be included in the capital expenditure of Oil Refineries.[1)]

Although it is recommended in the I.S.I.C. that the independent services of transporting crude oil, refined oil, and natural gas should be classified in Group 719 (Transport n.e.c.), it is not possible to do so in the case of oil companies operating in Iraq due to the nature of their accounts which do not separate pipe-lines from oil fields because the operation of the

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1) It is worth indicating that the contribution of the KOC to the value added of this sector is very small (about ID 77 thousand). See Haseeb, K., The National Income of Iraq 1953-1961, (R.I.I.A., Oxford University Press, London, 1964) p.83 Table 47.

former is not independent of crude oil extraction. Hence, capital formation in C.O.E. includes that part which is made on the construction of pipe lines.

Finally, it is worth indicating here that from the viewpoint of capital formation, the public sector has not yet made any real expenditure which involves the creation of physical assets in this sector. Expenditure by the Development and Planning Board on geological and metallurgical surveys (amounting to an annual average of ID 50,000) are regarded as development expenditures not directly associated with the acquisition or construction of physical capital assets, and hence they are excluded from GDFCF.[1)]

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1) U.N. Statistical Office, Studies in Methods, Series F. No. 3; Concepts and Definitions of Capital Formation, (New York 1953) Para. 38 p.11 and para. 50, p.12.

A. CAPITAL FORMATION IN C.O.E. (Oil Companies)

$ 1. INTRODUCTION

The exploitation of Iraq's oil resources is granted in concession to the Iraq Petroleum Company (IPC) and its associated companies, Mosul Petroleum Company (MPC) and Basrah Petroleum Company(BPC). All these companies are registered abroad.[1] The ownership of the IPC and its affiliates is shared between British, Dutch, French and American interests as follows :

British Petroleum	23.75%
Royal Dutch-Shell Group	23.75%
Compagnie Francaise des Petroles	23.75%
Near East Development Corporation (Joint Jersey Standard and Sacony Mobil)	23.75%
Participations and Explorations Corpn. (C.S. Gulbenkian Estate)	5%

1) Note that although this foreign registry, from the viewpoint of National Income, raises some conceptual problems in respect of the treatment of value added by oil companies to the domestic product, these problems are avoided here since GDFCF is measured according to the country of location, irrespective of the nationality of owners. See: U.N. Statistical Office, A System of National Accounts and Supporting Tables, Series F. No. 2, Rev. 2. (New York, 1964) p.7.

Exports of IPC's crude oil, which accounts for about 80% of total crude oil exports, is carried by a system of pipe-lines to the Mediterranean. Two 12" lines and two 16" lines runn parallel from K1 pumping station in Kirkuk to K3 at Haditha, through K2 at Baiji. At K3, one of the 12" lines and one of the 16" lines (the northern lines) proceed to the Tripoli terminal in Lebanon. The other two lines, which originally carried oil to Haifa, were unused after the Palestine War in 1948. In 1952, however, the northern lines were supplemented by a 30"/32"/26" line to Banias port in Syria.

In August 1961, a new 30/32" line was completed to carry oil from Kirkuk oil fields to both Mediterranean terminals, Tripoli and Banias. The annual throughput potential of this line is 35 m. long tons, but the reconstruction of pump installations in 1961 has increased its potential capacity to 48 m. long tons.

The MPC's oil is mainly piped to join the IPC lines at K2, but part of the crude oil is used to supply the Government bitumen refinery at Qaiyarah.

The BPC's crude oil comes mainly from its Rumaila oil fields (75%) and from the fields at Zubair (25%). Pipelines connect these fields with an oil-loading terminal at Fao, south of Basrah on the Shat-al-Arab, from where the oil is carried by tankers to the export markets.

In April 1962, a programme designed to increase the BPC's annual export capacity from 12 to 22 m. long tons was completed. It included

expansion at Fao, with a pumping station, new wells on Rumaila and de-gassing facilities, new feeder lines from Rumaila to Zubair, a 30/32" pipe line from Zubair to Fao, and two 32", 40-Km pipelines (34 Km. under sea) from Fao to a new deep-water terminal at Khor-al-Amaya, with capacity for two 65,000 ton tankers.[1)]

Profits realized from the operation of these companies in Iraq are shared between the Companies and the Iraqi Government on the 50/50 sharing arrangement introduced in the agreement which was signed in February 1952, with retroactive effect to 1st January 1951.[2)]

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1) 'Middle East Oil and The Arabian Peninsula', Quarterly Econ. Rev. Annual Supplement. The Economist Intelligence Unit, December 1964, p.12.

2) The term "Profits resulting from the operation of the Companies in Iraq" is defined in Paragraph (a) of Article (I) of the Agreement to mean :
(i) in relation to the export by the companies of crude oil from Iraq the difference between the Iraq border value per ton of such oil and the actual costs or fixed cost per ton as the case may be (ascertained in each case in a manner provided for in Article 9 of this Agreement) multiplied by the number of tons of oil so exported; and,
(ii) in relation to other operations of the companies in Iraq, the profits ascertained in a manner to be agreed between the Government and the Companies.
Article I of the Agreement, however, defines the "Posted Prices" of Iraqi oil as being the "prices (expressed in shillings per ton) f.o.b. seaboard terminal for Iraqi crude oil of the gravity and quality concerned arrived at by reference to free market prices for individual commercial sales of full cargoes and in accordance with the procedure to be agreed between the Government and the Companies or if there is no free market for commercial sales of full cargoes of Iraqi crude oil then posted prices shall mean fair prices fixed by agreement between the Government and the Companies or in default of agreement by arbitration".
"Actual Cost" means "the aggregate costs determined by sound and consistent accounting methods fairly and properly attributed to the operations

After the Revolution of 1958, however, the Government started prolonged negotiations with the Oil Companies, demanding 20 per cent participation in the Companies and a revision of the 50/50 profit-sharing formula to one more favourable to the Government. In addition, the Government challenged other points concerning the Companies' operation in Iraq, such as the methods by which costs and profits are calculated; the method of fixing selling prices; the progress of Iraqization of the Companies' posts, etc.[1] In 1961, the negotiations were terminated without accord being reached. The Government then, on December 11, 1961, promulgated Law No. 80 by which the Companies' area of operations was restricted to some 740 square miles, which constituted only 0.5 per cent of their concession areas.

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of the companies in Iraq in respect of: (i) operating expenses and overheads and; (ii) depreciation of all physical assets in Iraq at the rate of ten per centum per annum and; (iii) amortization of all other capital expenditure in Iraq at the rate of five per centum per annum until such assets and expenditure are fully written off".
Paragraph B(V) of Article 9 of the Agreement states that the Companies' actual costs shall be taken to be 13 shillings per ton as from 1953 (this figure is called the "Fixed Cost"). It also states that if the actual costs for any year as and when determined are found to differ from the fixed cost by more than 10%, the actual costs shall be applied, and if any such application is required, the figure so ascertained shall be treated as the fixed cost.

1) The Revolution Government and Oil Negotiations, Popular Culture, Series 27. Prepared by the Ministry of Oil and Published by the Directorate of Arts and Popular Culture, Ministry of Guidance, Baghdad (undated).

$ 2. SOURCES AND METHODS OF ESTIMATION

Capital Formation by the three Oil Companies, IPC, MPC, and BPC, is estimated from the expenditure side. Details of the Companies' annual capital expenditure on various types of fixed assets were obtained from their Head Office in London. For each of the three companies operating in Iraq, two sets of accounts are available, one set shows the annual capital expenditure on building construction, pipelines and fixed plant. The other set of accounts relates to the companies' expenditure on machinery and equipment, furniture and transport equipment. In the second set, full details are given on the various types of machinery and equipment used by the companies in their operation, e.g. drilling machines, testing machines, derricks, power and power transmission, etc. Transport equipment, likewise, is classified according to type, e.g. saloons, lorries, vans, ambulances, floating units, and so forth. Expenditure on furniture and fixtures, like the above two components, is given in enough details that the segregation of expenditure on office furniture from that on household furniture is not diff difficult.[1)]

In estimating the companies' capital formation, only expen-

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1) Expenditure on household furniture is excluded from the Companies' capital formation and regarded as current expenditure.

diture on fixed assets is taken into consideration. Expenditure made by the companies' prior to the extraction of crude oil, even though they may be capitalized in their accounts, are regarded as development expenditure on exploration and research, and except in so far as they involve outlays on physical equipment and structure, are excluded from the estimate of capital formation.

To comply with the U.N. recommendations, the companies' expenditure on the erection of dwelling units for their staff members, shown in Table VI-2 below, is not included in this sector, but in the sector "Ownership of Dwellings".[1)]

TABLE VI-2

OIL COMPANIES' EXPENDITURE ON THE CONSTRUCTION OF DWELLING UNITS, 1957 - 1962

(ID 000)

Company	1957	1958	1959	1960	1961	1962
1. I.P.C.	121.0	64.0	6.6	132.4	5.0	21.7
2. M.P.C.	11.8	37.2	19.4	3.5	30.5	-
3. B.P.C.	223.5	160.2	119.8	200.0	65.4	48.6
TOTAL :	356.3	261.4	145.8	335.9	100.9	70.3

Sources: Oil Companies' accounts

1) The United Nations' Statistical Office recommends that "dwellings bought or built by enterprises for their own employees should be classified under the industry Ownership of Dwellings." See: U.N.S.O., Studies in Methods, Series F, No. 2, Rev. 2, A System of National Accounts and Supporting Tables, (New York 1964) Para. 175, p.29.

The estimation procedure for each type of asset is described below :

2.1. Non-Residential Buildings (item 1 Table VI-7)

Expenditure on this item is directly derived from the Companies' accounts. It covers expenditure on the construction of new and additions and major alterations to three types of non-residential buildings as shown in the following table :

TABLE VI-3

OIL COMPANIES' EXPENDITURE ON THE CONSTRUCTION OF NON-RESIDENTIAL BUILDINGS, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1. Office Buildings	22.3	53.2	90.2	133.8	166.9	100.9
2. Industrial Buildings	63.2	140.2	171.9	91.9	18.8	24.4
3. Welfare Buildings	51.2	88.3	104.8	57.1	49.7	32.6
TOTAL :	136.7	281.7	366.9	282.8	235.4	157.9

Sources: Oil Companies' Accounts.

The third category of the above table covers all buildings not elsewhere classified, such as hospitals, libraries, clubs and social centres, cinemas and the like.

2.2. Other Construction and Works (item 2 Table VI-7)

This item is divided into three sub-items. The figures are all derived from the companies' accounts. Sub-item 2(i) represents expenditure on sewage disposal plants, cold storage plants, terminal structure, piping plants and similar installations. As is explained in paragraph 2.3 below, the figure is adjusted to exclude the value of machines incorporated in these plants.

Sub-item 2(ii) includes expenditure on roads, air strips, swimming pools, railway sidings and the like.

Sub-item 2(iii) includes all types of construction not elsewhere classified, such as communications systems, tentage and prefabricated metal buildings.

2.3. Machinery and Other Equipment (item 3 Table VI-7)

Machinery and Equipment (sub-item 3(i)):

Expenditure on new "machinery and equipment" given in the companies' accounts, is substantially lower than the c.i.f. value of machinery and equipment imported by the companies during 1957-1962. In dis-

cussing this point with officials and engineers at the IPC's office in London, we were told that this difference is mainly due to the fact that certain machines and equipment are embodied in their "Fixed Plant" (sub-item 2(i)) and considered an integral part of the plant. To bring the companies' expenditure on "Machinery and Equipment", as shown in their accounts, to the total value of imported machinery and equipment without actually affecting their total capital expenditure during the period 1957-1962, the following adjustments are made :

a. Since the Oil Companies do not pay duties on their imports of capital goods, the c.i.f. value of their imports of machinery and equipment (shown in Appendix II Table 13) is marked-up by 10% only, in order to account for transport charges, installation fees and other costs directly connected with the acquisition of these machines. The 10% marking-up is made on the advice of the Companies' engineers and accountants.

b. The difference between the imported machinery and equipment, adjusted as in (a) above, and the Companies' expenditure on this type of capital goods as derived from their accounts, is then deducted from capital expenditure on "Fixed Plant", also as given in the Companies' accounts. This adjustment does not affect the Companies' total Capital Formation, but investment in "Fixed Plant" shown in our estimate is lower than the Companies' estimate by an

amount equal to the difference between their imported machinery and equipment and their expenditure on this item shown in their accounts. This difference, however, makes our estimates of "Machinery and Equipment" higher, by the same amount, than those given in the Companies' accounts. Table VI-4 shows the procedure of calculation.

Furniture and Fixtures (sub-item 3(ii))

Expenditure on "Furniture and Fixtures" is derived from the companies' accounts. The item includes expenditure on office furniture and appliances, typewriters, air coolers and air conditioners, filing cabinets, medical and dental furniture and all other types of furniture listed in Appendix III. Expenditure on furniture and fixtures for the companies' dwelling units is excluded.

2.4. Transport Equipment (tem 4 Table VI-7)

Expenditure on "Transport Equipment" is also derived from the Companies' accounts. Like "Machinery and Equipment", expenditure on this item as shown in the companies' accounts is lower than the c.i.f. value of the companies' imports of transport equipment shown in Appendix IV, Table 5. In enquiring from the IPC's office in London about the reason for this difference, it was pointed out that the difference might be due to the selling of some of these vehicles in Iraq, or because of their use for private

TABLE VI-4

ADJUSTMENT OF GFCF IN "MACHINERY AND EQUIPMENT" AND "FIXED PLANT" IN OIL COMPANIES

(ID 000)

		1957	1958	1959	1960	1961	1962
1	c.i.f. value of Imported Machinery and Equipment*	2098.2	1458.7	2363.9	2930.1	3071.7	492.3
2	+ 10% Mark-up	209.8	145.9	236.4	293.0	307.3	49.2
3	Total Machinery and Equipment imported by the Oil Companies :	2308.0	1604.6	2600.3	3223.1	3379.0	541.5
4	Less Expenditure on Machinery and Equipment identified from the Companies' accounts	707.7	737.5	1602.9	1304.6	401.7	109.8
5	= Machinery and Equipment incorporated in the Companies' Fixed Plant :	1600.3	867.1	997.4	1918.5	2977.3	431.7
6	Investment in "Fixed Plant" as identified from the Companies' accounts :	2914.8	3794.2	11600.6	20400.6	21264.6	4183.3
7	(6 - 5) = Investment in Fixed Plant excluding the value of Machinery and Equipment :	1314.5	2927.1	10603.2	18482.1	18287.3	3751.6

* For details on types of machinery and equipment imported by the Companies, see Appendix II Table 13.

purposes by the companies' personnel. For these two reasons, the companies' accounts then show the value of transport equipment which is actually capitalized. Hence, for our purpose of estimating the companies' capital formation, we considered as capital expenditure the figures given by the oil companies. The difference between the import statistics and the companies' accounts is regarded as consumers durable within the companies and thus no account is taken of it.

The following table shows the companies purchases of different types of transport equipment as derived from their accounts.

TABLE VI-5

OIL COMPANIES' PURCHASES OF TRANSPORT EQUIPMENT, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Saloon Cars	32.0	35.1	41.5	5.6	-	1.7
2	Station-wagons, Vans and Pick-ups	98.6	43.0	142.5	53.6	101.3	-
3	Buses	19.4	5.6	8.7	59.1	49.4	-
4	Ambulances	9.5	1.7	6.7	3.4	5.0	-
5	Rail-road Equipment	-	55.4	-	-	-	-
6	Fire Fighting Engines	1.4	6.6	13.0	2.8	2.6	8.9
7	Tractors, Cranes and other Transport Vehicles	382.0	269.0	247.5	353.0	245.1	57.8
8	Marine Equipment and Tankage	22.3	11.7	5.5	-	21.1	-
9	Floating Units	8.0	5.9	11.4	13.4	5.1	0.1
	TOTAL :	573.2	434.0	476.8	490.9	429.6	68.5

Sources: Oil Companies' accounts.

$ 3. RELIABILITY OF THE COMPANIES' ACCOUNTS

As to the reliability of the companies' accounts for the present purpose of estimating capital formation, it depends on whether the relevant components of capital formation are taken according to the companies' classification of what is a capital good and what is not, or according to the estimator's. If the companies' classification is considered, then there will be a definite underestimation in the results, because oil companies charge to their current operating accounts expenditure on items the values of which are relatively small, though their expected life may exceed two or more years. If, on the other hand, the classification is made according to the estimator's definitions of capital expenditure, then there is no possibility of such an underestimation, especially when the accounts are in as much detail as those provided to us. In fact, they can be considered as enjoying a very high level of reliability compared with the accounts of other private enterprises operating in other sectors of the economy.

$ 4. SUMMARY OF THE RESULTS

Results of our estimate of GFCF in Oil Companies are given in Tables VI-6, 7, 8 and 9 below. Some useful ratios relating GFCF to Gross Value Added and to Gross Profit originating in Oil Companies are shown in

Table VI-10.

Table VI-6 shows that in real terms Oil Companies' investment in 1957, 1958 and 1962 amounted to an annual average of about ID 5 m.; while during 1959, 1960 and 1961, this annual average was as high as ID 20 m.

A close look at the Table reveals that GFCF in 1959 was more than three times as much as in the initial year (1957), while in 1960 and 1961 it was about five times the level of 1957. In the terminal year (1962) investment became almost similar to that of the initial year, dropping by about 80 per cent from the 1961 level.

The rise in the companies' GFCF during 1959-1961 is due to a ID 100 m. expansion programme designed to increase Iraq's oil export capacity to 70 million tons per year. Part of this programme was completed towards the end of 1962. The sudden drop in the figures of 1962, however, is mainly due to the promulgation of Law No. 80, referred to earlier, which represented a drastic challenge to the oil companies' position and to the stability of their concession agreement in the Middle East.[1)]

Tables VI-7 and VI-8 give the classification of GFCF by type of asset, at current and at constant (1957) prices. The latter table also shows the relative contribution of each type of asset to total GFCF. It can

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1) IBRD, Current Economic Position and Prospects of Iraq, Report No. AS-100a, September 30, 1963, p.28.

be seen that about 70 per cent of the companies' capital expenditure is made on construction like pipelines, fixed plant and similar installations described earlier. "Machinery and other Equipment" ranks second in the companies' capital expenditure with an average annual contribution of 24 per cent. "Transport Equipment", which ranks third during the first five years, with an average annual contribution ranging between 12 and 2 per cent, dropped to fourth place in the terminal year with a percentage contribution of only 1.3. Expenditure on "Non-residential Buildings", which showed an increasing trend during 1957-1961, remained at the fourth place throughout the period, but jumped to the third place in 1962 despite its drop in absolute terms.

Looking at Table VI-9, we observe that of the three companies, IPC, MPC, and BPC, the first and third have contributed, on average, by 50 and 45 per cent respectively to total GFCF in Crude Oil Extraction. The MPC contribution, however, which amounted to about 10 per cent in 1957, declined to only 0.2 per cent in 1962, yielding an annual average of about 5 per cent.

Since the IPC and the MPC fields of operation are in the Kirkuk and Mosul Provinces (northern Iraq), while that of the BPC is in Basrah Province (southern Iraq), we may infer that 55 per cent of the oil companies' GFCF is made in the northern region of Iraq, and 45 per cent is in the southern region.

Finally, a glance at Table VI-10 shows that the ratios of

GFCF to GVA (Col. 5), to Gross Profit (Col. 6) are almost identical, amounting to 11% in 1960 and 1961 and dropping to a little over 2% in 1962. If we take the 50 per cent share of the Iraqi Government out of the Gross Profit, the ratio of GFCF to Gross Profit doubles, but remains, on average, as low as 13%.

TABLE VI-6

GFCF IN C.O.E. (Oil Companies), 1957 - 1962

Year	At Current Prices			At Constant (1957) Prices		
	ID 000	1957 = 100	Increase over Preceding Year %	ID 000	1957 = 100	Increase over Preceding Year %
1957	4665.1	100.0	-	4665.1	100.0	-
1958	5565.6	119.3	19.3	5907.3	126.6	26.6
1959	14848.1	318.3	166.8	14826.1	317.8	151.0
1960	22814.0	489.0	53.6	21901.8	469.5	47.7
1961	22477.7	482.0	- 1.4	21689.8	465.0	- 1.0
1962	4710.5	101.0	- 79.0	4677.2	100.3	- 78.4

Sources: Tables VI-7 and VI-8 below.

TABLE VI-7

CLASSIFICATION OF GFCF IN C.O.E. (Oil Companies) BY TYPE OF ASSET, 1957-1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	136.7	281.7	366.9	282.8	235.4	157.9
2	Other Construction and Works						
	(i) Fixed Plant	1314.5	2927.1	10603.2	18482.1	18287.3	3751.6
	(ii) Field Works	86.9	65.1	257.4	160.9	77.8	133.9
	(iii) Other	123.7	82.4	313.0	99.7	17.0	28.9
	Total 2 :	1525.1	3074.6	11173.6	18742.7	18382.1	3914.4
3	Machinery and Other Equipment						
	(i) Machinery and Equipment	2308.0	1604.6	2600.3	3223.1	3379.0	541.5
	(ii) Furniture and Fixtures	122.1	170.7	230.5	74.5	51.6	28.2
	Total 3 :	2430.1	1775.3	2830.8	3297.6	3430.6	569.7
4	Transport Equipment	573.2	434.0	476.8	490.9	429.6	68.5
	TOTAL GFCF in C.O.E.	4665.1	5565.6	14848.1	22814.0	22477.7	4710.5

TABLE VI-8

CLASSIFICATION OF GFCF IN C.O.E. (Oil Companies) BY TYPE OF ASSET, 1957-1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	136.7	314.7	372.9	271.4	227.4	157.3
2	Other Construction and Works	1525.1	3435.3	11355.3	17987.2	17760.5	3898.8
3	Machinery and Other Equipment						
	(i) Machinery and Equipment	2308.0	1562.4	2425.7	3141.4	3267.9	529.8
	(ii) Furniture and Fixtures	122.1	176.0	251.4	80.1	59.5	33.4
	Total 3 :	2430.1	1738.4	2677.1	3221.5	3327.4	563.2
4	Transport Equipment	573.2	418.9	420.8	421.7	374.5	57.9
5	TOTAL GFCF in C.O.E. :	4665.1	5907.3	14826.1	21901.8	21689.8	4677.2
	1 as % of 5	3.0	5.3	2.5	1.2	1.0	3.4
	2 as % of 5	32.7	58.2	76.6	82.2	82.0	83.3
	3 as % of 5	52.0	29.4	18.1	14.7	15.3	12.0
	4 as % of 5	12.3	7.1	2.8	1.9	1.7	1.3
	Total :	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Figures of Table VI-7 above deflated by the Price Index numbers given in Chapter II.

TABLE VI-9

CLASSIFICATION OF GFCF IN C.O.E. ACCORDING TO COMPANIES, 1957 - 1962

(at Current Prices)

Year	I.P.C.		M.P.C.		B.P.C.		TOTAL	
	ID 000	%	ID 000	%	ID 000	%	ID 000	%
1957	2519.6	54.0	428.9	9.2	1716.6	36.8	4665.1	100.0
1958	3333.0	60.0	449.9	8.0	1782.7	32.0	5565.6	100.0
1959	5543.3	37.3	482.6	3.3	8822.2	59.4	14848.1	100.0
1960	12400.6	54.3	185.1	0.9	10228.3	44.8	22814.0	100.0
1961	9632.6	42.9	168.9	0.7	12676.2	56.4	22477.7	100.0
1962	2730.7	58.0	11.9	0.2	1967.9	41.8	4710.5	100.0

TABLE VI-10

ALTERNATIVE INVESTMENT RATIOS FOR THE OIL COMPANIES

Year	GFCF in C.O.E. ID 000	GVA in C.O.E. ID 000	Gross Profit* in C.O.E. ID 000	Wages & Salaries Paid in Iraq by C.O.E. ID 000	(1):(2) %	(1):(3) %	(3):(2) %	(4):(2) %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1957	4665.1	113024.0	107252.0	5772.0	4.1	4.3	95.0	5.0
1958	5565.6	175355.0	169124.0	6231.0	3.2	3.3	96.4	3.6
1959	14848.1	189916.0	182040.0	7876.0	7.8	8.2	95.8	4.2
1960	22814.0	207989.0	198926.0	9063.0	11.0	11.5	95.6	4.4
1961	22477.7	208956.0	200123.0	8833.0	10.8	11.2	95.8	4.2
1962	4710.5	210153.0	201440.0	8713.0	2.2	2.3	95.8	4.2

* Including Interest paid in Iraq, and before the payment of the Government's 50% share of the profit.

Note: Figures of investment, value added, profit, etc. are all expressed in current prices.

B. CAPITAL FORMATION IN OTHER MINING AND QUARRYING

Mining and Quarrying, other than Crude Oil Extraction, is carried out by small indigenous establishments. No information on their capital expenditure could be ascertained, and thus a direct estimate of their capital formation is almost an impossibility.

Nonetheless, to make an estimate of GFCF in these establishments we applied an indirect method of assigning certain proportions of annual investment in urban non-residential building to this sector. As with the general method described in Chapter III, this proportion is determined by using the weighted percentage contribution of "Mining and Quarrying (other than Oil)" to the GDP in each year. (See Table III-25 above.) On the same principle a proportion of total supply of "Furniture and Fixtures" is allocated to this sector (see Table III-26).

Investment in "Machinery and Equipment" is arrived at by using the commodity-flow method in assigning to this sector machinery and implements which are wholly or mainly used for mining and quarrying activities. On the basis of information collected from the Ministry of Industry,[1)]

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1) The Ministry of Industry, through its Directorate General of Industrial Design and Construction, is the authoritative body which grants licences for mining and quarrying activities in Iraq.

we allocated three types of imported machines and tools to this sector (see Table III-21). Details on these machines are given in Appendix II (Table 4).

The estimation of investment in "Transport Equipment" is also made on the same lines as for the above three components of GFCF (see Table III-23). Details on transport equipment attributed to this sector are given in Appendix IV.

The results of the estimate of GFCF in this part of the sector are shown in Tables VI-11 and VI-12 below.

GFCF estimates in the Mining and Quarrying sector as a whole are shown in Tables VI-13 and VI-14 below.

TABLE VI-11

GFCF IN "MINING AND QUARRYING (OTHER THAN C.O.E.)", 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	57.3	56.0	75.8	28.0	65.0	61.0
2	Other Construction and Works	-	-	-	-	-	-
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	199.4	217.3	129.8	215.2	254.1	150.9
	(ii) Furniture and Fixtures	11.2	13.6	14.5	14.0	14.0	14.5
	Total 3 :	210.6	230.9	144.3	229.2	268.1	165.4
4	Transport Equipment	17.9	17.9	11.8	22.0	25.7	26.6
	TOTAL GFCF in Mining and Quarrying (other than C.O.E.) :	285.8	304.8	231.9	279.2	358.8	253.0

TABLE VI-12

GFCF IN "MINING AND QUARRYING (OTHER THAN C.O.E.)", 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	57.3	62.6	77.0	26.9	62.8	60.7
2	Other Construction and Works	-	-	-	-	--	-
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	199.4	211.6	121.1	209.7	245.7	147.6
	(ii) Furniture and Fixtures	11.2	14.0	15.8	15.0	16.2	17.2
	Total 3 :	210.6	225.6	136.9	224.7	261.9	164.8
4	Transport Equipment	17.9	17.3	10.4	18.9	22.4	22.5
	TOTAL GFCF in Mining and Quarrying (other than C.O.E.) :	285.8	305.5	224.3	270.5	347.1	248.0

Sources: Figures of Table VI-11 deflated by the Price Indices given in Chapter II.

TABLE VI-13

CLASSIFICATION OF GFCF IN MINING AND QUARRYING BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	194.0	337.7	442.7	310.8	300.4	218.9
2	Other Construction and Works	1525.1	3074.6	11173.6	18742.7	18382.1	3914.4
3	Machinery and Other Equipment :						
	(i) Machinery and Equipment	2507.4	1821.9	2730.1	3438.3	3633.1	692.4
	(ii) Furniture and Fixtures	133.3	184.3	245.0	88.5	65.6	42.7
	Total 3 :	2640.7	2006.2	2975.1	3526.8	3698.7	735.1
4	Transport Equipment	591.1	451.9	488.6	512.9	455.3	95.1
	TOTAL GFCF in Mining and Quarrying :	4950.9	5870.4	15080.0	23093.2	22836.5	4963.5

Sources: Table VI-7 and VI-11 above.

TABLE VI-14

CLASSIFICATION OF GFCF IN MINING AND QUARRYING BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	194.0	377.3	449.9	298.3	290.2	218.0
2	Other Construction and Works	1525.1	3435.3	11355.3	17987.2	17760.5	3898.8
3	Machinery and Other Equipment :						
	(i) Machinery and Equipment	2507.4	1774.0	2546.8	3351.1	3513.6	677.4
	(ii) Furniture and Fixtures	133.3	190.0	267.2	95.1	75.7	50.6
	Total 3 :	2640.7	1964.0	2814.0	3446.2	3589.3	728.0
4	Transport Equipment	591.1	436.2	431.2	440.6	396.9	80.4
	TOTAL GFCF in Mining and Quarrying :	4950.9	6212.8	15050.4	22172.3	22036.9	4925.2

Sources: Tables VI-8 and VI-12 above.

CHAPTER VII

MANUFACTURING

§ 1. DEFINITION

The definition of the manufacturing sector is, in general, similar to that laid down in the I.S.I.C. as including establishments with activities falling within groups 201-399.[1] But for statistical convenience the United Nations' definition is amended to further include the following activities :

a. Oil products distribution (filling stations), which is under the control of GORA.

b. Natural gas distribution, which is also under the control of GORA.

c. Pipe-lines operated by the GORA for the transport of crude oil or gas.

This industry group, however, does not cover the workshops of the Railways Administration, Baghdad Public Transport (Bus) Services and that

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1) U.N. Statistical Office, Statistical Papers, Series M, No. 4, Rev. 1, (New York, 1958) pp.7-14.

of the Post Office. This is because of the difficulties involved in separating the capital expenditure on the workshops of these enterprises from their capital expenditure in general. Hence, these workshops are included in the industry group "Transportation, Storage and Communications" to which the above enterprises belong.

The results of the estimates of GFCF in this industry group are shown in Tables VII-1 to VII-14. The figures are distributed between the public and the private sectors; and within the former, they are divided between "Oil Refining" and "other Government manufacturing establishments".

Tables VII-1 and VII-2 show that public investment in manufacturing accounted for more than 58 per cent of the total during the period 1957-1962.[1] It also shows that GFCF declined continuously between the initial year and 1961, but rose in 1962 by 66 per cent from the 1961 level, and by 23 per cent from the 1957 level. The decline, however, was in the public sector where investment after the 1958 revolution dropped continuously until 1962 when the level became similar to that of the initial year 1957.

The interesting point here is that while the public sector's contribution to the value added of the manufacturing sector is only about 15 per cent (see Appendix IX Table 10), its capital formation is even higher

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1) Excluding the year 1960 in which public investment dropped to just over 12 per cent.

than that of the private sector.

From Table VII-6 it can be observed that public GFCF in manufacturing, other than oil refining, was on average 85 per cent of total public GFCF. It reflects public expenditure on manufacturing projects drawn up in the various development plans, and mainly financed from the development budgets.

Table VII-4 shows that of total GFCF, machinery and equipment accounted, on average, for more than 57 per cent, non-residential buildings and other construction and works accounted for about 21 per cent and 18 per cent, respectively. Transport equipment, on the other hand, registered the lowest contribution, only 4 per cent.

TABLE VII-1

GFCF IN MANUFACTURING, 1957 - 1962

(at Current Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	10895.1	65.0	5851.7	35.0	16746.8	100.0	100
1958	7809.3	57.6	5747.3	42.4	13556.6	100.0	81
1959	8655.4	76.5	2656.0	23.5	11311.4	100.0	68
1960	1120.1	12.4	7919.8	87.6	9039.9	100.0	54
1961	5869.1	45.8	6945.1	54.2	12814.2	100.0	77
1962	10199.7	48.8	10688.7	51.2	20888.4	100.0	125

Sources: Tables VII-5 and VII-13 below.

TABLE VII-2

GFCF IN MANUFACTURING, 1957 - 1962

(at Constant (1957) Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	10895.1	65.0	5851.7	35.0	16746.8	100.0	100
1958	8184.0	58.5	5797.0	41.5	13981.0	100.0	83
1959	8449.4	76.4	2614.3	23.6	11063.7	100.0	66
1960	1076.4	12.3	7662.2	87.7	8738.6	100.0	52
1961	5668.7	45.8	6716.7	54.2	12385.4	100.0	74
1962	10070.3	49.0	10495.7	51.0	20566.0	100.0	123

Sources: Tables VII-6 and VII-14 below.

TABLE VII-3

CLASSIFICATION OF GFCF IN MANUFACTURING BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	4670.1	2829.8	2505.2	1109.5	2648.1	3673.5
2	Other Construction and Works	1370.7	2528.9	3205.9	740.3	2061.4	5015.3
3	Machinery and Other Equipment :						
	(i) Machinery and Equipment	9984.8	7577.6	4991.1	6063.1	6863.3	10837.4
	(ii) Furniture and Fixtures	345.0	252.6	318.4	397.2	409.5	459.8
	Total 3 :	10329.8	7830.2	5309.5	6460.3	7272.8	11297.2
4	Transport Equipment	376.2	367.7	290.8	729.8	831.9	902.4
	TOTAL GFCF in Manufacturing at Current Prices :	16746.8	13556.6	11311.4	9039.9	12814.2	20888.4

Sources: Tables VII-5 and VII-13 below.

TABLE VII-4

CLASSIFICATION OF GFCF IN MANUFACTURING BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	4670.1	3161.8	2546.0	1064.8	2558.5	3658.9
2	Other Construction and Works	1370.7	2825.6	3257.9	710.4	1991.8	4995.3
3	Machinery and Other Equipment :						
	(i) Machinery and Equipment	9984.8	7378.4	4655.9	5909.4	6637.6	10604.0
	(ii) Furniture and Fixtures	345.0	260.3	347.2	427.1	472.2	545.6
	Total 3 :	10329.8	7638.7	5003.1	6336.5	7109.8	11149.6
4	Transport Equipment	376.2	354.9	256.7	626.9	725.3	762.2
5	TOTAL GFCF in Manufacturing at Constant Prices :	16746.8	13981.0	11063.7	8738.6	12385.4	20566.0
	1 as % of 5	27.9	22.6	23.0	12.2	20.7	17.8
	2 as % of 5	8.2	20.2	29.4	8.1	16.1	24.3
	3 as % of 5	61.7	54.6	45.2	72.5	57.4	54.2
	4 as % of 5	2.2	2.6	2.4	7.2	5.8	3.7
	Total :	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Tables VII-6 and VII-14 below.

$ 2. SOURCES AND METHODS OF ESTIMATION

The estimation of GFCF in this industry group is made from the expenditure side for the public sector, and by the commodity-flow approach for the private sector. The GFCF of a sample of 155 private manufacturing establishments is estimated from the expenditure side.

It is worth indicating that expenditure figures derived from the balance sheets of public or private manufacturing establishments represent gross additions to the stock of each type of fixed asset. In fact, almost every balance sheet is arranged so that it shows the original cost of the asset, the annual additions to it, its accumulated depreciation, and its net book value. Moreover, each set of final accounts is usually supplemented by a table showing new additions to each type of asset. This is particularly the case of all public manufacturing establishments, and nearly all the private establishments covered by the sample.

2.1. Public GFCF

Public GFCF in manufacturing refers to the capital expenditure of those establishments carrying out manufacturing activities and owned and controlled, in one way or another, by the Government. The investment of private manufacturing enterprises in the capital of which the Industrial Bank has a share are not included here but retained in the private sector.

The capital expenditure of public manufacturing establishments was derived either from their balance sheets or from their detailed capital expenditure statements. In almost all cases the two sets of information were used as a check against each other, but the breakdown of the figures was based on the capital expenditure statements. This is because in some balance sheets, buildings and other types of construction were given under one heading, while in the capital expenditure statements they were shown separately.

(i) Oil Refining (Table VII-7)

In the case of "Oil Refineries", little use could be made of their balance sheets for the classification of assets by type, and hence the GFCF estimate was entirely based upon the capital expenditure accounts, which was obtained directly from the GORA.[1)]

The capital expenditure of Oil Product Distribution Services, and that of the Gas Distribution Bureau were derived from their balance sheets.

(ii) Other Manufacturing Establishments (Table VII-8)

The capital expenditure of these establishments was derived from two sources : the final accounts (including capital expenditure statements)

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1) These accounts were obtained from the GORA through a questionnaire specially prepared to meet our requirement. The total capital expenditure inserted in the questionnaire was then checked against the total derived from their balance sheets. The two were identical.

of these establishments, and the Development and Ordinary Budgets. The second source, however, was used only in the case of establishments whose final accounts could not be ascertained, and for industrial projects which could not be identified with a particular establishment. Thus, for example, the expenditure shown in the Development Budgets on Government cement plants in Sarchinar and Mosul, and the Mosul Textile plant were discarded because the final accounts of these establishments were ascertained, with more details than those given in the Development Budgets. In the case of Government Dairy Products Plant, the final accounts were discarded and the Development Budgets were used, because the former source was in a very disorganized and condensed form, while the latter contained more details.

Capital expenditures of the Government owned press and bakery (Al-I'asha) were the only figures which were derived from the Ordinary Budget (see Appendix V, Table 3).

Table VII-9 shows the GFCF in those manufacturing establishments whose final accounts were relied upon; while Table VII-10 shows the capital expenditure on manufacturing projects derived from the Development Budgets. The aggregate of these two tables and Table 3 of Appendix V is shown in Table VII-8 below.

TABLE VII-5

CLASSIFICATION OF PUBLIC GFCF IN MANUFACTURING BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Oil Refining	255.6	119.8	138.6	93.2	67.0	98.0
b. Other Manufacturing	3630.5	2000.0	1254.3	480.3	1338.9	2366.0
Total 1 :	3886.1	2119.8	1392.9	573.5	1405.9	2464.0
2 Other Construction and Works						
a. Oil Refining	47.6	7.7	2001.1	9.0	77.8	112.1
b. Other manufacturing	936.1	1909.6	1122.1	149.2	1609.6	4161.7
Total 2 :	983.7	1917.3	3123.2	158.2	1687.4	4273.8
3 Machinery and Other Equipment						
(i) Machinery and Equipment						
a. Oil Refining	1013.3	257.3	2031.3	59.8	1392.0	37.7
b. Other Manufacturing	4627.4	3290.4	1887.7	259.7	1235.6	3077.4
Sub-Total 3(i):	5640.7	3547.7	3919.0	319.5	2627.6	3115.1
(ii) Furniture and Fixtures						
a. Oil Refining	97.0	4.4	5.8	2.6	8.8	13.7
b. Other Manufacturing	52.0	30.2	40.5	14.1	25.7	39.5
Sub-Total 3(ii):	149.0	34.6	46.3	16.7	34.5	53.2
Total 3 :	5789.7	3582.3	3965.3	336.2	2662.1	3168.3

(Continued)

TABLE VII-5 (continued)

4 Transport Equipment						
a. Oil Refining	190.2	178.4	-	14.8	11.9	204.8
b. Other Manufacturing	45.4	11.5	174.0	37.4	101.8	88.8
Total 4 :	235.6	189.9	174.0	52.2	113.7	293.6
5 TOTAL PUBLIC GFCF in Manufacturing:						
a. Oil Refining	1603.7	567.6	4176.8	179.4	1557.5	466.3
b. Other Manufacturing	9291.4	7241.7	4478.6	940.7	4311.6	9733.4
Grand Total :	10895.1	7809.3	8655.4	1120.1	5869.1	10199.7
1 as % of 5	35.7	27.1	16.0	51.2	24.0	24.1
2 as % of 5	9.0	24.5	36.0	14.1	28.7	42.0
3 as % of 5	53.1	46.0	46.0	30.0	45.4	31.0
4 as % of 5	2.2	2.4	2.0	4.7	1.9	2.9
Total :	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Tables VII-7 and VII-8 below.

TABLE VII-6

CLASSIFICATION OF PUBLIC GFCF IN MANUFACTURING BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Oil Refining	255.6	133.9	140.9	89.4	64.7	97.6
b. Other Manufacturing	3630.5	2234.6	1274.7	461.0	1293.6	2356.6
Total 1 :	3886.1	2368.5	1415.6	550.4	1358.3	2454.2
2 Other Construction and Works						
a. Oil Refining	47.6	8.6	2033.6	8.6	75.2	111.7
b. Other Manufacturing	936.1	2133.6	1140.3	143.2	1555.2	4145.1
Total 2 :	983.7	2142.2	3173.9	151.8	1630.4	4256.8
3 Machinery and Other Equipment						
(i) Machinery and Equipment						
a. Oil Refining	1013.3	250.5	1894.9	58.3	1346.2	36.9
b. Other Manufacturing	4627.4	3203.9	1760.9	253.1	1195.0	3011.1
Sub-Total 3(i) :	5640.7	3454.4	3655.8	311.4	2541.2	3048.0
(ii) Furniture and Fixtures						
a. Oil Refining	97.0	4.5	6.3	2.8	10.1	16.4
b. Other Manufacturing	52.0	31.1	44.2	15.2	29.6	46.9
Sub-Total 3(ii):	149.0	35.6	50.5	18.0	39.7	63.3
Total 3 :	5789.7	3490.0	3706.3	329.4	2580.9	3111.3

(Continued)

TABLE VII-6 (continued)

4	Transport Equipment					
	a. Oil Refining	190.2	172.2	-	12.7	10.4	173.0
	b. Other Manufacturing	45.4	11.1	153.6	32.1	88.7	75.0
	Total 4 :	235.6	183.3	153.6	44.8	99.1	248.0
5	TOTAL PUBLIC GFCF in Manufacturing:						
	a. Oil Refining	1603.7	569.7	4075.7	171.8	1506.6	435.6
	b. Other Manufacturing	9291.4	7614.3	4373.7	904.6	4162.1	9634.7
6	GRAND TOTAL :	10895.1	8184.0	8449.4	1076.4	5668.7	10070.3
	(5 a.) as % of (6)	14.7	7.0	48.3	16.0	26.6	4.3
	(5 b.) as % of (6)	85.3	93.0	51.7	84.0	73.4	95.7
	Total :	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Figures of Table VII-5 above deflated by the Price Index Numbers referred to in Chapter II.

TABLE VII-7

CLASSIFICATION OF GFCF IN OIL REFINING BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	255.6	119.8	138.6	93.2	67.0	98.0
2	Other Construction and Works*	47.6	7.7	2001.1	9.0	77.8	112.1
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	1013.3	257.3	2031.3	59.8	1392.0	37.7
	(ii) Furniture and Fixtures	97.0	4.4	5.8	2.6	8.8	13.7
	Total 3 :	1110.3	261.7	2037.1	62.4	1400.8	51.7
4	Transport Equipment	190.2	178.4	-	14.8	11.9	204.8
	TOTAL GFCF in Oil Refining :	1603.7	567.6	4176.8	179.4	1557.5	466.3

* This item also includes Development Board's expenditures of (ID 000) 8.8, 7.7, 1.1, 65.5, and 112.1 in 1957, 1958, 1959, 1961 and 1962, respectively.

Note: The term "Oil Refining" includes Government Refineries, Oil Product Distribution Services, and the Gas Distribution Bureau.

Sources: 1. For Oil Refineries: detailed capital expenditure supplied to the writer by GORA, Letter No. 3051/8658, 29th April 1965.
2. For Oil Product Distribution Services and the Gas Distribution Bureau: Final accounts and capital expenditure statements supplied to the writer by GORA, Letter No. 4477/12381, 2nd June 1965.

TABLE VII-8

GFCF IN GOVERNMENT MANUFACTURING ESTABLISHMENTS (Other than Oil Refining), 1957-1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	3630.5	2000.0	1254.3	480.3	1338.9	2366.0
2	Other Construction and Works	936.1	1909.6	1122.1	149.2	1609.6	4161.7
3	Machinery and Other Equipment						
	(i) Machinery and Equipment	4627.4	3290.4	1887.7	259.7	1235.6	3077.4
	(ii) Furniture and Fixtures	52.0	30.2	40.5	14.1	25.7	39.5
	Total 3:	4679.4	3320.6	1928.2	273.8	1261.3	3116.9
4	Transport Equipment	45.4	11.5	174.0	37.4	101.8	88.8
	TOTAL 1 - 4 :	9291.4	7241.7	4478.6	940.7	4311.6	9733.4

Sources: Table VII-9 and VII-10 below, and Table 3 of Appendix V.

TABLE VII-9

CAPITAL EXPENDITURE DERIVED FROM THE FINAL ACCOUNTS OF GOVERNMENT MANUFACTURING ESTABLISHMENTS* (other than Oil Refining), 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	3121.8	464.3	539.2	144.0	299.1	402.5
2	Other Construction and Works	676.1	1109.6	760.0	77.7	156.9	255.0
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	3765.0	1679.8	1190.3	221.1	310.1	482.7
	(ii) Furniture and Fixtures	46.1	13.7	33.2	13.4	16.2	14.0
	Total 3 :	3811.1	1693.5	1223.5	234.5	326.3	496.7
4	Transport Equipment	45.4	11.5	174.0	37.4	79.8	56.8
	TOTAL :	7654.4	3278.9	2696.7	493.6	862.1	1211.0

* Excluding Development Budget's capital expenditure.

Sources: Final Accounts of all Government Manufacturing Establishments.

TABLE VII-10

DEVELOPMENT BOARD'S CAPITAL EXPENDITURE IN MANUFACTURING (excluding Oil Refining and Establishments whose accounts were relied upon), 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	508.7	1535.7	715.1	336.3	1039.8	1963.5
2	Other Construction and Works	260.0	800.0	362.1	71.5	1452.7	3906.7
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	514.8	1584.0	671.2	-	881.0	2527.0
	(ii) Furniture and Fixtures	5.2	16.0	6.8	-	9.0	25.0
	Total 3 :	520.0	1600.0	678.0	-	890.0	2552.0
4	Transport Equipment	-	-	-	-	22.0	32.0
	TOTAL 1 - 4 :	1288.7	3935.7	1755.2	407.8	3404.5	8454.2

Sources: Appendix V Table 8.

2.2. Private GFCF

Total private GFCF in manufacturing is estimated by the commodity-flow approach, or what we may call the allocation method. Within this total, however, the GFCF of a sample of 155 establishments was estimated from the expenditure side by using their final accounts (see Table VII-11). The sample contains mainly establishments which are either stock companies or companies with limited liabilities. From the manufacturing accounts of these establishments we also calculated their gross output, input, and gross value added (broken down by factor incomes) for the years 1957 and 1962 as shown in Table VII-12.

Since no material information was available on private investment in manufacturing construction (i.e. other construction and works), the sample provided useful information in this respect. The estimation procedure is described below :

1. Non-Residential Buildings (Table VII-13 item 1):

This item is estimated in the manner described in Section B of Chapter III above (see Table III-25).

2. Other Construction and Works (Table VII-13 item 2):

This item may be considered as "own account construction" of manufacturing establishments. Its magnitude, for the sample was derived from the balance sheets of the establishments covered by the sample. For

the rest of the sector, it was estimated as 10 per cent of investment in machinery and equipment, i.e., 10% of item 3(i)b.[1)]

3. Machinery and Equipment (Table VII-13 item 3(i)):

This item represents the difference between the control total of machinery and equipment allocated to this sector (see Table III-21) and public investment in this type of asset (see Table VII-5, item 3(i)).

4. Furniture and Fixtures (Table VII-13 item 3(ii)):

This item is estimated in the manner described in Section B of Chapter III (see Table III-26).

5. Transport Equipment (Table VII-13 item 4):

The calculation of private investment in this item is similar to that of machinery and equipment. From the control total of transport equipment attributed to this sector (see Table III-23 paragraph b) public investment (shown in Table VII-5 item 4) is deducted and the residual is private GFCF in transport equipment.

* * * * *

1) The 10 per cent is based on the information derived from the sample referred to earlier. It represents the simple average of the ratios of item 2a to item 3(i)a of Table VII-13.

TABLE VII-11

GFCF IN A SAMPLE OF 155 PRIVATE MANUFACTURING ESTABLISHMENTS, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	732.7	481.7	225.4	232.4	560.2	759.5
2	Other Construction and Works	272.4	297.4	40.7	102.1	87.8	146.5
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	3198.6	887.5	655.7	942.6	1373.0	1773.9
	(ii) Furniture and Fixtures	90.5	59.5	40.6	59.6	73.9	90.1
	Total 3 :	3289.1	947.0	696.1	1002.2	1446.9	1864.0
4	Transport Equipment	96.0	82.0	46.1	121.3	154.3	168.0
	TOTAL :	4390.2	1808.1	1008.5	1458.0	2249.2	2938.0

Sources: Final Accounts of 155 Private manufacturing establishments.

TABLE VII-12

OUTPUT, INPUT, AND GROSS VALUE ADDED OF 155 PRIVATE MANUFACTURING ESTABLISHMENTS

(A) 1957 at Current Factor Cost

(ID 000)

	I.S.I.C. Classification (group)	G.O.	Inputs	GVA	Wages and Salaries	Rent	Profit	Depreciations
1 Food, Beverage, Tobacco and Chemicals and Chemical Products Industries (57 Establishments)	203, 205, 206, 209, 211, 213, 214, 220, 311, 312.	13660.0	10217.3	3442.7	1284.2	48.0	1563.5	547.0
2 Textile Manufacturing Industries (21 Establishments)	231, 232, 233, 239.	3028.0	1664.2	1363.8	780.0	18.1	369.0	196.7
3 Footwear, Leather and Leather Tanning Industries (9 Establishments)	241, 291, 293, 300.	1520.0	1021.0	499.0	359.0	10.0	66.0	64.0
4 Furniture and Fixtures Industries (22 Establishments)	260	809.0	548.0	261.0	145.0	7.5	74.0	34.5
5 Printing, Publishing and Allied Industries (20 Establishments)	280	1875.0	1199.0	676.0	198.0	25.0	408.0	45.0
6 Non-Metallic Mineral Products Industries, except Products of Petroleum and Coal (26 Establishments)	331, 332, 334.	5506.0	2329.3	3176.7	642.1	14.2	1700.8	819.6
7 TOTAL 1 — 6 :		26398.0	16978.8	9419.2	3408.3	122.8	4181.3	1706.8
8 G.O., Inputs and GVA of Private Manufacturing*		59205.0	29856.0	29349.0				
9 (7) as % of (8)		44.6	57.0	32.1				

* Derived from Haseeb's estimates of National Income of Iraq.

(Continued)

TABLE VII-12 (continued)

(B) 1962 at Current Factor Cost

(ID 000)

		I.S.I.C. Classification (group)	G.O.	Inputs	GVA	Wages and Salaries	Rent	Profit	Depreciations
1	Food, Beverage, Tobacco and Chemicals and Chemical Products Industries (57 Establishments)	203, 205, 206, 209, 211, 213, 214, 220, 311, 312.	22318.0	15756.5	6561.5	2783.0	83.0	2953.5	742.0
2	Textile Manufacturing Industries (21 Establishments)	231, 232, 233, 239.	4630.0	2435.4	2194.6	1303.5	27.1	634.7	229.3
3	Footwear, Leather and Leather Tanning Industries (9 Establishments)	241, 291, 293, 300.	2568.0	1523.0	1045.0	584.0	11.2	345.8	104.0
4	Furniture and Fixtures Industries (22 Establishments)	260	1686.0	1042.8	643.2	247.0	24.2	247.5	124.5
5	Printing, Publishing and Allied Industries (20 Establishments)	280	2464.0	1652.0	812.0	278.0	32.0	424.0	78.0
6	Non-Metallic Mineral Products Industries, except Products of Petroleum and Coal (26 Establishments)	331, 332, 334.	6482.0	2880.0	3602.0	978.0	23.3	1886.2	714.5
7	TOTAL 1 — 6 :		40148.0	25289.7	14858.3	6173.5	200.8	6491.7	1992.3
8	G.O., Inputs and GVA of Private Manufacturing*		105168.0	53636.0	51532.0				
9	(7) as % of (8)		38.2	47.2	29.0				

* Derived from Haseeb's estimates of National Income of Iraq.

Sources: Final Accounts of 155 Private manufacturing establishments.

TABLE VII-13

CLASSIFICATION OF PRIVATE GFCF IN MANUFACTURING BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings:						
	a. the Sample	732.7	481.7	225.4	232.4	560.2	759.5
	b. Other	51.3	228.3	886.9	303.6	682.0	450.0
	Total 1 :	784.0	710.0	1112.3	536.0	1242.2	1209.5
2	Other Construction and Works:						
	a. the Sample	272.4	297.4	40.7	102.1	87.8	146.5
	b. Other*	114.6	314.2	42.0	480.0	286.2	595.0
	Total 2 :	387.0	611.6	82.7	582.1	374.0	741.5
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment						
	a. the Sample	3198.6	887.5	655.7	942.6	1373.0	1773.9
	b. Other	1145.5	3142.4	416.4	4801.0	2862.7	5948.4
	sub-total 3(i):	4344.1	4029.9	1072.1	5743.6	4235.7	7722.3
	(ii) Furniture and Fixtures						
	a. the Sample	90.5	59.5	40.6	59.6	73.9	90.1
	b. Other	105.5	158.5	231.5	320.9	301.1	316.5
	sub-total 3(ii):	196.0	218.0	272.1	380.5	375.0	406.6
	Total 3 :	4540.1	4247.9	1344.2	6124.1	4610.7	8128.9

(Continued)

TABLE VII-13 (continued)

4	Transport Equipment					
	a. the Sample	96.0	82.0	46.1	121.3	154.3	168.0
	b. Other	44.6	95.8	70.7	556.3	563.9	440.8
	Total 4 :	140.6	177.8	116.8	677.6	718.2	608.8
5	TOTAL PRIVATE GFCF in Manufacturing						
	a. the Sample	4390.2	1808.1	1008.5	1458.0	2249.2	2938.0
	b. Other	1461.5	3939.2	1647.5	6461.8	4695.9	7750.7
	GRAND TOTAL :	5851.7	5747.3	2656.0	7919.8	6945.1	10688.7

* This figure is taken as 10% of item 3 (i) b.

TABLE VII-14

CLASSIFICATION OF PRIVATE GFCF IN MANUFACTURING BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	784.0	793.3	1130.4	514.4	1200.2	1204.7
2	Other Construction and Works	387.0	683.4	84.0	558.6	361.4	738.5
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	4344.1	3924.0	1000.1	5598.0	4096.4	7556.0
	(ii) Furniture and Fixtures	196.0	224.7	296.7	409.1	432.5	482.3
	Total 3 :	4540.1	4148.7	1296.8	6007.1	4528.9	8038.3
4	Transport Equipment	140.6	171.6	103.1	582.1	626.2	514.2
	TOTAL PRIVATE GFCF in Manufacturing :	5851.7	5797.0	2614.3	7662.2	6716.7	10495.7

Sources: Figures of Table VII-13 above deflated by the price indices shown in Chapter II.

CHAPTER VIII

CONSTRUCTION

This industry group includes the GFCF of establishments undertaking construction activities. It is considered as falling wholly in the private sector because almost all construction in Iraq is carried out by private establishments, whether for the account of the Government or the private sector.

The GFCF in this industry is estimated by the commodity-flow approach for "machinery and equipment" and "transport equipment"; and by the allocation method for "non-residential buildings" and "furniture and fixtures" in the manner described in chapter III above. The summary of the estimates is shown in Tables VIII-1 and VIII-2, at current and at constant prices. Details on the type of machinery and on transport equipment are given in Appendix II Table 6 and Appendix IV Table 4, respectively.

* * * * *

TABLE VIII-1

CLASSIFICATION OF GFCF IN CONSTRUCTION BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	306.0	289.5	366.5	117.2	259.0	183.3
2	Other Construction and Works	-	-	-	-	-	-
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	2165.7	844.5	923.7	460.6	1138.5	1062.3
	(ii) Furniture and Fixtures	89.6	105.6	105.2	93.0	92.6	72.6
	Total 3 :	2255.3	950.1	1028.9	553.6	1231.1	1134.9
4	Transport Equipment	347.2	826.6	444.4	630.0	388.6	344.3
	TOTAL :	2908.5	2066.2	1839.8	1300.8	1878.7	1662.5

Sources:
1. For item 1 see Table III-25.
2. For item 3(i) see Table III-21.
3. For item 3(ii) see Table III-26.
4. For item 4 see Table III-23.

TABLE VIII-2

CLASSIFICATION OF GFCF IN CONSTRUCTION BY TYPE OF ASSET, 1957 - 1962

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	306.0	323.5	372.5	112.5	250.2	182.6
2	Other Construction and Works	-	-	-	-	-	-
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	2165.7	822.3	861.7	449.0	1101.1	1039.4
	(ii) Furniture and Fixtures	89.6	108.9	114.7	100.0	106.8	86.1
	Total 3:	2255.3	931.2	976.4	549.0	1207.9	1125.5
4	Transport Equipment	347.2	798.0	392.2	541.2	338.8	290.8
	TOTAL GFCF in Construction at Constant Prices :	2908.5	2052.7	1741.1	1202.7	1796.9	1598.9

Sources: Table VIII-1 above deflated by the Price Index Numbers indicated in Chapter II.

CHAPTER IX

ELECTRICITY AND WATER

§ 1. DEFINITION

According to the United Nations' I.S.I.C., this industry should embrace not only electricity and water, but also gas manufacture and distribution, and sanitary services.

For the present purpose, however, the definition of this industry is narrower in scope than the United Nations' one.[1] It is confined to "Electricity and Water" only for the following reasons:

1. The distribution of natural gas from oil fields is undertaken by the Gas Distribution Bureau which was set up in 1960 by GORA. The operation of this Bureau is on a very small scale, being confined solely to the selling of gas to consumers in Baghdad City. It was found unrealistic to separate this activity from that of oil refining, and so it was retained in the sector "Manufacturing".

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1) The definition adopted here is similar to that used for the National Income estimation; see Haseeb, K., The National Income of Iraq, 1953-1961, (R.I.I.A., Oxford University Press, London, 1964) pp.116-117.

2. No steam heat and power industry exist in Iraq.

3. Sanitary services (garbage and sewage disposal and the operation of drainage, other than those on agricultural land), are the responsibility of the various municipalities spreading all over the country.[1] It was not possible to separate municipalities' capital expenditure on sanitary projects from their expenditure on parks and similar projects, which are included with the main activities of these municipalities in the sector "Services".

For the above reasons, this sector covers the capital formation of establishments engaged only in the generation, transmission and distribution of electricity, purification and distribution of water.[2]

Power plants operated by manufacturing establishments and by the oil companies for their own use are not included in this sector but retained in the manufacturing and mining sectors.

After 1956, all electricity and water supply establishments came under Government control. With the exception of Baghdad and Basrah

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1) In Baghdad City, however, these services are undertaken by the Sewage Administration which was established in 1955 (Law No. 37 of 1955) with an independent budget. Although the capital expenditure of this administration was secured, it was included in the sector "Services" along with the main activities of the other municipalities.

2) The construction of irrigation systems is not included here, but in the sector "Agriculture".

Provinces, all electricity and water supply establishments take the form of "Electricity and Water Boards". In Baghdad, the electricity and water are supplied by Baghdad Electricity Services and Baghdad Water Supply Services, respectively. Both are public bodies with independent budgets. In Basrah, the supply of electricity and water to municipal areas is under the control of Basrah Electricity and Water Supply, which in turn is controlled by the Ports Administration.[1)]

Until 1961, all Electricity and Water Boards had independent budgets, but were under the supervision of the Directorate-General of Municipalities.[2)] Since then these Boards have been attached to the municipalities concerned and their budgets ceased to be independent.[3)]

In view of the increasing demand on electricity for both domestic and industrial uses, the Government established the National Electricity Administration in 1959. It is attached to the Ministry of Industry, but has an independent legal status and budget. The Administration's main operations consist of generating electricity from its giant power stations in

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1) The Ports Administration itself supplies electricity and water to bulk consumers from their Central Electric Power and Water Purification Stations.

2) Before the 1958 revolution this Directorate was attached to the Ministry of Interior, but since then become part of the newly formed Ministry of Municipalities, which was later named as the Ministry of Municipal and Rural Affairs.

3) In Baghdad and Basrah, however, they remained to be independent. But the Baghdad Electricity Services was terminated in 1964 and its operation was taken over by the National Electricity Administration.

northern, middle, and southern Iraq, and selling in bulk to municipalities, industrial establishments and other consumers.

$ 2. SOURCES AND METHODS OF ESTIMATION

GFCF in "Electricity and Water" is based on the capital expenditure statements of the various bodies mentioned above, in addition to the relevant expenditure derived from the Development Budgets.

Since interrelation - to a very great extent - existed between the capital expenditures shown in the Development Budgets and those shown in the accounts of the Electricity and Water Boards,[1)] care was taken to avoid double-counting. It was avoided by obtaining from Baghdad Electricity Services, Baghdad Water Supply Services, and the National Electricity Administration details of their capital expenditure, which was financed from the Development Budgets. In the case of Basrah Electricity and Water Supply, it did not appear from the balance sheets and capital expenditure statements that any part of capital expenditure was financed from the Development Budgets during the period under review.

For other Electricity and Water Boards, it was not possible to

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1) The word "Boards" is used here in referring to all public bodies concerned with generating and supplying electricity and water.

identify from their capital expenditure statements the part which was financed from the Development Budgets. But since the finance of these expenditures comes mainly from the Development Budgets, they were eliminated from the latter and their capital expenditure statements were relied upon.

The results of the estimating procedure are shown in Tables IX-1 to IX-10 below. Table IX-1 shows the aggregate GFCF in Electricity and Water, both at current and at constant 1957 prices. Tables IX-2 and IX-3 give the classification of the figures by type of asset at current and at constant prices, respectively. Table IX-4 shows the GFCF in this sector excluding the Development Board's expenditure. The latter is given in Table IX-10. The capital expenditures of Baghdad Electricity Services, Baghdad Water Supply Board, and Basrah Electricity and Water Board are shown in Tables IX-5, IX-6 and IX-7, respectively. Other Electricity and Water Board's capital expenditure and that of the National Electricity Administration are shown in Tables IX-8 and IX-9, respectively.

Remark

Investment in machinery and equipment derived from the accounts of "Boards" was slightly lower than the imported machinery and equipment attributed to this sector (see Appendix II Table 7). To account for this difference and at the same time preserve the consistency of total GFCF estimated from the expenditure side, it was assumed that this diff-

erence lies in item 2 of Table IX-10 below. Hence, the difference was deducted from this item and added to item 3(i) of the same table. This procedure kept the figures of machinery and equipment consistent with those allocated to this sector, and left the GFCF total unaffected.

* * * * *

TABLE IX-1

GFCF IN ELECTRICITY AND WATER, 1957 - 1962*

(Summary Table)

Year	at Current Prices		at Constant (1957) Prices	
	ID 000	1957 = 100	ID 000	1957 = 100
1957	6431.0	100.0	6431.0	100.0
1958	8912.4	138.6	9628.2	149.7
1959	5019.1	78.0	4907.0	76.3
1960	7774.7	121.0	7483.6	116.4
1961	5030.6	78.2	4874.5	75.8
1962	4867.2	75.7	4819.7	74.9

* Excluding expenditure on repair work.

Sources: Tables IX-2 and IX-3 below.

TABLE IX-2

CLASSIFICATION OF GFCF IN ELECTRICITY AND WATER BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	141.8	333.6	535.3	661.7	446.2	570.4
2	Other Construction and Works	4714.9	6260.1	2114.3	5095.3	3079.8	2508.6
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	1522.8	2182.7	2186.7	1833.1	1259.3	1701.7
	(ii) Furniture	23.7	67.3	63.6	61.8	127.7	43.6
	Total 3 :	1546.5	2250.0	2250.3	1894.9	1387.0	1745.3
4	Transport Equipment	27.8	68.7	119.2	122.8	117.6	42.9
5	TOTAL 1 — 4	6431.0	8912.4	5019.1	7774.7	5030.6	4867.2
6	Expenditure on Repair and Maintenance of :						
	(i) Buildings	1.5	1.5	1.5	6.5	14.5	10.6
	(ii) Water Supply Pipes	92.3	119.1	155.4	257.2	236.0	269.7
	(iii) Electricity Transmission Lines	7.0	7.0	6.4	27.2	68.1	135.0
	TOTAL expenditure on Repair Works:	100.8	127.6	163.3	290.9	318.6	415.3

Sources: Tables IX-4 and IX-10 below.

TABLE IX-3

CLASSIFICATION OF GFCF IN ELECTRICITY AND WATER BY TYPE OF ASSET, 1957 - 1962*

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	141.8	372.7	544.0	635.0	431.1	568.1
2	Other Construction and Works	4714.9	6994.5	2148.7	4890.0	2975.7	2498.6
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	1522.8	2125.3	2039.8	1786.6	1217.9	1665.1
	(ii) Furniture and Fixtures	23.7	69.4	69.3	66.5	147.3	51.7
	Total 3 :	1546.5	2194.7	2109.1	1853.1	1365.2	1716.8
4	Transport Equipment	27.8	66.3	105.2	105.5	102.5	36.2
5	TOTAL GFCF in Electricity and Water at Constant Prices :	6431.0	9628.2	4907.0	7483.6	4874.5	4819.7
	1 as % of 5	2.2	3.9	11.1	8.5	8.8	11.8
	2 as % of 5	73.3	72.6	43.8	65.3	61.1	51.8
	3 as % of 5	24.0	22.8	43.0	24.8	28.0	35.6
	4 as % of 5	0.5	0.7	2.1	1.4	2.1	0.8
	Total :	100.0	100.0	100.0	100.0	100.0	100.0

* Excluding Expenditure on Repairs and Maintenance.

Sources: Figures of Table IX-2 above deflated by the Price Index Numbers indicated in Chapter II.

TABLE IX-4

GFCF IN ELECTRICITY AND WATER, 1957 - 1962

(Excluding Development Board's Expenditure shown in Table IX-10 below)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	46.4	74.6	228.8	190.1	195.6	180.0
2	Other Construction and Works	1000.6	1191.4	1349.1	1367.7	1490.1	1035.6
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	1222.5	975.8	525.1	616.8	363.3	316.2
	(ii) Furniture and Fixtures	7.1	14.2	26.6	17.4	52.8	13.8
	Total 3 :	1229.6	990.0	551.7	634.2	416.1	330.0
4	Transport Equipment	7.8	15.7	51.2	33.8	48.6	12.9
5	TOTAL 1 — 4 :	2284.4	2271.7	2180.8	2225.8	2150.4	1558.5
6	Expenditure on Repair works of:						
	(i) Buildings	1.5	1.5	1.5	6.5	14.5	10.6
	(ii) Water Supply Pipes	92.3	119.1	155.4	257.2	236.0	269.7
	(iii) Electricity Transmission Lines	7.0	7.0	6.4	27.2	68.1	135.0
	TOTAL 6 :	100.8	127.6	163.3	290.9	318.6	415.3

Sources: Tables IX-5, IX-6, IX-7, IX-8, and IX-9 below.

TABLE IX-5

CAPITAL EXPENDITURE OF BAGHDAD ELECTRICITY SERVICES, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	30.0	35.0	38.2	97.0	149.0	162.0
2	Other Construction and Works	-	-	267.8	345.5	368.0	419.0
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	880.1	760.1	304.2	267.2	283.1	231.5
	(ii) Furniture and Fixtures	5.0	9.4	4.0	8.0	7.3	9.6
	Total 3 :	885.1	769.5	308.2	275.2	290.4	241.1
4	Transport Equipment	6.7	10.6	24.0	28.3	42.6	-
	TOTAL Capital Expenditure (1 - 4) :	921.8	815.1	638.2	746.0	850.0	822.1

Sources: Actual final accounts of Baghdad Electricity Services supplied to the writer.

TABLE IX-6

CAPITAL EXPENDITURE OF BAGHDAD WATER SUPPLY BOARD, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	8.0	4.4	52.8	21.4	22.2	18.0
2	Other Construction and Works	255.2	383.7	207.5	274.2	329.5	357.3
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	14.5	12.7	65.6	53.6	24.5	64.7
	(ii) Furniture	2.1	1.1	1.7	7.0	4.3	2.0
	Total 3 :	16.6	13.8	67.3	60.6	28.8	66.7
4	Transport Equipment	-	2.8	20.0	5.5	6.0	12.9
5	TOTAL Capital Expenditure :	279.8	404.7	347.6	361.7	386.5	454.9
6	Expenditure on Repair works:						
	(i) Repair of Water Supply Pipes	83.2	111.5	148.7	245.8	227.0	261.7
	(ii) Repair of Buildings	1.5	1.5	1.5	1.5	1.2	1.6
	Total 6 :	84.7	113.0	150.2	247.3	228.2	263.3

Sources: Actual final accounts of Baghdad Water Supply Board supplied to the writer.

TABLE IX-7

CAPITAL EXPENDITURE OF BASRAH ELECTRICITY AND WATER SUPPLY,* 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	-	-	10.2	19.2	20.6	-
2	Other Construction and Works: (Mainly electricity Transmission lines and Watter Supply Pipes.)	280.6	378.8	165.0	195.2	160.6	49.3
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	14.0	16.2	-	-	-	-
	(ii) Furniture	-	-	-	-	-	-
4	Transport Equipment	1.1	2.3	7.2	-	-	-
5	TOTAL 1 — 4 :	295.7	397.3	182.4	214.4	181.2	49.3

* Including the "Central Electric Power and Water Purification Stations" owned by the Ports Administration.

Sources: Capital Expenditure Accounts supplied to the writer by the Directorate-General of Ports Administration; Letter No. 19/14/139, dated 4 December, 1965.

TABLE IX - 8

CAPITAL EXPENDITURE OF ELECTRICITY AND WATER BOARDS*

(excluding Basrah and Baghdad), 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	8.4	35.2	127.6	52.5	-	-
2	Other Construction and Works	464.8	428.9	681.0	552.8	279.0	210.0
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	313.9	186.8	107.8	213.1	20.0	20.0
	(ii) Furniture	-	3.7	3.6	2.4	2.2	2.2
	Total 3 :	313.9	190.5	111.4	215.5	22.2	22.2
4	Transport Equipment	-	-	-	-	-	-
5	TOTAL 1 — 4 :	787.1	654.6	920.0	820.0	301.2	232.2
6	Expenditure on Repair Works:						
	(i) Electricity Transmission Lines	7.0	7.0	6.4	7.5	7.0	7.0
	(ii) Water Supply Pipes	9.1	7.6	6.7	11.4	9.0	8.0
	Total 6 :	16.1	14.6	13.1	18.9	16.0	15.0

* Including Municipalities capital expenditure, see Appendix V Table 12.

Sources: Actual accounts of the Water and Electricity Boards supplied to the writer by the Ministry of Municipal and Rural Affairs.

TABLE IX-9

CAPITAL EXPENDITURE OF THE NATIONAL ELECTRICITY ADMINISTRATION,* 1959 - 1962

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings			-	-	3.8	-
2	Other Construction and Works			27.8	-	353.0	-
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment			47.5	82.9	35.7	-
	(ii) Furniture and Fixtures			17.3	-	39.0	-
	Total 3 :			64.8	82.9	74.7	-
4	Transport Equipment			-	-	-	-
5	TOTAL 1 — 4 :			92.6	82.9	431.5	-
6	Expenditure on Repairs and Maintenance of						
	(i) Electricity Transmission Lines			-	19.7	61.1	128.0
	(ii) Buildings			-	5.0	13.0	9.0
	Total 6 :			-	24.7	74.1	137.0

* Established in 1959.

Sources: Actual accounts of the Administration supplied to the writer. The figures are exclusive of the Development Board's capital expenditure.

TABLE IX-10

DEVELOPMENT BOARD'S CAPITAL EXPENDITURE IN "ELECTRICITY AND WATER" n.e.c., 1957-1962

(at current prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	95.4	259.0	306.5	471.6	250.6	390.4
2	Other Construction and Works	3714.3	5068.7	765.2	3727.6	1589.7	1473.0
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment*	300.3	1206.9	1661.6	1216.3	896.0	1385.5
	(ii) Furniture	16.6	53.1	37.0	44.4	74.9	29.8
	Total 3 :	316.9	1260.0	1698.6	1260.7	970.9	1415.3
4	Transport Equipment	20.0	53.0	68.0	89.0	69.0	30.0
	TOTAL :	4146.6	6640.7	2838.3	5548.9	2880.2	3308.7

* See the remarks on page 389 above.

Sources: Appendix V Table 8.

CHAPTER X

TRANSPORTATION, STORAGE, AND COMMUNICATIONS

§ 1. DEFINITION

Basically, the boundary drawn up in the I.S.I.C. for this sector should include establishments rendering the services of transport of passengers and freight by land, water, or air, in addition to services which are incidental to transport. Storage and warehousing, and communications by telephone, telegraph and radio (except radio broadcasting studios which are classified in the sector "Services") are also part of this sector.

The Statistical Office of the U.N., also recommends the inclusion in this sector of the transportation by pipe-line of crude and refined oil and natural gas, if it constitutes an independent service.[1)]

The definition adopted in this study follows very closely the U.N.'s, with the following exceptions :

a. Pipe-lines operated by the oil companies and GORA are excluded due to difficulties involved in segregating their operations from the main activities of the oil companies and GORA. Hence, they were retained in the relevant sectors to which

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1) U.N., Statistical Papers, Series M, No. 4, Rev. 1, pp.15-16.

each one belongs, namely, "mining and Quarrying" in the case of oil companies and "manufacturing" in the case of GORA.

b. No account is made of horse-drawn passenger carriers and wagons because of the decrease in their number resulting from the introduction of Government bus services, with a subsequent restriction of the area in which these carriers and wagons operate.[1)]

The summary of the resulting estimates of GFCF in this industry is shown in Tables X-1 to X-4 below. The first two tables show the aggregate GFCF divided between the public and the private sectors, at current and at constant prices, respectively. As can be seen from the tables, public GFCF accounted, on average, for more than 75 per cent of the total. This is natural, however, because the public sector embraces all expenditures on roads, bridges, ports, communications systems, and similar social overhead capital facilities, which account for more than 80 per cent of public investment; while investment in transport equipment proper accounts for less than 6 per cent of total public investment (see Table X-5).

The contribution of the private sector is mainly made up of investment in transport equipment proper which accounts for nearly 80 per cent of total private GFCF.

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1) Haseeb, K., The National Income of Iraq, 1953-1961, p.128.

TABLE X-1

GFCF IN TRANSPORTATION, STORAGE AND COMMUNICATIONS, 1957-1962*

(at Current Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	17804.0	75.5	5763.1	24.5	23567.1	100.0	100.0
1958	16989.0	77.7	4875.4	22.3	21864.4	100.0	92.8
1959	17249.9	83.4	3433.3	16.6	20683.2	100.0	87.8
1960	19166.7	75.2	6326.3	24.8	25493.0	100.0	108.2
1961	22695.8	70.7	9402.4	29.3	32098.2	100.0	136.2
1962	21359.7	73.8	7588.1	26.2	28947.8	100.0	122.8

Sources: Table X-3 below.

TABLE X-2

GFCF IN TRANSPORTATION, STORAGE AND COMMUNICATIONS, 1957-1962*

(at Constant (1957) Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	17804.0	75.5	5763.1	24.5	23567.1	100.0	100.0
1958	18666.1	79.5	4810.9	20.5	23477.0	100.0	99.6
1959	17249.9	84.4	3196.9	15.6	20446.8	100.0	86.8
1960	18285.6	76.7	5550.2	23.3	23835.8	100.0	101.1
1961	21857.6	72.2	8399.7	27.8	30257.3	100.0	128.4
1962	21092.0	76.0	6676.2	24.0	27768.2	100.0	117.8

Sources: Table X-4 below.

* Excluding expenditure on repair work.

TABLE X-3

CLASSIFICATION OF GFCF IN "TRANSPORTATION, STORAGE AND COMMUNICATIONS" BY TYPE OF ASSET AND SECTOR, 1957-1962 (at Current Prices)*

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Public	289.1	320.2	1036.3	2336.1	2704.0	1439.7
b. Private	670.0	588.3	834.0	391.0	970.5	867.4
Total 1 :	959.1	908.5	1870.3	2727.1	3674.5	2307.1
2 Other Construction and Works						
a. Public	16105.0	14518.7	13785.0	15249.8	18678.1	18272.0
b. Private	-	-	-	-	-	-
3 Machinery and Other Equipment						
(i) Machinery and Equipment						
a. Public	870.7	1140.7	801.6	304.4	439.6	427.9
b. Private	387.9	161.4	105.1	48.6	135.3	138.5
Sub-total 3(i) :	1258.6	1302.1	906.7	353.0	574.9	566.4
(ii) Furniture and Fixtures						
a. Public	13.4	19.7	18.5	70.6	40.6	25.7
b. Private	196.0	214.5	240.0	325.0	347.4	343.6
Sub-total 3(ii):	209.4	234.2	258.5	395.6	388.0	369.3
Total 3 :	1468.0	1536.3	1165.2	748.6	962.9	935.7

(Continued)

TABLE X-3 (continued)

4 Transport Equipment						
a. Public	525.8	989.7	1608.5	1205.8	833.5	1194.4
b. Private	4509.2	3911.2	2254.2	5561.7	7949.2	6238.6
Total 4 :	5035.0	4900.9	3862.7	6767.5	8782.7	7433.0
GFCF in Transportation, Storage and Communications :						
a. Public	17804.0	16989.0	17249.9	19166.7	22695.8	21359.7
b. Private	5763.1	4875.4	3433.3	6326.3	9402.4	7588.1
GRAND TOTAL :	23567.1	21864.4	20683.2	25493.0	32098.2	28947.8

* Excluding expenditure on repair work.

Sources: For Public GFCF - Table X-5; for Private GFCF - see description of sources and methods of estimation.

TABLE X-4

CLASSIFICATION OF GFCF IN "TRANSPORTATION, STORAGE AND COMMUNICATIONS"

BY TYPE OF ASSET AND SECTOR, 1957-1962 (at Constant (1957) Prices)*

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Public	289.1	357.8	1053.1	2242.0	2612.5	1434.0
b. Private	670.0	657.3	847.6	375.2	937.7	864.0
Total 1 :	959.1	1015.1	1900.7	2617.2	3550.2	2298.0
2 Other Construction and Works						
a. Public	16105.0	16222.0	14009.1	14635.1	18046.5	18200.0
b. Private	-	-	-	-	-	-
3 Machinery and Other Equipment						
(i) Machinery and Equipment						
a. Public	870.7	1110.7	747.8	296.7	425.1	418.7
b. Private	387.9	157.2	98.0	47.4	130.9	135.5
Sub-total 3(i) :	1258.6	1267.9	845.8	344.1	556.0	554.2
(ii) Furniture and Fixtures						
a. Public	13.4	20.3	20.2	75.9	46.8	30.5
b. Private	196.0	221.1	261.7	349.5	400.7	407.6
Sub-total 3(ii):	209.4	241.4	281.9	425.4	447.5	438.1
Total 3 :	1468.0	1509.3	1127.7	769.5	1003.5	992.3

(Continued)

TABLE X-4 (continued)

4 Transport Equipment						
a. Public	525.8	955.3	1419.7	1035.9	726.7	1008.8
b. Private	4509.2	3775.3	1989.6	4778.1	6930.4	5269.1
Total 4 :	5035.0	4730.6	3409.3	5814.0	7657.1	6277.9
5 GFCF in Transportation, Storage and Communications :						
a. Public	17804.0	18666.1	17249.9	18285.6	21857.6	21092.0
b. Private	5763.1	4810.9	3196.9	5550.2	8399.7	6676.2
GRAND TOTAL :	23567.1	23477.0	20446.8	23835.8	30257.3	27768.2
1 as % of 5	4.1	4.3	9.3	11.0	11.7	8.3
2 as % of 5	68.3	69.1	68.5	61.4	59.7	65.5
3 as % of 5	6.2	6.4	5.5	3.2	3.3	3.6
4 as % of 5	21.4	20.2	16.7	24.4	25.3	22.6
Total:	100.0	100.0	100.0	100.0	100.0	100.0

* Excluding expenditure on Repair work.

Sources: Figures of Table X-3 deflated by the Price Indices shown in Chapter II.

$ 2. SOURCES AND METHODS OF ESTIMATION

GFCF in this industry was arrived at in two ways: the expenditure approach and the commodity-flow method. The former was employed in estimating public GFCF, and the latter for private GFCF. Within the private sector, investment in two types of asset, namely, "machinery and equipment" and "transport equipment" were obtained as the difference between the control totals (set up in chapter III) and public investment.

2.1. Public GFCF

Public GFCF is derived from the capital expenditure statements of the agencies engaged in providing transport, storage and communications services, in addition to Government expenditure on the construction of roads, highways, bridges, ports and airports. The derivation procedure is as follows :

a. Ports Administration and Bar Dredging Scheme (Table X-6)

Table X-6 below shows the capital expenditure of the Ports Administration in Basrah, and the Bar Dredging Scheme at Fao. The figures were derived from the detailed unpublished capital expenditure accounts which were obtained from the Ports Administration directly by the writer.[1)]

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1) Directorate-General of Ports, Basrah, Letters No. 19/14/74 and 19/14/139, dated 26/6/1965 and 4/12/1965, respectively.

Separate statements were given for the capital expenditure of the Bar-Dredging Scheme, the Central Water and Electricity of the Ports, and the Basrah Electricity and Water Supply. The latter two were excluded from this sector and included in the sector "Electricity and Water".

The figures so derived were checked against those shown in the balance sheets of the Ports and the Bar-Dredging Scheme.[1] The two "aggregates" were identical when additions to "land", (which appear in the balance sheet), are taken into consideration; otherwise the capital expenditure statements give higher estimates of GFCF. The root cause for this, is the peculiar classification of expenditure on the construction of ports and dockyards under the heading "Land" in the balance sheets.[2]

b. Railways Administration (including Iraqi Airways) (Table X-7)

The figures shown in Table X-7 are the GFCF of the Railways Administration (RA). They were derived from the annual reports of the RA, which give detailed statements showing expenditure on major development schemes and capital works during each year. The figures include all expenditures (except those for land) charged to capital account by the RA.

Since the RA is also responsible for the operation of the State

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1) The balance sheets show the annual additions to each type of asset, but in a more condensed form than shown in the capital expenditure statements.
2) This treatment was explained by the Ports' financial secretary in his letter to the writer.

owned Iraqi Airways, the latter's capital expenditure is embodied in Table X-7. Moreover, the RA undertakes the provision of a hotel catering service, which is an ancillary activity to the main one of transportation; the capital expenditure in this respect is also embodied in Table X-7.

Railways expenditures on renewals and replacements are not regarded as part of GFCF, though they are shown in item 6 of Table X-7. Their exclusion is to allow for the value of scrapped (if any) railway lines, coaches and similar assets.

c. The Grain Board (Table X-8)

The Grain Board's capital expenditure is included in this sector because it performs, as an independent service, the storage of grains in silos constructed for this purpose. The figures shown in Table X-8 were derived from the detailed capital expenditure statements of the Grain Board supplied to the writer.

d. Public Transport (Bus) Services (Table X-9)

The capital expenditure of these administrations were derived from two sources. For Baghdad, Mosul and Basrah Transport Services, the figures were derived from their actual unpublished final accounts, which were directly obtained (see Appendix VIII, Tables 3, 4, and 5). For other provinces, the capital expenditures were based on the "Revenue and Expenditure" records of these administrations which are kept at the Ministry of the Interior (see Appendix VIII Table 6).

The regional distribution of number of buses operated by the Public Transport (Bus) Services and their purchases of transport equipment during 1962 (shown in Appendix VIII Table 7) was derived from the C.B.S.' "Report on Statistics of Transport and Communications during 1962".[1)]

e. The Development Board's Capital Expenditure (Table X-10)

The Development Board's capital expenditure in transportation, etc., embraces only that part which is not embodied in the capital expenditure statements of any of the previous agencies. The figures were derived from the Development Budgets, and include expenditure on the construction of highways, bridges, airports, telephone and telegraph systems and the like. Expenditure on silos during 1957 - 1960 is excluded from the Development Budgets because it was derived from the Grain Board's accounts. But for 1961 and 1962 the figures shown in the Development Budgets were taken into account because they were not included in the Grain Board's accounts.

"Non-residential buildings" and "machinery and equipment" (item 1 and 3(i)) represent expenditure on the construction of post office buildings, and on telephone switch-boards and related equipment.

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1) Expenditure on transport equipment during 1962 by the Directorate-General of Passenger Transport Services in Baghdad shown in this "report" was lower than the actual expenditure figure given by the Directorate by ID 102,800, and hence, the "report's" figure was adjusted for this underestimation.

f. Central Government (the Ordinary Budget) Capital Expenditure (Appendix V Table 4)

Expenditure figures derived from the Ordinary Budget are those pertaining to the Post Office, which is financially integrated with General Government. Minor expenditures on the construction of roads and culverts by the Directorate-General of Roads and Bridges are also included here.

g. Municipalities' Capital Expenditure (Appendix V Table 12)

Municipalities' capital expenditure is confined to one type of asset: the construction of streets and culverts. The figures are derived from the accounts of municipalities, including Baghdad Municipality (Amanet Al-Asima). The figures represent expenditure on the construction of new streets and culverts.

h. Local Administrations' Capital Expenditure (Appendix V Table 10)

The expenditure of these Administrations is similar to that of the municipalities. The figures are derived from the Administrations' records kept at the Ministry of the Interior.

TABLE X-5

CLASSIFICATION OF PUBLIC GFCF IN "TRANSPORTATION, STORAGE AND COMMUNICATIONS" BY TYPE OF ASSET, 1957 - 1962 (at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	289.1	320.2	1036.3	2336.1	2704.0	1439.7
2	Other Construction and Works	16105.0	14518.7	13785.0	15249.8	18678.1	18272.0
3	Machinery and Other Equipment						
	(i) Machinery and Equipment	870.7	1140.7	801.6	304.4	439.6	427.9
	(ii) Furniture and Fixtures	13.4	19.7	18.5	70.6	40.6	25.7
	Total 3 :	884.1	1160.4	820.1	375.0	480.2	453.6
4	Transport Equipment	525.8	989.7	1608.5	1205.8	833.5	1194.4
5	TOTAL PUBLIC GFCF in Transportation, Storage and Communications :	17804.0	16989.0	17249.9	19166.7	22695.8	21359.7
	1 as % of 5	1.6	1.9	6.0	12.2	11.9	6.7
	2 as % of 5	90.4	85.5	80.0	79.5	82.3	85.6
	3 as % of 5	5.0	6.8	4.7	2.0	2.1	2.1
	4 as % of 5	3.0	5.8	9.3	6.3	3.7	5.6
	Total :	100.0	100.0	100.0	100.0	100.0	100.0
	Expenditure on Repairs and Renewals :	1932.1	1979.7	2397.4	1455.1	1426.6	1311.6

Sources: Tables X-6, X-7, X-8, X-9, X-10 and Tables 4, 10, 12 of Appendix V.

TABLE X-6

PORTS ADMINISTRATION AND BAR DREDGING SCHEME

CAPITAL EXPENDITURE, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings	30.2	141.9	726.4	1802.5	2338.6	1243.7
2 Other Construction and Works:						
(i) Navigational and Communications Systems	6.0	10.7	0.7	55.8	158.7	10.2
(ii) Port Extension, Canal Dredging Scheme and Docks	146.7	259.6	418.1	1215.6	1400.8	1417.7
(iii) Internal Roads, Sewage System, and similar projects	34.8	80.3	146.1	323.7	368.4	101.0
Total 2 :	187.5	350.6	564.9	1595.1	1927.9	1528.9
3 Machinery and Other Equipment:						
(i) Machinery and Equipment	180.4	364.2	277.7	168.7	325.4	391.8
(ii) Furniture and Fixtures	-	-	-	47.6	23.4	5.1
Total 3 :	180.4	364.2	277.7	216.3	348.8	396.9

(Continued)

TABLE X-6 (continued)

4	Transport Equipment	337.8	349.5	470.3	890.0	97.0	27.5
5	TOTAL 1 — 4 :	735.9	1206.2	2039.3	4503.9	4712.3	3197.0
6	Expenditure on Repair Work :	351.5	279.0	472.3	389.8	525.0	489.1

Sources: Detailed Capital Expenditure statements and the Final Accounts of Iraqi Ports Administration and Bar-Dredging Schemes, supplied to writer by the Directorate-General of Ports, Basrah; Letter No. 19/14/74, dated 26th June, 1965, also Letter No. 19/14/139, dated 4th December, 1965.

TABLE X-7

RAILWAYS ADMINISTRATION*

Capital Expenditure, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings (Station buildings, workshops, offices, etc)	234.6	118.6	286.3	401.4	291.7	159.4
2 Other Construction and Works:						
(i) Extension of Railway Lines	207.1	296.0	195.5	359.4	2393.2	6158.0
(ii) Baghdad-West Development Scheme	389.1	437.0	660.6	361.6	149.0	0.3
(iii) Aircraft Hangers and Other Constructions	317.8	-	-	-	106.0	434.2
Total 2 :	914.0	733.0	856.1	721.0	2648.2	6592.5
3 Machinery and Other Equipment						
(i) Machinery and Equipment	35.0	57.6	7.3	4.6	0.5	-
(ii) Furniture and Fixtures	6.0	8.0	7.0	8.0	8.0	8.0
Total 3 :	41.0	65.6	14.3	12.6	8.5	8.0
4 Transport Equipment:						
(i) Locomotives	-	160.6	64.2	11.7	-	-
(ii) Goods Wagons	-	46.3	197.7	0.6	-	-
Total 4 :	-	206.9	261.9	12.3	-	-

(Continued)

TABLE X-7 (continued)

5	TOTAL Capital Expenditure :	1189.6	1124.1	1418.6	1147.3	2948.4	6759.9
6	Expenditure on Renewals and Replacements of :						
	(i) Railway Lines	596.6	481.4	469.2	375.2	60.4	91.6
	(ii) Station Buildings, Bridges and Culverts	10.7	47.0	47.1	9.4	106.1	73.6
	(iii) Rolling Stock	291.7	503.2	500.5	13.0	64.6	7.2
7	TOTAL Expenditure on Renewals and Replacements :	899.0	1031.6	1016.8	397.6	231.1	172.4

* Including Iraqi Airways.

Sources: Iraqi Railways Administration: Reports on the Administration of the Railways for the fiscal years 1956/57 — 1962/63, supplied to the writer by the Directorate-General of Railways, Letter No. 607/279, dated 9th June, 1965.

TABLE X-8

GRAIN BOARD

Capital Expenditure, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings	-	-	-	-	-	-
2 Other Construction and Works: (Silos)	171.7	2823.2	1906.1	1698.1	1192.0	480.2
3 Machinery and Other Equipment:						
(i) Machinery and Equipment	2.4	26.4	20.8	2.4	0.7	2.0
(ii) Furniture and Fixtures	1.0	1.3	1.4	0.7	1.0	1.2
Total 3 :	3.4	27.7	22.2	3.1	1.7	3.2
4 Transport Equipment	2.6	-	1.2	2.3	1.0	2.2
5 TOTAL 1 — 4 :	177.7	2850.9	1929.5	1703.5	1194.7	485.6
6 Expenditure on Repair works of Buildings and Silos :	1.0	1.0	0.7	1.0	1.4	2.0

Sources: Detailed Capital Expenditure statements and final accounts of the Grain Board.

TABLE X-9

PUBLIC TRANSPORT (BUS) SERVICES (ALL IRAQ)

Capital Expenditure, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	24.3	59.7	14.9	55.3	24.3	22.2
2	Other Construction and Works (mainly Bus Stops)	-	1.0	1.1	1.6	1.5	4.0
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	2.4	21.2	34.4	18.3	26.1	14.8
	(ii) Furniture and Fixtures	3.4	4.8	6.3	7.5	4.4	5.4
	Total 3 :	5.8	26.0	40.7	25.8	30.5	20.2
4	Transport Equipment	185.4	433.3	875.1	301.2	735.5	1164.7
	TOTAL :	215.5	520.0	931.8	383.9	791.8	1211.1

Sources: Final accounts and Revenue and Expenditure accounts of Public Transport (Bus) Services. See Appendix VIII Tables 3, 4, 5, and 6.

TABLE X-10

DETAILS OF THE DEVELOPMENT BOARD'S CAPITAL EXPENDITURE

IN "TRANSPORTATION, STORAGE AND COMMUNICATIONS", 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	-	-	8.7	76.9	49.4	14.4
2	Other Construction and Works						
	(i) Roads and Bridges	12556.6	8564.0	5608.1	7480.7	9102.0	6767.7
	(ii) Airports	224.0	235.2	50.4	133.5	58.2	360.4
	(iii) Communications Systems	401.5	345.8	508.5	218.6	779.8	547.5
	(iv) Grain Silos	-	-	-	-	229.2	286.4
	(v) Improvement of Navigation	-	-	-	-	535.3	-
	Total 2 :	13182.1	9145.0	6167.0	7832.8	10704.5	7962.0
3	Machinery and Other Equipment						
	(i) Machinery and Equipment	240.0	250.0	171.5	93.0	70.5	-
	(ii) Furniture and Fixtures	-	-	-	-	-	-
4	Transport Equipment	-	-	-	-	-	-
	TOTAL :	13422.1	9395.0	6347.2	8002.7	10824.4	7976.4

Sources: Development Budgets, a summary of which is given in Appendix V Table 8.

2.2. Private GFCF

Private GFCF in this industry is estimated by the methods described in chapter III above. "non-residential buildings" and "furniture and fixtures" represent the allocated proportions of total private GFCF in these two types of asset as shown in Tables III-25 and III-26, respectively. "Machinery and equipment" represents the difference between the control total of machinery and equipment set up for this industry group (see Table III-21) and public GFCF in this type of asset (see Table X-5).

The case of "transport equipment" is similar, from the estimation viewpoint, to that of machinery and equipment. It is derived as the difference between the control total (Table III-23 item 1(d) + item (5)) and public investment in transport equipment (Table X-5 item 4). The control total, however, represents not only imported transport equipment, but also domestically made barges and boats. The latter is estimated as follows :

1. From the Industrial Census of 1953 and the Monthly Industrial Surveys of 1960, 1961, and 1962, the value of barges and boats manufactured domestically was determined, as shown below:

Year	Value of Barges and Boats manufactured and sold (ID 000)
1953	76.0
..	..
1960	136.5
1961	96.2
1962	53.4

2. For the years 1957 - 1959, the value of barges and boats was taken as ID 75 thousands in each year, which is equivalent to the simple average of the value of barges and boats manufactured during 1953, 1961, and 1962. The reason for excluding the 1960's figure from the calculation of the simple average is that the figure thought to be high compared with previous and later years and its inclusion would result in an upward biased average.

Finally, it is to be observed, that since the public sector does not operate taxis, it is assumed that this type of transport equipment - the estimation of which was explained in Chapter III - is operated entirely by the private sector.

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CHAPTER XI

WHOLESALE AND RETAIL TRADE

$ 1. DEFINITION

The definition adopted for this sector is similar to that given in the I.S.I.C. It embraces establishments with activities falling within Groups 611-612 of the I.S.I.C.[1] There is, however, one exception to the U.N.'s definition. Petrol filling stations, which are operated by GORA have been included in the manufacturing sector (Oil Refining).[2]

$ 2. SOURCES AND METHODS OF ESTIMATION

The estimating procedure of capital formation in this sector does not differ basically from the procedure followed for other sectors. It consisted of employing the expenditure method in the case of public GFCF, and the commodity-flow method in determining private GFCF.

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1) U.N. Statistical Paper, Series M, No. 4, Rev. 1 (New York, 1958).
2) Haseeb, K., The National Income of Iraq, 1953-1961, (R.I.I.A., Oxford University Press, 1964) p.136.

2.1. Public GFCF

The public sector's contribution to "Wholesale and Retail Trade" is insignificant, and is limited to the activities of the Tobacco Monopoly Administration, Government Sales Administration (established in 1959), and the Date Association.[1)]

For the purpose of this study, however, the public sector is confined to the Tobacco Monopoly Administration, for the following reasons :

a. The final accounts of the Government Sales Administration for the fiscal years 1960/1961, 1961/1962, and 1962/1963 showed no capital expenditure other than some ID 85 on furniture and fixtures.

b. The Date Association (now the Iraqi Date Administration) is included in the manufacturing sector with other Government manufacturing establishments. It is so treated because almost all its capital expenditure during 1957-1962 was on machinery and equipment used for "processing" dates rather than anything else.

So far as the capital expenditure of the Tobacco Monopoly Administration[2)] is concerned, reliance was made upon its final accounts, which

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1) Ibid., p.142.

2) The Tobacco Monopoly Administration was established in 1939 by Law No. 35. Its function is the purchase and selling of raw tobacco; the licensing of the manufacture, importation, wholesaling and retailing of cigarettes. It also controls the importation of other requisites of the cigarette manufacture.

were obtained by the writer directly.

Derivation of the capital expenditure from the final accounts was not, however, as straight-forward as in the case of other public agencies, because the Tobacco Monopoly Administration did not prepare the final accounts of 1960, 1961, and 1962 separately. Only one set of accounts was made covering the period 1960-1962.[1] Thus, gross additions to fixed assets from the beginning of 1960 until the end of 1962 had to be distributed. The distribution was made by using the rate of depreciation and the increase in the amount of annual depreciation (derived from the profit and loss account) of each type of asset, as a yardstick.

The resulting estimates are shown in Table XI-1. It should be noticed that in this table item 2 represents expenditure on the construction of certain types of warehouses which are built of steel and can be dismantled. They are nearer to shelters than to proper warehouses.

2.2. Private GFCF

Private GFCF in this sector is estimated in the manner described in Chapter III. It consisted of the allocation of proportion of total private investment in non-residential buildings and in furniture and fixtures,

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1) In fact, only the balance sheets of 1960-1962 were consolidated, while the profit and loss account was given for each year independently.

as shown in Tables III-25 and III-26, respectively.

Since the Tobacco Monopoly Administration had no investment in machinery and equipment, private investment in this type of asset is represented by the control total of machinery and equipment shown in Table III-21. Investment in transport equipment, on the other hand, is the difference between the control total (Table III-23, item 1(e)) and public investment (Table XI-1, item 4a).

* * * * *

TABLE XI-1

CLASSIFICATION OF GFCF IN WHOLESALE AND RETAIL TRADE BY TYPE OF ASSET, 1957-1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings:						
a. Public	778.4	76.0	100.0	162.0	31.0	30.0
b. Private	1320.0	1064.5	1289.0	647.6	1552.8	1441.6
Total 1 :	2098.4	1140.5	1389.0	809.6	1583.8	1471.6
2 Other Construction and Works:						
a. Public	210.0	100.0	57.0	80.0	50.0	53.5
b. Private	-	-	-	-	-	-
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Public	-	-	-	-	-	-
b. Private	19.6	23.8	17.1	19.0	12.4	15.2
(ii) Furniture and Fixtures						
a. Public	1.0	1.0	2.0	2.0	2.5	1.5
b. Private	580.0	582.3	555.0	808.0	834.0	856.7
Total 3 :	600.6	607.1	574.1	829.0	848.9	873.4

(Continued)

TABLE XI-1 (continued)

4 Transport Equipment:						
a. Public	-	4.2	2.0	3.0	3.8	1.0
b. Private	307.7	250.9	146.1	420.0	507.5	522.2
Total 4 :	307.7	255.1	148.1	423.0	511.3	523.2
5 TOTAL GFCF at Current Prices:						
a. Public	989.4	181.2	161.0	247.0	87.3	86.0
b. Private	2227.3	1921.5	2007.2	1894.6	2906.7	2835.7
GRAND TOTAL :	3216.7	2102.7	2168.2	2141.6	2994.0	2921.7

TABLE XI-2

CLASSIFICATION OF GFCF IN WHOLESALE AND RETAIL TRADE BY TYPE OF ASSET, 1957-1962

(at Constant (1957) Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings:						
a. Public	778.4	85.0	101.6	155.5	30.0	29.9
b. Private	1320.0	1189.4	1310.0	621.5	1500.3	1435.8
Total 1 :	2098.4	1274.4	1411.6	777.0	1530.3	1465.7
2 Other Construction and Works:						
a. Public	210.0	111.7	57.9	76.8	48.3	53.3
b. Private	-	-	-	-	-	-
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Public	-	-	-	-	-	-
b. Private	19.6	23.2	16.0	18.5	12.0	14.9
(ii) Furniture and Fixtures						
a. Public	1.0	1.0	2.2	2.1	2.9	1.8
b. Private	580.0	600.3	605.2	868.6	962.0	1016.2
Total 3 :	600.6	624.5	623.4	888.7	976.9	1032.9

(Continued)

TABLE XI-2 (continued)

4 Transport Equipment:						
a. Public	-	4.0	1.8	2.6	3.3	0.8
b. Private	307.7	242.2	129.0	360.8	442.5	441.0
Total 4 :	307.7	246.2	130.8	363.4	445.8	441.8
5 TOTAL GFCF at Constant Prices:						
a. Public	989.4	201.7	163.5	237.0	84.5	85.8
b. Private	2227.3	2055.1	2060.2	1869.4	2916.8	2907.9
GRAND TOTAL :	3216.7	2256.8	2223.7	2106.4	3001.3	2993.7

CHAPTER XII

BANKING AND INSURANCE

§ 1. DEFINITION

The definition of this sector as laid down by the U.N. Statistical Office in its I.S.I.C. (Group 620-40) should include all banks and related institutions, insurance carriers of all kinds and dealers in real estate.

According to this definition, the following institutions which operate in Iraq should be included in this sector :

1. The Central Bank of Iraq (CBI)
2. Commercial Banks
3. Specialized Banks
4. Credit Co-operatives
5. The Post Office Saving Deposit
6. Insurance Companies
7. Sarrafs[1)]
8. Real Estate Dealers

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1) Sarrafs are "small, local indigenous banks which have a long history behind them. They deal mainly in foreign exchange, though they also make

However, due to the scarcity of data, and in order to avoid guesswork, certain institutions are excluded from this sector. They are :

1. Credit Co-operatives. These institutions were excluded[1] because until the end of 1961, only three existed in the country with total paid-up capital of ID 39.

2. The Post Office Saving Deposit. The activity of this department is part of the post office activities in general. It is not possible to separate its capital expenditure (if any) from that of the Directorage-General of Post, Telegraphs and Telephones. Hence the investment of the post office as a whole is included in the sector "Transportation, Storage and Communications.

3. Sarrafs. In practice, capital expenditure made by sarrafs is negligible and is not worth accounting for. The only investment in fixed assets that a sarraf might make is on furniture, which usually consists of a

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loans to individuals known to them. In general, the credits are for small amounts except in the case of a few big Sarrafs." (See Reports on Census of Services and Service Industries in Iraq for 1957 (1958), p.3. P.B.S., Baghdad.) The Law for the Control of Banking of 1950, defines the Sarraf as a "person or company licensed to deal in banking in Iraq (Art. 1(3))"; his disposable paid-up capital in Iraq must not be less than ID.12000 if the relevant operations are in Baghdad; but less than ID.12000 in other regions (Art. 4(4)). However, in addition to licensed sarrafs, unlicensed sarrafs do exist and carry out banking activities without the necessary licence from the CBI.

1) Dr. Haseeb also excluded them from his estimates of the National Income of Iraq because their net output was so negligible which did not warrent their inclusion.

desk, a chair and a safe. Moreover, since the number of sarrafs, as shown below, has remained fairly constant throughout the period of this study, and since it is unlikely that sarrafs who were in business before 1957 will make new investment in furniture and fixtures, we decided to exclude them from this sector.

TABLE XII-1

NUMBER OF SARRAFS, 1956 - 1962

Year	Number
1956	17
1957	18
1958	20
1959	20
1960	20
1961	20
1962	20

Sources: Commerce, A Quarterly Economic Review published by the Baghdad Chamber of Commerce, Vol. XXV, No. 2, 1962.

4. Real Estate Dealers. Real estate dealers are those who derive their income from the letting of houses, flats and other properties which they own. Rent collecting agencies and house and estate agents are also regarded as dealers in real estate. Their capital expenditure - furniture and fixtures - is similar to that of sarrafs. They are exlcuded from

this sector for the following reasons:

a. No information exists on their number and size of business for the period under review, other than the number of house agents given in the 1957 Census of Services.

b. Analysis of the final (audited) accounts of four large companies (the paid-up capital of which accounted for more than 65 per cent of the total paid-up capital of all estate companies during 1960), which are registered at the Directorate-General of Registration and Supervision of Companies (DGRSC) as "estate companies" revealed that their main activities are not their dealings in real estate but are either the construction of buildings and/or the manufacture of building materials, especially bricks and ceramic tiles. This means that they should be classified either in the construction or the manufacturing sector.[1)]

The exclusion of the above institutions from this sector by no means implies the underestimation of GDFCF in the country as a whole. It simply means that investment made by co-operatives, sarrafs, and real

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1) The accounts were collected from the DGRSC where it is possible to examine the accounts of any company upon payment of 100 Fils (2 shillings) fees for each company, provided it is registered at the DGRSC.
Dr. Haseeb in his estimate of the value added in real estate used the ratio of value added to paid-up capital of one of these companies and the total paid-up capital of all estate companies in addition to the index of building licences as an indicator. See Haseeb, K., The National Income of Iraq, 1953-1961, p.148.

estate dealers is implicitly distributed among the various private sectors; while the capital expenditure of the Post Office Saving Deposit is included, as we mentioned earlier, in the "Transportation, Storage and Communications" sector.

$ 2. BANKING SYSTEM[1)]

Banking operations in Iraq are carried out by private as well as by public institutions. Private banks are all commercial; while public banks are of two types: commercial and specialized. The responsibility of note-issue and other credit and menetary matters is vested in the Central Bank which was set up in 1947, though decisions of its Board are subject to approval by the Minister of Finance.

Commercial banks (one of which is entirely Government-owned and handles more than 50 per cent of banking transactions) are subject to control by the CBI and are required to keep at least 15 per cent of their total deposits with the CBI. But in practice, the CBI's control is limited, and

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1) In July 1964 all private banks, among which there are three wholly Iraqi banks, and two with a majority Iraqi shareholding as well as the local branches of five foreign banks, were nationalized and put under the control of the General Organization of Banking. Insurance Companies, too, were nationalized and put under the control of the General Insurance Organization. But since our study does not go beyond the year 1962, the nationalization will not affect the distribution of fixed capital formation in this industry group between public and private sectors.

changes in the latter's discount rate have little effect upon their lending rates. In addition to their banking activities, and because of the absence of an organized stock-exchange in the country, the commercial banks operate as stockbrokers and sell shares to the public.

Specialized banks, on the other hand, are all owned by the Government. They operate in the field of agriculture, industry, construction, etc. They are :

1. The Agricultural Bank
2. The Industrial Bank
3. The Mortgage (Real Estate) Bank
4. The Mortgage (Movable Property) Bank
5. The Co-operative Bank.

The Specialized Banks are of considerable importance as sources of loanable funds. The Agricultural Bank provides mainly short and medium-term finance to farmers for the purchase of seeds, machinery, etc. The Industrial Bank, which was initially concerned with granting loans to larger firms, has started, in recent years, to grant small loans to small and medium sized firms. Besides its lending operations, it also participates in the capital of various industries, where the percentage of participation in the nominal capital varies between 8 and 45 per cent. On average it was about 18 per cent as at the end of 1962 as shown below:

	(ID 000)		
Total Nominal Capital of companies in which the Industrial Bank is a participant:	14605.0	.....	(1)
Participation of the Industrial Bank :	2591.0	.....	(2)
(2) as a percentage of (1) :	17.7%		

The Mortgage (Real Estate) Bank was established in 1948[1] with the object of providing owners of houses with an "opportunity to convert loans secured by mortgages on their properties and bearing high interest into loans supplied by the bank and bearing a more reasonable interest."[2] This field of operation was later (from 1952) extended to advancing loans to private individuals who wished to build new houses and other buildings. The Bank, under Law No. 8 of 1953, was also empowered to purchase land and build houses on its own account for sale, on an instalment basis, under certain specified conditions "to any Iraqi official or employee or any other person who earns an income".[3]

The Mortgage (Movable Property) Bank and the Co-operative Bank, can be regarded as similar to pawnbrokers, who operate in short-term loans secured with movable property. They are of great value from the view-

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1) Law No. 18 of 1948 and its subsequent amendments.
2) Iverson, C., A Report on the Monetary Policy in Iraq; The National Bank of Iraq (the CBI), 1954, pp.34-35.
3) Salter, Lord, The Development of Iraq: A Plan of Action (Iraq Development Board, April 1955).

point of combating usury.

Table XII-3 overleaf shows the lending activity of the above-mentioned five Specialized Banks during 1957-1962.

TABLE XII-2

REGIONAL DISTRIBUTION OF NUMBER OF BANKING INSTITUTIONS OPERATING IN IRAQ AS AT THE END OF 1962

Province	Iraqi Banks	Foreign Banks' Branches
1. Mosul	7	3
2. Sulaimaniya	4	-
3. Arbil	3	1
4. Kirkuk	5	1
5. Diala	5	-
6. Ramadi	4	-
7. Baghdad	41	24
8. Kut	7	-
9. Hilla	7	-
10. Kerbela	10	1
11. Diwaniya	7	—
12. Amara	4	1
13. Nasiriya	4	-
14. Basrah	10	6
TOTAL :	118	37

TABLE XII-3

TOTAL LOANS GRANTED BY SPECIALIZED BANKS, 1957 - 1962

(ID 000)

Year	The Mortgage (Real Estate) Bank	The Agricultural Bank	The Industrial Bank	The Mortgage (Movable Property) Bank	The Co-operative Bank
1957	4465.2	686.1	1093.6	3244.8	10.5
1958	4478.1	631.0	906.2	4379.3	22.7
1959	6018.9	551.1	706.3	5312.9	124.0
1960	5816.0	559.5	568.6	6145.7	67.3
1961	5278.0	910.8	968.1	8057.6	244.3
1962	4213.3	875.9	1194.7	8691.8	535.0

Sources: The Annual Reports of the above Banks and the CBI's Annual Reports.

$ 3. INSURANCE

Like banking, insurance activities are carried out by public and by private institutions which usually take the form of stock companies.

The Government has the complete ownership of one large company, that is the National Insurance Company (NIC). It also participates in the capital of the Iraqi Re-insurance Company, which was established in 1960 with a paid-up capital of ID 5 m.

Three of the 32 private insurance companies are owned by Iraqi nationals, while the rest are branches of foreign insurance companies.

At the beginning of 1960 there were 33 insurance companies operating in Iraq, but with the enforcement of the Iraqi Insurances Act No. 49 of 1960, ten of these companies ceased underwriting because the size of their business was not large enough to warrant their adjustment to the requirement of the new Act. The following table shows the number and nationality of insurance companies before and after the enforcement of the Insurance Act.

TABLE XII-4

INSURANCE COMPANIES

Nationality of Company	No. of Companies before the 1960 Act	No. of Companies after the 1960 Act
1. Iraqi	4	4
2. Egyptian	3	2
3. Lebanese	2	2
4. Jordanian	1	1
5. British	15	9
6. American	1	1
7. French	2	2
8. Italian	1	-
9. Australian	1	-
10. New Zealander	1	1
11. Indian	1	1
12. Swiss	1	-
TOTAL :	33	23

Sources: Directorate-General of Registration and Supervision of Companies, Baghdad.

§ 4. FIXED CAPITAL FORMATION IN BANKING AND INSURANCE

In practice, fixed capital formation in "Banking and Insurance" is limited to buildings, furniture and fixtures (including statistical machines). As it can be seen from Table XII-7 about 84 per cent of the capital expenditure

in this sector is on the buildings in which these institutions carry out their activities, while 15 per cent is on furniture, fixtures and statistical machines, and about 1 per cent is on transport equipment.

Compared with other sectors of the economy, this sector's contribution to GDFCF is the lowest being less than 1 per cent both at current and at constant prices as shown in Table IV-16 above. This, however, is not surprising since these institutions are more concerned with "financial" than with "fixed" investment, i.e. the very nature of banking precludes great investment in illiquid assets.

In Tables XII-5 A and B the distribution of GFCF between public and private banks and insurance companies is given. The tables show that on average, public investment accounted for about 78 per cent of total investment at current and constant prices. The main contributor to this investment during the first three years (1957-1959) was the CBI with its new building which cost more than ID 2 m. For the period 1960-1962, Commercial, Specialized Public banks and the NIC made the major share in public investment as shown in Table XII-8.

With regard to private investment, we see from Table XII-9 that private commercial banks are the only major investors, while, other than some furniture and fixtures, insurance companies make no significant investment in fixed assets.

The Regional Distribution of capital formation in this sector

(Table XII-10) shows that about 94 per cent of the investment is made in Baghdad alone. The remaining 6 per cent is made in the other 13 provinces. This, however, is a natural tendency in most countries where most of the economic activities are concentrated in the Capital.[1)]

§ 5. SOURCES AND METHODS OF ESTIMATION

Discussion on the methods used in arriving at the estimate of fixed capital formation in "Banking and Insurance" may be divided into two parts, according to the type of institutions, as follows :

5.1. Capital Expenditure of Commercial Banks (including CBI)

Commercial banks, like other financial institutions, usually publish their final annual accounts in various ways. One of these is the Annual Reports of the CBI, which give consolidated balance sheets, profit and loss accounts, etc., of all commercial banks operating in the country without distinction between public and private institutions.

Before examining these consolidated final accounts, it was thought that they would provide, like the final accounts of, say, stock com-

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1) The Regional Distribution of the value added in Banking and Insurance in 1956 shows that about 86 per cent is made in Baghdad. See Haseeb, K., The National Income of Iraq, 1953-1961, Table 107.

TABLE XII-5A

GFCF IN BANKING AND INSURANCE, 1957 - 1962

(at Current Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	597.6	75.4	194.7	24.6	792.3	100.0	100.0
1958	747.9	76.4	230.9	23.6	978.8	100.0	123.5
1959	710.3	85.0	126.4	15.0	836.7	100.0	104.3
1960	420.6	81.0	98.5	19.0	519.1	100.0	65.5
1961	684.5	78.0	193.8	22.0	878.3	100.0	110.9
1962	918.9	72.0	356.8	28.0	1275.7	100.0	161.0

Sources: Table XII- 6 below.

TABLE XII-5B

GFCF IN BANKING AND INSURANCE, 1957 - 1962

(at Constant (1957) Prices)

Year	Public		Private		TOTAL		1957 = 100
	ID 000	%	ID 000	%	ID 000	%	
1957	597.6	75.4	194.7	24.6	792.3	100.0	100.0
1958	832.2	77.2	246.4	22.8	1078.6	100.0	136.1
1959	720.7	85.0	127.2	15.0	847.9	100.0	107.0
1960	412.5	81.1	95.9	18.9	508.4	100.0	64.2
1961	668.2	77.5	193.8	22.5	862.0	100.0	108.8
1962	917.9	71.6	364.1	28.4	1282.0	100.0	161.8

Sources: Table XII-7 below.

TABLE XII-6

CLASSIFICATION OF GFCF IN "BANKING AND INSURANCE" BY TYPE OF ASSET, 1957-1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings:						
a. Public	553.1	720.7	674.5	325.4	623.0	849.0
b. Private	91.3	136.3	81.0	72.4	115.3	220.4
Total 1 :	644.4	857.0	755.5	397.8	738.3	1069.4
2 Other Construction and Works:						
a. Public	-	-	-	-	-	-
b. Private	-	-	-	-	-	-
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Public	28.1	17.1	22.2	16.9	22.6	43.9
b. Private	51.2	53.7	27.9	7.1	31.8	82.7
Sub-total 3(i) :	79.3	70.8	50.1	24.0	54.4	126.6
(ii) Furniture and Fixtures						
a. Public	14.7	8.8	12.4	75.8	37.3	21.3
b. Private	49.5	35.3	16.5	14.7	39.0	53.7
Sub-total 3(ii):	64.2	44.1	28.9	90.5	76.3	75.0
Total 3 :	143.5	114.9	79.0	114.5	130.7	201.6

(Continued)

TABLE XII-6 (continued)

4 Transport Equipment:						
a a. Public	1.7	1.3	1.2	2.5	1.6	4.7
b. Private	2.7	5.6	1.0	4.3	7.7	-
Total 4 :	4.4	6.9	2.2	6.8	9.3	4.7
5 TOTAL GFCF in Banking and Insurance :						
a. Public	597.6	747.9	710.3	420.6	684.5	918.9
b. Private	194.7	230.9	126.4	98.5	193.8	356.8
GRAND TOTAL :	792.3	978.8	836.7	519.1	878.3	1275.7

TABLE XII-7

CLASSIFICATION OF GFCF IN "BANKING AND INSURANCE" BY TYPE OF ASSET, 1957-1962

(at Constant (1957) Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings:						
a. Public	553.1	805.2	685.5	312.3	601.9	845.6
b. Private	91.3	152.3	82.3	69.5	111.4	219.5
Total 1 :	644.4	957.5	767.8	381.8	713.3	1065.1
2 Other Construction and Works:						
a. Public	-	-	-	-	-	-
b. Private	-	-	-	-	-	-
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Public	28.1	16.7	20.7	16.5	21.9	43.0
b. Private	51.2	52.3	26.0	6.9	30.7	80.9
Sub-total 3(i) :	79.3	69.0	46.7	23.4	52.6	123.9
(ii) Furniture and Fixtures						
a. Public	14.7	9.1	13.5	81.5	43.0	25.3
b. Private	49.5	36.4	18.0	15.8	45.0	63.7
Sub-total 3(ii):	64.2	45.5	31.5	97.3	88.0	89.0
Total 3 :	143.5	114.5	78.2	120.7	140.6	212.9

(Continued)

TABLE XII-7 (continued)

4 Transport Equipment:						
a. Public	1.7	1.2	1.0	2.2	1.4	4.0
b. Private	2.7	5.4	0.9	3.7	6.7	-
Total 4 :	4.4	6.6	1.9	5.9	8.1	4.0
5 TOTAL GFCF in Banking and Insurance :						
a. Public	597.6	832.2	720.7	412.5	668.2	917.9
b. Private	194.7	246.4	127.2	95.9	193.8	364.1
GRAND TOTAL :	792.3	1078.6	847.9	508.4	862.0	1282.0
1 as % of 5	81.3	88.8	90.6	75.1	82.7	83.1
2 as % of 5	-	-	-	-	-	-
3 as % of 5	18.1	10.6	9.2	23.7	16.3	16.6
4 as % of 5	0.6	0.6	0.2	1.2	1.0	0.3
	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Figures of Table XII-6 above deflated by the Price Index Numbers given in Chapter II above.

TABLE XII-8

DETAILED PUBLIC GFCF IN BANKING AND INSURANCE, 1957 - 1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Central Bank	409.6	587.7	578.5	135.3	52.0	51.0
b. Specialized Banks	135.2	96.9	67.0	82.3	223.2	155.2
c. Commercial Banks	8.3	36.1	29.0	84.4	244.7	429.7
d. National Insurance Company	-	-	-	23.4	103.1	213.1
Total 1 :	553.1	720.7	674.5	325.4	623.0	849.0
2 Other Construction and Works	-	-	-	-	-	-
3 Machinery and Other Equipment						
(i) Machinery and Equipment						
a. Central Bank	18.2	7.4	9.0	1.4	5.1	0.6
b. Specialized Banks	5.6	4.9	8.0	6.5	11.8	3.2
c. Commercial Banks	4.3	4.8	5.2	8.4	5.3	39.4
d. National Insurance Company	-	-	-	0.6	0.4	0.7
Sub-total 3(i) :	28.1	17.1	22.2	16.9	22.6	43.9

(Continued)

TABLE XII-8

3 (ii) Furniture and Fixtures						
a. Central Bank	1.1	1.0	0.3	63.6	23.0	3.0
b. Specialized Banks	7.2	6.5	9.0	8.6	10.0	5.5
c. Commercial Banks	6.4	1.3	3.1	3.6	4.3	11.8
d. National Insurance Company	-	-	-	-	-	1.0
Sub-total 3(ii):	14.7	8.8	12.4	75.8	37.3	21.3
Total 3 :	42.8	25.9	34.6	92.7	59.9	65.2
4 Transport Equipment						
a. Central Bank	-	-	0.2	1.1	0.1	-
b. Specialized Banks	1.7	1.3	1.0	1.4	1.5	2.2
c. Commercial Banks	-	-	-	-	-	2.5
d. National Insurance Company	-	-	-	-	-	-
Total 4 :	1.7	1.3	1.2	2.5	1.6	4.7
5 TOTAL PUBLIC GFCF in Banking and Insurance :	597.6	747.9	710.3	420.6	684.5	918.9

TABLE XII-9

DETAILED PRIVATE GFCF IN BANKING AND INSURANCE, 1957 - 1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Commercial Banks	91.3	136.3	81.0	72.4	115.3	220.4
b. Insurance Companies	-	-	-	-	-	-
Total 1 :	91.3	136.3	81.0	72.4	115.3	220.4
2 Other Construction and Works	-	-	-	-	-	-
3 Machinery and Other Equipment						
(i) Machinery and Equipment						
a. Commercial Banks	50.7	53.2	27.1	5.1	27.8	80.7
b. Insurance Companies	0.5	0.5	0.8	2.0	4.0	2.0
Sub-total 3(i) :	51.2	53.7	27.9	7.1	31.8	82.7

(Continued)

TABLE XII-9 (continued)

3 (ii) Furniture and Fixtures						
a. Commercial Banks	49.0	33.7	15.0	9.5	30.2	48.8
b. Insurance Companies	0.5	1.6	1.5	5.2	8.8	4.9
Sub-total 3(ii):	49.5	35.3	16.5	14.7	39.0	53.7
Total 3 :	100.7	89.0	44.4	21.8	70.8	136.4
4 Transport Equipment						
a. Commercial Banks	2.7	5.6	1.0	4.3	7.7	-
b. Insurance Companies	-	-	-	-	-	-
Total 4 :	2.7	5.6	1.0	4.3	7.7	-
TOTAL :	194.7	230.9	126.4	98.5	193.8	356.8

TABLE XII-10

REGIONAL DISTRIBUTION OF GFCF IN "BANKING AND INSURANCE", 1962

(at Current Prices)

(ID 000)

PROVINCE (LIWA)	Non-Residential Buildings (1)	Machinery and Other Equipment			Transport (5)	TOTAL CAPITAL FORMATION (6)
		Machinery and Equipment (2)	Furniture and Fixtures (3)	TOTAL (2)+(3) (4)		
1. Mosul	-	4.1	1.4	5.5	-	5.5
2. Sulaimaniya	-	0.1	1.4	1.5	-	1.5
3. Arbil	0.1	-	-	-	-	0.1
4. Kirkuk	-	3.3	0.7	4.0	-	4.0
5. Diala	-	-	1.2	1.2	-	1.2
6. Ramadi	-	-	-	-	-	-
7. Baghdad	1027.8	102.0	60.8	162.8	3.4	1194.0
8. Kut	-	-	-	-	-	-
9. Hilla	-	3.2	0.6	3.8	-	3.8
10. Kerbela	10.5	5.1	3.9	9.0	-	19.5
11. Diwaniya	-	0.1	-	0.1	-	0.1
12. Amara	-	0.1	0.1	0.2	-	0.2
13. Nasiriya	-	0.1	2.5	2.6	-	2.6
14. Basrah	31.0	8.5	2.4	10.9	1.3	43.2
TOTAL 1-14 :	1069.4	126.6	75.0	201.6	4.7	1275.7

panies, a good and reliable source of information on the capital investment in fixed assets classified by types. But on examining them we found that the consolidated balance sheets of commercial banks give more details about "financial" assets than about fixed. The latter appears as one item called "other assets" with no distinction between building, furniture and other fixed assets which are usually classified in the final accounts of other firms.

To show how disappointing commercial banks' final accounts are for our purposes, an actual consolidated balance sheet for the year 1962 is given below.

TABLE XII-11

CONSOLIDATED BALANCE SHEET OF COMMERCIAL BANKS, 1962

	ID 000
(A) Liabilities	
1. Paid-up Capital	9205
2. Reserves	3977
3. Provisions for Income Tax and other provisions and Profits ready for distribution	1036
4. Balance of Profit and Loss account	1646
5. Debit Balances with Branches in Iraq	10736
6. " " " " licensed Banks in Iraq	1517
7. " " " Abroad	968
8. Government Departments Deposits - Current account	3041
9. " " " " " " " - Time Deposits	8437
10. Deposits Against Guarantees and Credits	6499
11. Current Accounts	33078
12. Savings Accounts	19866
13. Time Deposits	8019
14. Other Deposits	1453
15. Other Liabilities	7425
16. As per Contra	98858
(Continued) TOTAL ;	215761

TABLE XII-11 (continued)

(B) Assets			ID 000
1. Notes and Coins in Cash			3940
2. Credit Balances with Branches in Iraq			11009
3. " " " " licensed Banks in Iraq			1646
4. Deposits with the Central Bank :			
(a)	Current Account	7849	
(b)	Iraqi Treasury Bills	1677	
(c)	Iraqi Government Bills	2195	11721
5. Deposits and Investments Payable Abroad			11997
6. Government Investments and Loans :			
(a)	Iraqi Treasury Bills	2450	
(b)	Iraqi Government Bills	30	
(c)	Other Loan and Advances granted to Government and Semi-Government Depts.	1293	3773
7. Discounted Bills			23861
8. Guaranteed Advances			12139
9. Non-guaranteed Advances			26245
10. Other Assets			10571
11. As per Contra			98859
		TOTAL :	215761

Sources: Central Bank of Iraq.

To achieve our aim in estimating "Banking and Insurance" capital formation from the expenditure side, it was decided to obtain the information from the banks directly. This was done during a visit to Iraq in the summer of 1965 by sending, through the Department of Statistics of the CBI, a special questionnaire to the head offices of commercial banks, asking them to provide the CBI with the annual capital expenditure from 1956-1963 of

each head office and its branches. The questionnaire was prepared in such a way as to achieve the purpose of estimating capital expenditure on each type of asset. A covering letter, signed by the Governor of the CBI, in which he urged the banks to send their replies promptly, accompanied each questionnaire,[1] And indeed, in a very short time all the information needed was obtained.

However, in order to check the information collected from the head offices of commercial banks, another questionnaire was sent out to all branches of these banks throughout Iraq (including the head office) enquiring about capital expenditure on each type of asset during 1962. Aggregating the information collected in this way gave exactly the same total as was originally supplied by head offices. This facilitated the regional distribution of their capital expenditure as shown in Table XII-10.

5.2. Capital Expenditure of Specialized Banks and Insurance Companies

Capital expenditure of the five Specialized Banks (and their branches) and Insurance Companies was derived from their final accounts. These accounts are presented more or less in the same way as those of stock and limited liability companies in which the assets are classified by type,

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1) Since all commercial banks were nationalized in 1964 and put under the control of the General Organization for Banking, the head of which is the Governor of the CBI, no bank could refuse to send any information requested by the CBI.

with their original cost, the accumulated depreciation and the current book value (remaining balance) are given.[1] Some of the accounts also give the annual additions to fixed assets separately from their original cost.

However, in the case of one Specialized Bank (the Industrial Bank) the final accounts of one year (1958) could not be obtained. To estimate its gross investment during that year recourse was made to the 1959 final accounts which presented the current book values of fixed assets in 1958 in a separate column in the balance sheet for the purposes of comparison.[2]

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1) The remaining balance of an asset equals its original cost, less accumulated depreciation as at the end of each accounting period.

2) The estimation was made first by calculating the original cost of each type of asset during 1958 by adding to the remaining balance the accumulated depreciation as at the end of 1959, and then deducting the annual depreciation of the asset for 1959 (given in the profit and loss account). Second, the original cost of the asset in 1957 was then deducted from its counterpart in 1958 and the gross addition in the latter year was thus obtained. The procedure is described as follows:

Put : R_1 = the remaining balance of a particular asset as at the end of 1958

D_2 = the accumulated depreciation of the asset as at the end of 1959

d_2 = the annual depreciation of the asset during 1959

C_o = the original cost (undepreciated) of the asset as at the end of 1957

C_1 = the original cost (undepreciated) of the asset as at the end of 1958

I_1 = the gross addition to the asset during 1958

then:

$$C_1 = R_1 + D_2 - d_2$$

and

$$I_1 = C_1 - C_o .$$

With reference to the reliability of the final accounts of these institutions which formed the basis of our estimates of their gross fixed capital formation, there is no reason to doubt their high quality and accuracy, since they are subject to qualified auditing.

As to the validity of deriving the annual addition to a particular asset, by taking the difference between its original cost in two consecutive balance sheets, we think that it is as correct as if the addition were directly derived from the capital expenditure accounts, especially when the original cost of the assets represents the undepreciated purchase value.

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CHAPTER XIII

OWNERSHIP OF DWELLINGS

This chapter is divided into two parts. Part One sets out the definition and scope of this industry, with a brief outline of the role of Government in investment in housing. The summary of the estimates is also embodied in this part.

Part Two, on the other hand, contains details on the sources and methods of estimation.

PART ONE

$ 1. DEFINITION, SCOPE AND COVERAGE

"Ownership of Dwellings" is a special sector suggested by the United Nations' Statistical Office for the classification of domestic product by industry. It has no counterpart in the International Standard Industrial Classification of All Economic Activities (I.S.I.C.). The reason for this arises from the fact that by using the establishment as the unit of classification for showing the contribution of different trades, "the income from the use of land and buildings is logically regarded as part of the contribution of the establishment making use of the property, irrespective of the ownership of the property."[1] So far as dwellings are concerned, therefore, the income originating in their use or the amount invested in them should explicitly be shown in the national income or capital formation estimates.

The definition of "dwellings" adopted here conforms with that laid down by the U.N.S.O. in its various publications on the subjects of national income and capital formation. It simply consists of permanent housekeeping dwelling units in various types of structure. A housekeeping

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1) U.N.S.O., Methods of National Income Estimation, Studies in Methods: Series F, No. 8, (New York 1955) p.54.

dwelling unit is defined as living accommodation containing housekeeping facilities which are regarded as integral parts of the units. Prefabricated houses (if any) are included on the condition that they are permanent and made of new materials. Trailers, houseboats and other temporary structures are excluded. Excluded also, are living quarters provided for superintendents, caretakers, or watchmen in warehouses, factories and other non-residential buildings on the grounds that construction of residence in these cases is incidental to these buildings.

Residential non-housekeeping construction, such as hotels, motels, students' hostels and the like are not part of this sector but dealt with elsewhere as Non-Residential Buildings.

"Houses with Shops" which are used for residential and non-residential purposes should, in principle, be allocated to the various industries of use according to the rents paid or any other suitable criterion such as cubic metres occupied. In practice, however, it was difficult for us to obtain reliable data which permits such an allocation, and due to the fact that investment in this type of house does not represent more than 3 per cent of total investment in urban dwellings (see Table XIII-5), we have considered "houses with shops" as wholly residential without any adjustment of the figures. On the other hand, "estate buildings" consisting of flats and shops were excluded from this sector on the grounds that in Iraq the habit of living in apartments is not common and these buildings are usually used as business quarters and

offices.

"Expenditure", includes the payment for the building proper, but not for the value of land. Also included in the expenditure estimates is the value of all types of immovable equipment which, when installed, become an integral part of the structure and necessary to any general use of the structure. Plumbing, air condition ducts, and lighting equipment are examples of service facilities which are considered as part of construction.

Moreover, capital formation in dwellings does not represent the value of dwelling units completed each year, but rather the amount spent on the construction of dwellings; and to this end it represents the value of the change in work-in-progress on dwellings as well as the value of such dwellings started and completed during the year.[1)]

$ 2. THE TREATMENT OF LAND

Land on which the dwelling units are being built poses particular problems in a study of capital formation and its finance in residential

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1) It is noteworthy to indicate at this stage that in this chapter we deal only with investment in new residential housekeeping construction (and also major alterations and renovations of the existing dwellings) as an end product, rather than with capital formation of the firms that undertake the construction of residential buildings, i.e. the construction industry. In this sense, capital formation in monetary terms, therefore, means the expenditure for the construction of dwellings and additions and major alterations; in physical terms it means a new dwelling unit designed for housekeeping.

construction. New capital comprises not only the buildings proper but also the non-structural site improvements associated with residential buildings, to the extent that they are privately financed, such as grading and landscaping, connection to sanitary and sewers, driveways, streets and sidewalks. Land usable for residential and other construction is, in fact, a highly processed product requiring substantial inputs.[1)]

However, in our estimate the value of land in itself is excluded and treated as a used asset,[2)] while expenditure for the improvement of building sites (area between the external walls of the house) is automatically accounted for in the cost of constructing the dwelling unit. Expenditure for improving land situated outside the boundary of the house, such as street levelling and surfacing, is usually made by public authorities and hence considered as part of the capital expenditure on "other construction and works" of the public authorities in the appropriate sectors.

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1) Blank, D.M., & Winnick, L., 'Capital Formation in Private Non-Farm Residential Construction', National Bureau of Economic Research, Vol.19, (Princeton University Press, Princeton 1956) p.4.

2) U.N.Statistical Office, Studies in Methods, Series F. No. 3, paras. 35, 36, 37, pp.10-11.

$ 3. THE ROLE OF GOVERNMENT IN INVESTMENT IN HOUSING[1)]

Before 1955 the Government, in effect, had no adequate housing programme; and its expenditure on housing projects from the year in which the Development Board was established till the end of 1956 did not exceed ID 4.5m. This amount, compared with the Board's expenditures on other projects, is relatively very small.

When the 1956 Housing Census revealed that out of 741,106 housing units only 157,998 were built of brick or stone, the Development Board started seriously planning for a housing programme which could provide better houses and environment for some 1.5 million families.[2)] This programme was both ambitious and imaginative. Knowing that better environment and living conditions does not simply mean a housing programme but also other facilities associated with it such as parks, schools, shopping centres, better roads, etc., the Board drew up a programme which was

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1) It is to be noted that despite the distinction in this chapter between Public and Private investment in dwellings, all Government financed dwellings construction are treated as part of Private GFCF in the final classification. The agrument for this is that these dwellings are eventually occupied by private individuals who get these houses either free or repay their costs of construction to the Government within a certain number of years. Moreover, since our classification of GDFCF is made according to the use of the assets, not their sources of finance, the treatment of investment in dwellings as wholly private is fully justified.

2) In 1957 it was estimated that only 100,000 out of 800,000 families in Iraq were adequately housed. See Government of Iraq: Development Board, Technical Section 5: The Housing Programme of Iraq, March 1957.

implemented in stages. The first stage was scheduled for completion in 1962 and was called the "Basic Foundation Programme". This stage was divided into two sub-stages. The first entailed the construction of new houses and the improvement of old ones. The second constituted a foundation for future action, including experimental study of modern communities, construction techniques, and building materials, the establishment of a research laboratory, and the training of administrative and technical personnel.[1] It was expected that if by 1962 this programme were completed, 40,200 houses would have been provided for 256,000 families. Nearly 50% of these houses were allotted to urban areas, and the remainder were for people in certain categories such as industrial workers, civil servants, etc. The programme also envisaged the construction of urban plots upon which the owners can build their own houses. Rural areas, too, did not escape the planners' attention. They suggested the construction of some 30,000 concrete foundations upon which peasants would be able to erect their houses.

Further, the programme was planned in such a way that the main beneficiaries were those of low income as shown in Table XIII-1 below.

However, before the complete accomplishment of this programme the Board was abolished in 1959 and a Ministry of Planning was

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1) Langley, K.M., The Industrialization of Iraq, A Harvard Middle Eastern Monograph (Harvard University Press, Cambridge, Massachusettes, 1961) p.231.

TABLE XIII-1

ALLOTMENT OF URBAN AREA HOUSES AND LAND PLOTS IN THE DEVELOPMENT BOARD'S PROGRAMME BY INCOME CATEGORIES

Annual Income (ID)	Number of Rooms in each house	Type of House	Number of Houses to be built	% of Houses in each income group	Plots of Land	
					Number	% of Plots in each income group
120	1 - 2	1 storey	8,000	40.0	7,000	35.0
240	2 - 3	" "	6,000	30.0	5,000	25.0
360	3 - 4	" "	3,000	15.0	3,000	15.0
600	4 - 5	1-2 "	2,000	10.0	2,000	10.0
940	4 - 5	2 "	1,000	5.0	1,500	7.5
1200	4 - 5	2 "	-	-	1,000	5.0
1800	6	2 "	-	-	300	1.5
2400	7	2 "	-	-	200	1.0
TOTAL :			20,000	100.0	20,000	100.0

Sources: Ministry of Development, Technical Section 5, The Housing Programme; The Government of Iraq, Baghdad, (undated).

created to take over the task.[1] A provisional Economic Plan for the period 1960-63 was then drawn up by the new Ministry and was soon followed by a "Detailed Economic Plan" for the period 1961-1966. In this, ID 24 m. (which represents only 4.3 per cent of total allotments) is allotted for housing projects. Nearly 69 per cent of this is allocated to Baghdad Province.

The project includes the construction of 13,800 houses for government officials, employees, and army officers. It also comprises the completion and construction of :

1. 1911 houses for serifa dwellers;
2. a special village for cattle and buffalo owners comprising 220 houses with 220 animal pens;
3. 8800 plots of land on which houses could be built by the owners themselves;
4. complementary housing projects, such as market places, dirty water filtration, public baths, administrative centres, health centres, and also the paving of roads linking these houses with nearby cities and towns.

Table XIII-2 shows the regional (provincial) distribution of

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1) The actual task of executing government housing projects is entrusted to the Ministry of Works and Housing which was created in 1959 too.

TABLE XIII-2

HOUSING PROJECTS IN THE DETAILED ECONOMIC PLAN 1961/62 - 1965/66

(ID 000)

PROVINCE	Total Allotment over the years of the Plan	Annual Allotment					% Allotment for each Province
		1961/62	1962/63	1963/64	1964/65	1965/66	
Mosul	700.0	250.0	250.0	100.0	100.0	-	2.9
Sulaimaniya	440.0	220.0	150.0	70.0	-	-	1.8
Arbil	990.0	290.0	400.0	175.0	125.0	-	4.1
Kirkuk	340.0	70.0	70.0	80.0	90.0	30.0	1.4
Diala	-	-	-	-	-	-	-
Ramadi	300.0	80.0	100.0	100.0	20.0	-	1.3
Baghdad	16524.0	4540.0	4790.0	3086.0	2248.0	1860.0	68.7
Kut	300.0	90.0	75.0	75.0	60.0	-	1.2
Hilla	1024.0	600.0	294.0	115.0	150.0	-	4.3
Kerbela	1590.0	550.0	500.0	295.0	245.0	-	6.6
Diwaniya	451.0	150.0	150.0	120.0	31.0	-	1.9
Amara	300.0	150.0	100.0	50.0	-	-	1.2
Nasiriya	350.0	100.0	100.0	100.0	50.0	-	1.5
Basrah	750.0	680.0	60.0	10.0	-	-	3.1

(Continued)

TABLE XIII-2 (c ntinued)

1. Total Allotment for Housing Projects:	24059.0	7770.0	7039.0	4376.0	2984.0	1890.0	100.0
2. Total Allotment of the Economic Plan as a Whole :	556340.0	97139.0	108056.0	117624.0	119605.0	113916.0	
3. (1) as a % of (2) :	4.3	8.0	6.5	3.7	2.5	1.7	
4. Annual Allotment for Housing as % of total allotment for Housing:		32.3	29.2	18.2	12.4	7.9	

total and annual allotment for housing projects contemplated in the Plan for the years 1961-1966.

Table XIII-3, on the other hand, presents actual government investment expenditure on housing from 1957-1962. And it is to be noted that the figures in this table represent only expenditure on housing proper, i.e. they do not include expenditure on complementary projects to housing such as those mentioned in Paragraph 4 above.

TABLE XIII-3

PUBLIC ANNUAL GROSS INVESTMENT IN HOUSING, 1957-1962

Year	Gross Investment (ID 000)	1957 = 100
1957	6557.2	100
1958	5399.4	82
1959	7071.4	108
1960	6604.0	101
1961	6319.2	96
1962	5538.5	84

Sources: Ministry of Finance, Annual Reports of the Directorate General of Accounts on the Development and Planning Board's Expenditure, 1957/1958 - 1962/1963 (Government Press, Baghdad, 1959-1964.

From the table we notice that over the six years from 1957-1962 the Government has spent about ID 40 m. on housing, or an annual average of just over ID 6 m. Comparing this total with the ID 4.5 m. spent on the same purpose during the six years 1951-1956 we deduce that the Government's housing policy began to be more fruitful after 1956.

At this stage we must indicate that public annual investment is here assumed to be in urban housing though almost certainly they embrace a part which should be considered as investment in rural housing projects, such as the construction of houses for serifa dwellers in the outskirts of Baghdad city, and plots of land on which peasants can build their houses. But due to statistical difficulties we could not segregate the figures into investment in rural and urban areas, especially for 1957, 1958 and 1959. However, the segregation of Government investment in housing does not affect figures for total investment in this sector or total gross capital formation for the country as a whole.

$ 4. REGIONAL DISTRIBUTION OF INVESTMENT IN URBAN DWELLINGS, 1962

An attempt is made to show investment in urban dwellings according to region (province) in which the dwelling units are located. In addition, investment expenditure is divided, in each province, between the

public and the private sectors to show the share of each one in total annual investment in dwellings.

To give some information, albeit rough, about the density of population in each province (which reflects living conditions), a regional distribution of the average number of persons per room is also attempted.

Table XIII-7 gives the regional distribution of private gross investment in urban dwellings in 1962. The figures are divided between investment in houses and in houses with shops. Investment expenditures on both types of houses, however, were regarded as investment in dwellings without adjustment of the latter type to exclude that part of investment expenditure on "shops", because, as we said earlier, the construction of these shops is incidental to the construction of houses. The table shows that 62 per cent of total investment was made in Baghdad alone. Basrah came second with only 7.5 per cent, followed by Mosul's 6 per cent. Annual investment in the remaining Provinces ranged between 1 - 4 per cent of the total.

In Table XIII-8 total investment in urban dwellings is distributed between private and public sectors. The table shows that on average, the contribution of the public sector was about 23 per cent of the total. However this percentage contribution varied from one province to another. For instance, in Baghdad province, the government's contribution was 28 per cent while in Basrah it was about 3 per cent only.

Finally, Table XIII-9 shows the number of rooms (for residen

tial housekeeping purposes) built in 1962 and the average number of persons per room in each of the fourteen provinces. It shows that on average one room was built for each person born in that year. This average, too, varied between provinces. In Baghdad, for example, two rooms were available for each person, while in Kirkuk the figure was less than half a room.

TABLE XIII-4

GFCF IN OWNERSHIP OF DWELLINGS, 1957 - 1962

Year	At Current Prices				At Constant (1957) Prices			
	Urban ID 000	Rural ID 000	TOTAL ID 000	1957 = 100	Urban ID 000	Rural* ID 000	TOTAL ID 000	1957 = 100
1957	18892.9	99.8	18992.7	100.0	18892.9	99.8	18992.7	100.0
1958	16889.0	101.2	16990.2	89.4	18870.4	101.2	18971.6	99.9
1959	22199.8	102.7	22302.5	117.4	22560.8	102.7	22663.5	119.3
1960	22971.1	104.1	23075.2	121.5	22045.2	104.1	22149.3	116.6
1961	25700.8	105.6	25806.4	135.9	24831.7	105.6	24937.3	131.3
1962	24086.1	107.2	24193.3	127.4	23990.1	107.2	24097.3	126.9

* Note that rural dwellings need not be deflated since the average construction cost per rural dwelling is assumed to have remained constant throughout the period of this study.

Sources: Table XIII-6 below for investment at current prices. Investment at constant prices is derived by deflating the current price figures by the price index number of building materials given in Chapter II.

TABLE XIII-5

PRIVATE GFCF IN URBAN DWELLINGS, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Houses	12015.0	11190.9	14735.1	15941.6	18906.6	18056.1
2	Houses with Shops	320.7	298.7	393.3	425.5	475.0	491.5
3	TOTAL :	12335.7	11489.6	15128.4	16367.1	19381.6	18547.6
4	(1) as % of (3)	97.4	97.4	97.4	97.4	97.5	97.3
5	(2) as % of (3)	2.6	2.6	2.6	2.6	2.5	2.7
6	Investment Expenditure on "Houses" completed during the year	9371.7	8728.9	11493.4	12309.6	14829.4	14011.9
7	Value of work in progress	2643.3	2462.0	3241.7	3632.0	4077.2	4044.2
	Sub-total (6 + 7):	12015.0	11190.9	14735.1	15941.6	18906.6	18056.1

(Continued)

TABLE XIII-5 (continued)

8	Investment Expenditure on "Houses with Shops" completed during the year	250.1	233.0	306.8	329.2	365.8	363.5
9	Value of work-in-progress	70.6	65.7	86.5	96.3	109.2	128.0
	Sub-total (8 + 9) :	320.7	298.7	393.3	425.5	475.0	491.5
10	Total (6 + 8) :	9621.8	8961.9	11800.2	12638.8	15195.2	14375.4
11	Total (7 + 9) :	2713.9	2527.7	3328.2	3728.3	4186.4	4172.2
12	TOTAL (10 + 11) :	12335.7	11489.6	15128.4	16367.1	19381.6	18547.6
13	(10) as % of (12)	78.0	78.0	78.0	77.2	78.4	77.5
14	(11) as % of (12)	22.0	22.0	22.0	22.0	21.6	22.5

TABLE XIII-6

GROSS AND GROSS-GROSS FIXED CAPITAL FORMATION IN DWELLINGS, 1957 - 1962*

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Rural Dwellings	99.8	101.2	102.7	104.1	105.6	107.2
2	Urban Dwellings:						
	(i) Private Investment	12335.7	11489.6	15128.4	16367.1	19381.6	18547.6
	(ii) Public Investment	6557.2	5399.4	7071.4	6604.0	6319.2	5538.5
	Total 2 :	18892.9	16889.0	22199.8	22971.1	25700.8	24086.1
3	TOTAL Gross Investment in Dwellings = (1 + 2) :	18992.7	16990.2	22302.5	23075.2	25806.4	24193.3
4	2(i) as % of total (2)	65.3	68.0	68.1	71.3	75.4	77.0
	2(ii) as % of total (2)	34.7	32.0	31.9	28.7	24.6	23.0
5	(1) as % of (3)	0.5	0.6	0.5	0.5	0.4	0.4
	(2) as % of (3)	99.5	99.4	99.5	99.5	99.6	99.6

(Continued)

TABLE XIII-6 (continued)

6	Expenditure on Repair Work:						
	(i) Urban Dwellings	698.7	696.2	527.8	294.7	372.3	346.9
	(ii) Rural Buildings	1204.4	1219.5	1234.7	1249.7	1264.7	1279.7
7	TOTAL expenditure on Repair Work :	1903.1	1915.7	1762.5	1544.4	1637.0	1626.6
8	TOTAL Investment in URBAN dwellings (new and repair) = (2 + 6(i)) :	19591.6	17585.2	22727.6	23265.8	26073.1	24433.0
9	TOTAL Investment in RURAL dwellings (new and repair) = (1 + 6(ii)) :	1304.2	1320.7	1337.4	1353.8	1370.3	1386.9
10	TOTAL GROSS-GROSS investment in dwellings = (8+9):	20895.8	18905.9	24065.0	24619.6	27443.4	25819.9
11	(8) as % of (10)	93.8	93.0	94.4	94.5	95.0	94.6
	(9) as % of (10)	6.2	7.0	5.6	5.5	5.0	5.4

* The term Gross-Gross refers to investment figures which include expenditure on repair work.

TABLE XIII-7

REGIONAL DISTRIBUTION OF PRIVATE GFCF IN URBAN DWELLINGS,* 1962

(ID 000)

Province	Houses (1)	Houses with Shops (2)	TOTAL (3)	% (4)
1. Mosul	1077.7	42.0	1119.7	6.0
2. Sulaimaniya	326.2	4.6	330.8	1.8
3. Arbil	391.4	10.9	402.3	2.2
4. Kirkuk	520.0	9.5	529.5	2.9
5. Diala	278.3	9.7	288.0	1.6
6. Ramadi	186.4	-	186.4	1.0
7. Baghdad	11252.5	265.6	11518.1	62.1
8. Kut	441.0	3.6	444.6	2.4
9. Hilla	479.3	15.8	495.1	2.7
10. Kerbela	662.9	32.3	695.2	3.7
11. Diwaniya	529.9	11.9	541.8	2.9
12. Amara	273.8	10.5	284.3	1.5
13. Nasiriya	295.0	17.1	312.1	1.7
14. Basrah	1341.7	58.0	1399.7	7.5
TOTAL :	18056.1	491.5	18547.6	100.0

* This is based on the Regional Monthly Statistics of Building Permits' costs given in Appendix I Tables 5, 6, 9 and 10.

TABLE XIII-8

REGIONAL DISTRIBUTION OF GFCF IN URBAN DWELLINGS

BETWEEN PRIVATE AND PUBLIC SECTORS, 1962*

(ID 000)

Province	Private Investment (1)	Public Investment (2)	TOTAL Investment (3)	(1):(3) % (4)	(2):(3) % (5)	(3) : Total % (6)
Mosul	1119.7	238.8	1358.5	82.4	17.6	5.6
Sulaimaniya	330.8	91.8	422.6	78.3	21.7	1.8
Arbil	402.3	131.0	533.3	75.4	24.6	2.2
Kirkuk	529.5	40.0	569.5	93.0	7.0	2.4
Diala	288.0	-	288.0	100.0	-	1.2
Ramadi	186.4	26.0	212.4	87.8	12.2	0.9
Baghdad	11518.1	4497.6	16015.7	72.0	28.0	66.5
Kut	444.6	12.7	457.3	97.2	2.8	1.9
Hilla	495.1	139.3	634.4	78.0	22.0	2.6
Kerbela	695.2	232.5	927.7	75.0	25.0	3.8
Diwaniya	541.8	26.2	568.0	95.4	4.6	2.4
Amara	284.3	60.2	344.5	82.5	17.5	1.4
Nasiriya	312.1	3.2	315.3	99.0	1.0	1.3
Basrah	1399.7	39.2	1438.9	97.3	2.7	6.0
TOTAL :	18547.6	5538.5	24086.1	77.0	23.0	100.0

* The Regional distribution of public investment is based on the detailed actual expenditure provided in the Development Budgets.

TABLE XIII-9

REGIONAL DISTRIBUTION OF NUMBER OF ROOMS BUILT IN 1962; THE INCREMENT IN URBAN POPULATION, AND THE AVERAGE NUMBER OF PERSONS PER-ROOM*

Province	Number of Rooms Built in 1962		TOTAL	Increment in Urban Population in 1962	Average Number of Persons per Room
	Private (1)	Public (2)	(3)	(4)	(4) ÷ (3)
Mosul	3595	605	4200	4504	1.1
Sulaimaniya	935	233	1168	1299	1.1
Arbil	1372	332	1704	1194	0.7
Kirkuk	1054	101	1155	2558	2.2
Diala	921	-	921	1217	1.3
Ramadi	586	66	652	1002	1.5
Baghdad	26371	11394	37765	13514	0.4
Kut	1533	32	1565	1118	0.7
Hilla	1352	353	1705	1696	1.0
Kerbela	1806	589	2395	2804	1.2
Diwaniya	1305	67	1372	1936	1.4
Amara	1186	152	1338	1363	1.0
Nasiriya	845	8	853	1380	1.6
Basrah	2969	99	3068	3870	1.3
TOTAL :	45830	14031	59861	39455	0.7

* The Regional distribution of Column (1) is based on data of Appendix I Tables 11 and 12.

For Column (2) Public investment in dwellings (given in Table XIII-8 above) in each province is divided by the average cost of erecting a new house and then multiplied by an average number of rooms per house.

The average cost and the average number of rooms per house were derived from the CBS' report on Statistics of Building Permits for 1962.

Chapter XIII PART TWO

SOURCES AND METHODS OF ESTIMATION

Dwellings in Iraq, as in other countries, may be classified in two categories: Rural and Urban. Sources of data and methods of estimating annual investment in "ownership of dwellings" vary according to the category we are dealing with.

$ 1. RURAL DWELLINGS

Rural dwellings in Iraq are of two types: mud houses (huts) and the type known as Serifa. The former type "usually has more than one room and the house, together with the courtyard, is surrounded by mud walls. The roofs of the rooms are usually supported by wooden poles and covered with matting on which a layer of mud is laid".[1] The average life of such a house is estimated to be ten years.[2] The Serifa, on the other hand, differs from a mud house in that it usually consists of one room and "it is constructed

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1) Haseeb, K., The National Income of Iraq, 1953-1961, (R.I.I.A., Oxford University Press, 1964) p.109.
2) Ibid., p.110.

in whole or in greater part of reed matting. Generally the roof is curved in semi-circular shape without support except at the ends. The mat walls are often plastered with mud during the winter ... Serifa can be fairly easily moved to another site and ... no special tools are required to remove the roof. The family members themselves can move their serifa and re-erect it elsewhere without calling in any outside assistance."[1)]

Generally speaking, the erection of a rural house, whether a mud-house or Serifa, is simple and does not take more than one month which means, given that our accounting period is a year, that the adjustment of our figures for such a short time-lag is inconsequential.

No direct information relating to investment in rural dwellings were available other than those given in the Housing Census of 1956 and Haseeb's figures.

The Housing Census, which was undertaken during 1956 and claimed to be nation-wide in its scope, gives the number of rural dwellings (mud-houses, serifas and tents) in towns and villages of under 2000 inhabitants as 476,797 with a total population of 2,587,000 and an average per-dwelling of 5.45 persons as shown below.

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1) Principal Bureau of Statistics, Report on Housing Census of Iraq for 1956 (Al-Rabita Press, Baghdad) p.9.

TABLE XIII-10

NUMBER OF RURAL DWELLINGS AND POPULATION, 1956

	Towns & Villages Number	Houses Number	Population Number	Average No. of Persons per Dwelling
1. Towns and Villages of 15 Houses or more (but under 2000 inhabitants)	8127	445762	2417832	5.4
2. Villages of less than 15 Houses	3137	25089	137207	5.5
3. Tents	-	5946	32453	5.4
TOTAL :	11264	476797	2587492	5.43

Source: P.B.S., Report on Housing Census of Iraq for 1956.

The rural population of 2,587,000 was thought to be underestimated by over 47 per cent.[1] Accordingly the figure was corrected and

1) Dr. Haseeb used the population Censuses of 1947 and 1957, with the aid of FAO adjusted population figures for 1947. The latter gives a total population of 5.2 m. (3.35 m. rural and 1.85 m. urban) in 1947 as compared with 4.8 m. reported in the Census. The 1957 Census was also adjusted to eliminate the "estimated late registration" after the date of the Census and to take account of the "actual late registration". It was further adjusted to exclude Iraqis living abroad at the time of the Census. After these adjustments the 1957 Census gives a total population of 6.3 m. (3.86 m. rural and 2.44 urban). Estimated on this basis, the average cumulative rate of increase of the rural population is 1.43; the urban 1.8; the total population 1.94 per cent per annum. See Haseeb, K., The National Income of Iraq 1953-1961, (R.I.I.A., Oxford University Press, London 1964) p.16.

taken to be 3,807,000, and the number of rural dwellings in 1956 was derived by dividing this total by the average number of persons per rural dwelling, which was taken by Haseeb as six persons instead of 5.43 in order to allow for possible understatement in the 1956 Housing Census. This procedure gives the number of rural dwellings in 1956 as 635,000 units.

To estimate annual investment in rural dwelling during the period covered in this study, and because of the scarcity of direct data, we were compelled to adopt an indirect method followed by other scholars in their estimates of value added of rural dwellings.[1] The method consisted of two stages of calculation and involved a few assumptions.

First, it was assumed that the average number of persons per rural dwelling remained constant at six persons throughout the period of estimation. Second, it was assumed that the average cost of constructing a rural dwelling has not changed, an assumption which is not unlikely because labour time involved has remained fairly constant and rural earnings have also remained the same.

In order to estimate the number of dwelling units in each year we applied, as the first stage, the index numbers of the rural population between 1957 - 1962 to the number of rural dwellings in 1956. The number of newly built houses each year was then derived by deducting the total number

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1) Haseeb, Ibid.

of houses in the previous year from the preceding one. In other words, the annual increase in rural population (taking 1.43 as the average cumulative rate of growth of the rural population) was divided by the average number of persons per rural dwelling. By this procedure the number of newly erected rural houses in each year from 1957 - 1962 was ascertained. This is shown in Table XIII-11.

TABLE XIII-11

NUMBER OF RURAL DWELLINGS ERECTED, 1957-1962

Year	Annual Increment in Rural Population	Average Number of persons per Rural Dwelling	Number of Rural Dwellings erected each Year
1957	54440	6.0	9073
1958	55219	6.0	9203
1959	56000	6.0	9333
1960	56810	6.0	9468
1961	57620	6.0	9604
1962	58445	6.0	9741

The above table gives only the annual investment in rural dwellings in quantitative terms and what remains here is to multiply the number of these houses by their average cost of construction. The cost of con-

structing a rural dwelling varies according to locality and type of unit. Unfortunately we had no direct information which would have enabled us to assess the order of magnitude of such costs other than those given by Haseeb. He gives an average cost of constructing a rural hut at some ID 30 and of a serifa at ID 10, giving a weighted average[1] of ID 22 per rural dwelling. Applying this average cost to the number of newly erected dwellings each year from 1957 - 1962 we obtained the gross annual investment in rural houses as shown in Table XIII-12.

TABLE XIII-12

GROSS ANNUAL INVESTMENT IN RURAL HOUSES, 1957 - 1962 (UNADJUSTED)

Year	Number of Newly Erected Rural Houses	Average Cost per House (ID)	Annual Gross Investment (ID)
1957	9073	22.0	199606
1958	9203	22.0	202466
1959	9333	22.0	205326
1960	9468	22.0	208296
1961	9604	22.0	211288
1962	9741	22.0	214302

1) The weight being the ratio of number of rural huts to serifas as given in the Housing Census of 1956. See, Haseeb, K., The National Income of Iraq 1953-1961 (R.I.I.A., Oxford, 1964).

However, rural dwellings are not only places of residence but also used by the Iraqi peasants as work places; and since we are here concerned with residential buildings only, it is necessary to isolate the figures of "annual gross investment" into two parts: one to be regarded as "non-residential buildings" and hence included in the agricultural farm buildings; the other part remains as investment in residential houses proper. The ideal solution is to divide the costs of construction between this sector and the agricultural sector on the basis of relative use made of the building for each purpose. But since the scarcity of data on this matter is an obstacle, we have arbitrarily regarded 50 per cent of the annual gross investment as investment in non-residential farm buildings and hence as part of the agricultural sector. This procedure, it is to be noted, has no effect whatsoever on gross domestic capital formation. Its only effect is at the sectoral level. The following table shows the final figures of annual gross investment in rural dwellings after performing the last adjustment indicated above.

TABLE XIII-13

GROSS ANNUAL INVESTMENT IN RURAL HOUSES,

1957 - 1962 (ADJUSTED)

Year	Number of Newly Erected Rural Houses	50% of Average Cost per Rural House (ID)	Gross Annual Investment (ID 000)
1957	9073	11.0	99.8
1958	9203	11.0	101.2
1959	9333	11.0	102.7
1960	9468	11.0	104.1
1961	9604	11.0	105.6
1962	9741	11.0	107.2

$ 2. URBAN DWELLINGS

To estimate annual gross investment in residential urban buildings three sources of data were scrutinized to assess their respective reliabilities for our purpose. Each of the three sources has its own advantages as well as shortcomings. Two of them can be considered as direct sources whilst one is indirect.

The indirect source, involves the use of extrapolated figures of population from the 1957 Censes and the average number of persons per urban

dwelling given in the 1956 Housing Census to determine the number of newly constructed houses in each year. This number, if multiplied by the average cost of constructing a dwelling unit in each year or by the average cost in 1956 with an adjustment for price changes in other years gives gross annual investment in dwellings.

Due to the importance of urban buildings in GDFCF this method, was thought unsatisfactory and of a rough nature because the assumptions it is based on may give unreliable estimates. Moreover, the adoption of this procedure only gives the value of houses completed during each year, while what we are concerned with here consists of the value of completed houses and the value of work-in-progress. This drawback was the main deterrent to us and hence the method was discarded.

The second source of data was the Construction Surveys published by the C.B.S. which covered both the private and the public sectors. For the public sector monthly statistics were available from 1960 onwards while those for the private sector were from 1961 onwards.

So far as the usefulness of these "Surveys" for our purpose is concerned, we decided, after a careful examination to discard them for the following reasons :

1. Although the "Construction Surveys" give, for the public sector, numerous tables on total inputs, output, wages and salaries paid, cubic metres of construction done, etc., they fail to give information about the

number of each type of building or its cost separately. Cost is given as a total for all types of construction whether buildings, roads, bridges or streets.

2. In the case of the private sector the "Construction Surveys" are based on a sample of building permits issued in each province (Liwa). The size of the sample varies inversely with the number of permits issued in each province or group of provinces as follows:

Province	Percentage of Building Permits covered by the Surveys of the Number of permits issued during the month
Baghdad	10%
Mosul	15%
Diwaniya	20%
Kirkuk, Hilla, Basrah, Diala	25%
Kerbela, Sulaimaniya, Arbil	30%
Kut, Nasiriya, Ramadi, Amara	50% .

Monthly information about buildings falling within the sample are collected by the C.B.S.'s ennumerators until the buildings are completed. After that, supplementary information is added.

However, it was not clear to us how the sample units are selected and to what extent each sample is a true representative of the population. Moreover, these "Surveys", although they give details about the number of buildings, their types, area of construction, and other useful information, nevertheless suffer from one crucial shortcoming - they fail (as in the case of the public sector) to supply the total cost of each type of building separately.

The third, and indeed the most important source of data on which we relied in estimating capital formation in residential dwellings was the "Statistics of Building Permits". The use of this type of statistic is fairly widespread for estimating investment in buildings construction in other countries.[1] The nature, scope and coverage of these permits may be discussed in some detail for two periods, i.e. 1956-1959 and 1960-1962, as follows :

2.1. Building Licences for 1960-1962

The statistics of building permits covering the years 1960, 1961 and 1962, which are published annually by the CBS, give rich information on the estimated cost[2] of each type of new building[3] as well as the cost of repair work in each of the fourteen provinces of Iraq. Monthly figures are also given. They give additional information on number of rooms, storeys, type of tenancy, etc. In addition, dwellings are divided into two categories: "houses" and "houses with shops" with separate information on each type. These details are obtained from the applicant for a permit, who is obliged to

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1) Such as Greece, the Netherlands, Brazil and the United States.
2) Estimated Cost means the amount given by the contractors in their application form for the permits as representing the cost of construction and other amenities which are integral parts of the dwellings.
3) New buildings is taken here to indicate either completely new or additions and major alterations to an existing building.

fill in a special questionnaire form furnished to each municipality by the CBS. After filling in this form, the applicant should enclose it with his application and present them together to the municipality concerned, otherwise his application will be neglected. An official in charge of checking the infromation in the application then verifies it. If any discrepancy is found the official himself collects the correct information. In case the municiplaity refuses to grant a permit, the form is discarded. Then, at the end of each month all forms completed are sent from the municipality of each province to the "Statistical Office" of the same province. These "statistics" are then supplied to the CBS through their "Statistical Superintendents" in the province.

On the question of the accuracy of these permits, it is believed that no under-statement or over-statement is involved in the "estimated cost", since the applicant for a new building pays the licence fees not according to cost, but with reference to area of the building. Nevertheless, these estimated costs are sometimes exceeded by some 10 per cent,[1)] and we, therefore, marked them up by this percentage to account not only for possible under-statement of cost but also for legal fees and other kinds of direct expenses usually connected with the erection and registration of building properties.

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1) See Haseeb, K., The National Income of Iraq, 1953-1961, (R.I.I.A., Oxford University Press, 1964) p.107.

2.2. Building Licences for 1956-1959

For the years before 1960, building permits were not classified in the same detail as for 1960 onwards. The classification was merely confined to whether the permit was for a new building construction or for repair work. Moreover, the "estimated cost", which should accompany each permit, could not be ascertained for all provinces but only for Mosul (in the north), Baghdad (in the middle) and Basrah (in the south). This insufficiency of information involved us in some extra calculations which could have been avoided had the permits issued during 1956-1959 been given in as much detail as those of 1960-1962.

2.3. Coverage of Building Licences

According to the law, no building construction could be carried out unless a licence had been obtained in advance from the municipality.[1] This implies that all kinds of building activities, whether private or public, are covered in principle by the reports on building permits published every year by the CBS. This is particularly so, since most building activities are carried out by private contractors, and such a licence is essential for the

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1) Regulations of Roads and Buildings No. 44 of 1953; also Law of Municipalities Revenues No. 84 of 1956.

final registration of the building as a property of the owners in Government Records.

However, in examining Government expenditure on buildings and housing, we began to doubt that the Government's new building construction had been licensed.[1)]

To vindicate our doubts, we went, during our visit to Iraq, to the Ministry of Municipalities and to Amanat-el-Asima and asked for permission to examine all building licences issued in Iraq during 1957, 1960 and 1962. The examination revealed the striking result that no licences had been obtained for Government buildings except for a house which was built in 1962, and the inclusion of this house was, in my opinion, accidental.

This exclusion of public buildings from statistics of building permits calls for an important adjustment to investment in dwelling (as well as for other kinds of buildings) as it is necessary to add Government expenditure on housing projects, which is derived from the Government Develop-

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1) We, therefore, wrote several letters to authorities in Baghdad, especially to the Ministry of Municipalities and to Amanat-el-Asima, asking whether Government buildings are subject to permits or not. Unfortunately we did not receive any replies to our enquiry. Then we asked an expert at the Ministry of Planning, who was at that time preparing an input-output table for Iraq about the possibility of the existence of unlicenced Government building construction. In his reply (Dr. Taher H. Kanaan, letter dated 31.5.1965, Ministry of Planning, Baghdad), he confirmed our doubts and assured us that from his experience and knowledge of most of Iraq's statistics Government buildings are not licenced.

ment Budgets, to those derived from building permits. This means that estimates of value added made by other scholars[1] for the construction sector are under-estimated by that part which is attributed to public expenditure on buildings.

In addition to the above adjustment, certain other adjustments are required in order to account for unlicenced buildings other than those belonging to Governments. The nature and extent of this adjustment varies between new building activities and repair works.

Evasion from licencing new building construction is rare because of the difficulty of carrying out such work without the knowledge of the authorities; since the job usually takes about six months, in which time the municipalities are likely to discover that the building construction has not been licenced. Moreover, as we pointed out earlier, such a licence is needed for the final registration of the building as a property of the owner.

When the "new building" is not an erection of a complete house or other type of building, but say, only an addition to an existing one, the evasion from building permits is less difficult. For this reason, we have marked-up permits for new buildings by 1 per cent. The marking-up, how-

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1) Dr. K. Haseeb assumed that building permits cover public as well as private building construction, which means that his estimates of value added of Government building construction are underestimated by the extent of the contribution of these buildings to the gross value added of the construction sector.

ever, was made only to permits issued in 1956, 1957, 1958 and 1959. No adjustment was made to those of 1960 - 1962 because we believe that they enjoy a high degree of accuracy and reliability.[1)]

In the case of repair work it is, however, believed that the number of permits for repairs and renewals should be marked up by some 15 per cent to account for unlicenced work because the possibility of unlicensed repair work is not uncommon since the work itself does not take on average more than one month.[2)]

$ 3. METHODS OF ESTIMATING INVESTMENT IN URBAN DWELLINGS

Public and private investment in dwellings were both estimated from the expenditure side. Figures relating to the first type (as shown in

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1) It could, however, be argued that a downward adjustment should be made for building permits, the project of which was abandoned. This kind of adjustment seemed unnecessary. The reason is that the regulations of "building licences" state that a building permit remains valid for six months from the date of issue, and should this period expire without the project being started, it can be renewed for another six months (Regulations of Roads and Buildings No. 44 of 1953 and the amendments thereof). This means that from a technical viewpoint the construction of a building can start any time between the date of issuing the permit and twelve months later. Since the fees are redeemable within six months of the date of issue, reports on building permits published by the CBS do not include licences of abandoned building projects. See Haseeb, K, An Estimate of the National Income of Iraq, 1953-1956; Ph,D, Dissertation, University of Cambridge, 1959, pp.312-313.

2) Haseeb, K., An Estimate of the National Income of Iraq, 1953-1956; Ph,D. Dissertation, Cambridge University, September 1959, p.311.

Table XIII-3 above) were derived from Government's Development Budgets for the years 1957-1962. Since these figures represent "actual expenditures" during the year, no adjustment was made to mark them up as we did in the case of private investment. No estimates of repair work was made for dwellings built by the Government, on the grounds that when these houses are completed they are usually handed over to private persons and become their own property on the condition that their full cost be repaid to the Government in, say, 10 or 15 years. If, meanwhile, the dwelling unit needs to be repaired, the owner himself (or a builder on his behalf) will obtain the permit which implicitly means that it has been accounted for in the statistics of building permits.

Private investment in urban new dwellings, on the other hand, was estimated in two stages; the first covered the period 1960-1962, and the second the period 1957-1959. They are discussed in some detail below.

3.1. Private Investment in new dwellings during 1960-1962

Investment in dwelling (excluding repair work) for this period was estimated by using the monthly figures of the "estimated cost" of permits issued for building houses and houses with shops in each province as shown in Appendix I, Tables 1, 2, 5, 6, 9 and 10.

Monthly tables for the country as a whole were then obtained and the "estimated cost" was marked up by 10 per cent. A six months' time-

lag between the date of issuing the licences and the completion of work was assumed. Thus, building (dwellings) licences issued during January to July of, say, 1962, were regarded as for the construction of dwellings started and completed during that year. For the remaining five months (August - December) of the same year, we assumed that 5/6 of total cost in August, 2/3 of September, 1/2 of October, 1/3 of November and 1/6 of December represented the value of work-in-progress during that year; while the remaining 1/6, 1/3, 1/2, 2/3 and 5/6 of total costs in August, September, October, November and December respectively, constituted part of investment in the following year. Hence, investment in dwellings during 1962 is made up of : 1/6, 1/3, 1/2, 2/3 and 5/6 of total cost of new dwelling units in August, September, October, November and December of 1961 plus total cost of new dwelling units during January - July of 1962, plus 5/6, 2/3, 1/2, 1/3, and 1/6 of total cost in August, September, October, November and December of 1962. (See Table XIII-14 and 15). This procedure was applied to the years 1960 and 1961.

TABLE XIII-14

PRIVATE GROSS INVESTMENT IN "HOUSES" DURING 1962

	(ID 000)
1. Total cost of building new houses: January 1962 - July 1962	10921.4
2. 5/6 total cost in August 1962	1605.9
3. 2/3 total cost in September 1962	1215.1
4. 1/2 total cost in October 1962	723.6
5. 1/3 total cost in November 1962	341.0
6. 1/6 total cost in December 1962	158.6
Sub-total (1962):	14965.6
7. 1/6 total cost in August 1961	342.1
8. 1/3 total cost in September 1961	555.1
9. 1/2 total cost in October 1961	773.6
10. 2/3 total cost in November 1961	662.5
11. 5/6 total cost in December 1961	757.2
Sub-total (1961):	3090.5
TOTAL investment in "Houses" in 1962 :-	18056.1

(A) Investment expenditure on "Houses" completed during 1962 = (1) + Sub-total 1961; i.e. (10921.4 + 3090.5) =	14011.9
(B) Value of work in progress during 1962 = (2 + 3 + 4 + 5 + 6) =	4044.2
TOTAL :	18056.1

Sources: Appendix I Tables 5 and 9.

TABLE XIII-15

PRIVATE GROSS INVESTMENT IN "HOUSES WITH SHOPS" DURING 1962

	(ID 000)
1. Total cost of building new "Houses with shops": January 1962 - July 1962	274.7
2. 5/6 total cost in August 1962	55.9
3. 2/3 total cost in September 1962	36.3
4. 1/2 total cost in October 1962	12.7
5. 1/3 total cost in November 1962	18.8
6. 1/6 total cost in December 1962	4.3
Sub-total (1962):	402.7
7. 1/6 total cost in August 1961	9.0
8. 1/3 total cost in September 1961	15.6
9. 1/2 total cost in October 1961	20.5
10. 2/3 total cost in November 1961	12.5
11. 5/6 total cost in December 1961	31.2
Sub-total (1961):	88.8
TOTAL investment in "Houses with Shops" 1962	491.5

(A) Investment expenditure in "Houses with Shops" completed during 1962 = (1) + Sub-total (1961) = (274.7 + 88.8) =	363.5
(B) Value of work in progress during 1962 = (2 + 3 + 4 + 5 + 6) =	128.0
TOTAL :	491.5

Sources: Appendix I Tables 6 and 10.

3.2. Private Investment in New Dwellings during 1957 - 1959

For the period 1957 - 1959, building permits were not given in as much detail as for 1960 - 1962. They were neither classified according to type of buildings nor could the "estimated cost" which should accompany each permit be ascertained. Classification was made only between permits which are issued for new buildings and those which are for repair work as shown below.

TABLE XIII-16

NUMBER OF BUILDING PERMITS ISSUED DURING 1956 - 1959

Type of Permits	1956	1957	1958	1959
1. For new buildings	10,331	9,391	9,087	12,233
2. For repair work	14,564	16,201	16,143	12,237

Sources: PBS, Statistical Abstract 1958;
CBS, Statistical Abstract 1959.

"Estimated Cost" of new buildings and of repair work could not be obtained separately and for all Iraq. What we were able to obtain was the estimated cost of new building activities and repair work for permits issued in three provinces, namely, Mosul (in the north), Baghdad (in the middle) and Basrah (in the south) as presented below.

TABLE XIII-17

ESTIMATED COST OF BUILDING PERMITS

(INCLUDING REPAIR WORK) DURING 1957 - 1959

(ID)

	Province	1957	1958	1959
1.	Mosul	1563266	1788430	1832400
2.	Baghdad	9027220	9355959	13168036
3.	Basrah	921450	358500	898150

Sources: Unpublished data supplied to the writer by the Ministry of Planning, Baghdad.

TABLE XIII-18

NUMBER OF BUILDING PERMITS ISSUED IN MOSUL, BAGHDAD AND BASRAH PROVINCES DURING 1956 - 1959

Year	MOSUL		BAGHDAD		BASRAH	
	New Buildings	Repair Work	New Buildings	Repair Work	New Buildings	Repair Work
1956	875	2205	5044	3241	760	2597
1957	911	2285	4595	5027	694	2583
1958	956	2760	4616	5257	356	1442
1959	1667	1784	5439	3328	691	1604

Sources: PBS, Statistical Abstract, 1958; and CBS, Statistical Abstract, 1959.

After obtaining this information we derived an average construction cost of a new building for each of the three years 1957 - 1959. The calculation procedure was as follows.

(1) First of all an average cost per repair work was estimated. No direct information was available on such an average. But Haseeb gave an average cost of about ID 50 per repair work during 1956,[1] while the reports on building permits published by the CBS gave ID 55, 45, 43 as the average cost per repair work during 1960, 1961 and 1962, respectively. However, we decided to take ID 50 as an average. This average was then used throughout the period of this study and was applied to the country as a whole. Total expenditure on repair work in the three provinces was derived by multiplying the number of repair permits issued in each province by the average cost of repair work. Deducting this total from the estimated cost of building construction given in Table XIII-17 we arrived at total estimated cost of new buildings in each of the three provinces for 1957 - 1959. The average construction cost per new building was thus derived by the division of the latter total by the number of permits for new buildings. The calculation is shown in Table XIII-19.

(2) From the calculation described in (1) we obtained for each of the three years 1957, 1958 and 1959 three "Provincial averages of Cost" of a

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1) Haseeb, K., The National Income of Iraq, 1953-1961, p.108.

new building construction in Mosul, Baghdad and Basrah.

To obtain a single "general average" for each year which can be applied to the country as a whole, we first calculated two "general averages" from the three "Provincial averages" as follows :

(i) A simple annual average cost,

(ii) a weighted annual average cost; the weights being the number of permits for new building issued in Mosul, Baghdad and Basrah.

(3) Since the number of building permits given in Table XIII-16 includes all types of buildings without distinction between residential and non-residential, they ought to be adjusted, in one way or another, to exclude building permits other than dwelling units. This adjustment was made by using as an indicator the average percentage ratio of dwelling licences to total licences for new buildings issued during 1960-1962 (see Table XIII-20). This percentage ratio, which turned out to be about 75 per cent was then applied to the adjusted number of building licences issued during 1956-1959 and the number of dwelling permits was thus obtained as shown in Table XIII-22.

(4) After marking up the "annual general average costs" derived in (2) above by 10 per cent, they were used together with the number of dwelling permits (estimated as in (3)) and two different estimates of "total investment in dwellings" during 1957 - 1959 were obtained but unadjusted for the six

months' time-lag suggested earlier. To do such an adjustment, 17 per cent of each year's total investment was carried to the following year, while 17 per cent of the preceding year's investment was brought forward to this year. These estimates are shown in Table XIII-22. It is to be noted, however, that the latter adjustment was based on the 1960 - 1962 estimates as shown in Table XIII-21. Moreover, to estimate that part of 1956 expenditure on dwellings which in fact is part of the 1957 investment, the average costs of 1957 were applied to the number of residential building permits issued in 1956, since it has been suggested that there was no change in the average cost of building construction between 1956 and 1957.[1)]

In our final estimates of private investment in residential dwellings for the period 1957 - 1959 as presented in Table XIII-5 above, we have taken the totals obtained by using the simple average cost and the number of new dwelling permits (adjusted for time-lag) rather than the other total, because it is believed that the weighted average resulted in a high cost of construction, while the Price Index of Building Materials[2)] does not show great fluctuations during the period of this study.

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1) Haseeb, K., The National Income of Iraq, 1953-1961, p.108.
2) See Chapter II, Table II-2 above.

TABLE XIII-19

DERIVATION OF AVERAGE COST PER NEW BUILDING CONSTRUCTION IN THE PROVINCES OF MOSUL, BAGHDAD AND BASRAH, 1957 - 1959

(ID)

	1957	1958	1959
MOSUL			
1. Number of permits for new construction	911	956	1667
2. Number of permits for repair work	2285	2760	1784
3. Total cost of construction (new and repair)	1563266	1788430	1921600
4. Average cost per repair work	50	50	50
5. Total cost of repair work = (2) x (4)	114250	138000	89200
6. Total cost of new construction = (3) - (5)	1449016	1650430	1832400
7. Average cost per new construction = (6) ÷ (1)	1590	1726	1100
BAGHDAD			
1. Number of permits for new construction	4595	4616	5439
2. Number of permits for repair work	5026	5257	3328
3. Total cost of construction (new and repair)	9027220	9355959	13168036
4. Average cost per repair work	50	50	50
5. Total cost of repair work = (2) x (4)	251300	262850	166400
6. Total cost of new construction = (3) - (5)	8775920	9093109	13001636
7. Average cost per new construction = (6) ÷ (1)	1910	1970	2390

(Continued)

TABLE XIII-19 (continued)

BASRAH			
1. Number of permits for new construction	694	356	691
2. Number of permits for repair work	2583	1442	1604
3. Total cost of construction (new and repair)	921450	358500	898150
4. Average cost per repair work	50	50	50
5. Total cost of repair work = (2) x (4)	129200	72100	80200
6. Total cost of new construction = (3) - (5)	792250	286400	817950
7. Average cost per new construction = (6) ÷ (1)	1142	805	1184

Note: 1. Number of permits, whether for new building construction or for repair work are not marked up here. This adjustment is made in Table XIII-22 where we derived investment in dwellings.

2. "Total Cost" and "Average Cost" are given in single Iraqi dinar, and are not adjusted for under-estimation. Such an adjustment is made in Table XIII-22.

TABLE XIII-20

PERCENTAGE RATIOS OF DWELLING LICENCES TO TOTAL NEW BUILDING LICENCES, 1960 - 1962

	1960	1961	1962
1. Number of permits for new buildings	14771	18034	18040
2. Number of permits for Houses and Houses with Shops	12876	12722	12136
3. "Total Estimated Cost" of new building (ID)	17092940	23942664	22003865
4. "Total Estimated Cost" of Houses and Houses with Shops (ID)	14983066	17918242	16906193
5. Ratio of (2) : (1) (Percentage)	87.2	70.5	67.3
6. Ratio of (4) : (3) (Percentage)	87.7	74.8	76.8

Note: "Total Estimated Cost" shown in (3) and (4) above are not adjusted in this table for the 10 per cent mark up.

TABLE XIII-21

PERCENTAGE RATIOS OF EACH YEAR'S TOTAL COST OF NEW DWELLINGS

WHICH IS PART OF THE SUCCEEDING YEAR'S INVESTMENT

(ID 000)

	1960	1961	1962
1. Total Cost of Houses and Houses with Shops (marked up by 10 per cent)	16481.4	19743.5	18596.8
2. Part of (1) which is included in the following year's investment	2817.4	3179.3	3228.5
3. Ratio of (2) : (1) (Percentage)	17.0	16.1	17.4

TABLE XIII-22

ESTIMATION OF PRIVATE INVESTMENT IN NEW URBAN DWELLINGS, 1957 - 1959

		1956	1957	1958	1959	1960
1	Number of Building Permits (unadjusted)	10331	9391	9087	12233	
2	plus 1% Mark-up	103	94	91	122	
3	TOTAL Number of Building Permits (adjusted) = (1) + (2) :	10434	9485	9178	12355	
4	Number of permits for the erection of dwellings = 75% of (3)	7826	7114	6884	9266	
5	Number of permits for the erection of other types of buildings = (3) - (4)	2608	2371	2294	3089	
6	Simple average cost of constructing a new building (adjusted) (ID)	1705	1705	1650	1716	
7	Weighted average cost of constructing a new building (adjusted); the weights being the number of permits for new buildings, issued in Mosul, Baghdad and Basrah (ID)	1955	1955	2046	2207	

(Continued)

TABLE XIII-22 (continued)

8	Total cost of "Dwellings" using the two different average costs : (ID 000)					
	(1) Simple Average Cost: (4) x (6)	13343.3	12129.4	11358.6	15900.5	
	(2) Weighted Average Cost: (4) x (7)	15299.8	13908.0	14084.7	20450.0	
9	Total cost of "Other Building" using the two different average costs: (ID 000)					
	(1) Simple Average Cost: (5) x (6)	4446.6	4042.6	3785.1	5300.7	
	(2) Weighted Average Cost: (5) x (7)	5098.6	4635.3	4693.5	6817.4	
	Investment in New Dwellings					
10	Total cost of new dwellings as shown in (8(1)) (ID 000)	13343.3	12129.4	11358.6	15900.5	16481.4
	Less 17% which is part of the following year's investment (ID 000)	2268.3	2062.0	1931.0	2703.1	2817.4
	Plus 17% of the preceding year's "total cost of dwellings" which is part of this year's investment (ID 000)	-	2268.3	2062.0	1931.0	2703.1
	Total (10):	-	12335.7	11489.6	15128.4	16367.1
	2.6% of total (10) is taken to represent "Houses with Shops"	-	320.7	298.7	393.3	425.5
	97.4% of total (10) is taken to represent "Houses only"	-	12015.0	11190.9	14735.1	15941.6

(Continued)

TABLE XIII-22 (continued)

11	Total cost of new dwellings as shown in (8(2)) (ID 000)	15299.8	13908.0	14084.7	20450.0	16481.4
	Less 17% which is part of the following year's investment (ID 000)	2601.0	2364.4	2394.4	3476.5	2817.4
	Plus 17% of the preceding year's "total cost of dwellings" which is part of this year's investment (ID 000)	--	2601.0	2364.4	2394.4	3476.5
	Total (11):	-	14144.6	14054.7	19367.9	17140.5

Note: 1. Total cost of dwellings shown in Paragraph 8 are before the six months time-lag is allowed for.

2. The year 1956 is given here for the purpose of estimating the part of expenditure which ought to be carried forward to the year 1957.

3. Figures relating to 1960 (except for the 17% which is brought forward from 1959) were estimated from Tables 1 and 2 of Appendix I.

$ 4. EXPENDITURE ON REPAIR WORK DURING 1957 - 1962

4.1. Urban

Expenditure on repairs and renewals of dwellings was estimated by using the ID 50 average cost per repair work throughout the period and the adjusted number of repair permits issued each year. Since repair permits were given in official statistics without distinction between those which are used for dwelling repair and those which are used for the repair of other types of building, we used the average percentage ratio of dwelling licences to total permits for new buildings issued during 1960 - 1962 to derive the number of dwellings' repair permits issued during 1957 - 1962. No time-lag was assumed for this type of expenditure since the work itself does not take more than one month. Table XIII-23 shows the procedure we applied.

4.2. Rural

Expenditure on repair and re-building of rural dwellings during 1957 - 1962 was estimated by using the value of gross output of rural housing given by Haseeb[1)] and deducting the value of newly erected rural houses each year (see Table XIII-12 above), and thus arriving at total expen-

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1) Haseeb, K., The National Income of Iraq, R.I.I.A., pp.108-111.

diture on repairs and renewals of rural dwellings as shown in Table XIII-24.

The table also shows that this type of expenditure amounted to about 86 per cent of total annual value of gross output of rural buildings. This, someone may say, is too high a percentage compared with that of urban dwellings which is about 3 per cent only. We think, however, that this is a logical trend in rural areas where nearly all buildings are built of mud and reeds, and are very likely to be affected by climatic changes, e.g. heavy rains, storms, etc., which means that frequent repairing is needed. Urban dwellings, on the contrary, do not need such frequent repairing since they are originally built of bricks, stones, cement and other common building materials. Moreover, this high figure of expenditure on repairing and rebuilding rural dwellings may be considered as representing the value of new buildings replacing the scrapped ones, which, of course, are not part of the gross capital formation because they do not make any addition to the existing stock of capital.

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TABLE XIII-23

URBAN BUILDINGS

ESTIMATION OF EXPENDITURE ON REPAIR WORK, 1957 - 1962

		1957	1958	1959	1960	1961	1962
1	Number of permits for repair work (unadjusted)	16201	16143	12237	6834	8632	8043
2	Plus 15% Mark-up	2430	2421	1836	1025	1295	1206
3	Total Number of permits for repair work (adjusted):	18631	18564	14073	7859	9927	9249
4	Number of permits for the repair of dwellings=75% of (3)	13973	13923	10555	5894	7445	6937
5	Average cost per repair work (ID)	50	50	50	50	50	50
6	Total cost of repair work of dwellings = (4) x (5)(ID000)	698.7	696.2	527.8	294.7	372.3	346.9
7	Number of permits for the repair of private non-residential buildings = (3) - (4)	4658	4641	3518	1965	2482	2312
8	Total Cost of repair work of private non-residential buildings = (7) x (5)(ID000)	232.9	232.1	175.9	98.3	124.1	115.6

TABLE XIII-24

RURAL BUILDINGS

VALUE OF GROSS OUTPUT, NEW ADDITIONS AND VALUE OF REPAIR AND RE-BUILDING, 1957 - 1962

	1957	1958	1959	1960	1961	1962
1 Value of gross output of rural buildings, (new additions and repair and rebuilding)*	1404.0	1422.0	1440.0	1458.0	1476.0	1494.0
2 Less value of new additions (see Table XIII-12)	199.6	202.5	205.3	208.3	211.3	214.3
3 Value of repair and rebuilding :	1204.4	1219.5	1234.7	1249.7	1264.7	1279.7
4 (2) as % of (1)	14.2	14.2	14.3	14.3	14.3	14.4
(3) as % of (1)	85.8	85.8	85.7	85.7	85.7	85.6

* Sources: Haseeb, K., The National Income of Iraq, 1953-1961 (R.I.I.A., Oxford University Press, 1964) pp.108-111.

CHAPTER XIV

PUBLIC ADMINISTRATION

§ 1. DEFINITION

From the viewpoint of capital formation, the definition of this industry group is narrower than that suggested by the U.N. for the classification of GDP by industrial origin. The cause of this difference is the elimination of Government defence agencies, such as the Ministry of Defence and its affiliated departments. Moreover, Government services in the field of education, health, recreation and the like are excluded from this industry group and included in the industry designated as "Services". Thus, if Government function is classified into three groups : general services, community services, and social services, this sector will embrace only Government agencies rendering the first group of services, the provision of which requires the use of compulsory powers and, therefore, have no private counterpart. Examples are justice, police, and general administration, that is, services related to the administration of Central Government as a whole or of a local Government unit. These services which are indispensible to the existence of an organized state, are provided by Government agencies

only, and cannot be conceptually allocated to particular groups of beneficiaries.

Government agencies providing community services (such as sanitation, water and electricity supply, roads and waterways) and social services (such as education, health and welfare services) are not classified here but in the relevant industry groups within which their main activities fall.

Due to statistical difficulties, the capital expenditures of certain Government departments, such as the Departments of Civil Aviation, Navigation, and Surveys, and Public Works Department are included in this sector.

The resulting estimates of GFCF in this sector are shown in Tables XIV-1 to XIV-3. Table XIV-1 gives the aggregate capital formation at current and at constant prices. The other two tables show the classification of the figures by type of asset. Expenditure on repair work of buildings and expenditure on military type construction are shown in paragraphs 6 and 7 of Table XIV-2, but they are not considered as components of capital formation.

TABLE XIV-1

GFCF IN PUBLIC ADMINISTRATION, 1957 - 1962*

Year	At Current Prices		At Constant (1957) Prices	
	ID 000	1957 = 100	ID 000	1957 = 100
1957	3086.3	100.0	3086.3	100.0
1958	2450.6	79.4	2694.0	87.3
1959	2725.2	88.3	2731.7	88.5
1960	3224.4	104.5	3092.9	100.2
1961	4092.1	132.6	3951.9	128.0
1962	5062.9	164.0	5040.6	163.3

* Excluding expenditure on repair work and on other construction for military purposes.

Sources: Tables XIV-2 and XIV-3 below.

TABLE XIV-2

CLASSIFICATION OF GFCF IN PUBLIC ADMINISTRATION BY TYPE OF ASSET, 1957 - 1962

(at Current Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	2449.1	2036.5	2013.9	2546.2	3449.0	4464.6
2	Other Construction and Works	156.5	86.3	122.5	145.4	157.7	175.4
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	129.8	84.3	176.7	146.5	100.9	110.5
	(ii) Furniture and Fixtures	122.7	76.0	154.3	162.5	121.7	138.1
	Total 3 :	252.5	160.3	331.0	309.0	222.6	248.6
4	Transport Equipment	228.2	167.5	257.8	223.8	262.8	174.3
5	TOTAL GFCF in Public Administration at Current Prices :	3086.3	2450.6	2725.2	3224.4	4092.1	5062.9
6	Expenditure on Repair works of Buildings :	151.0	127.0	175.3	163.4	180.5	306.1
7	Expenditure on Buildings (other than Dwellings) and other Constructions for Military Purposes :	5200.6	2848.3	7875.3	6923.7	10313.1	10060.2

Sources: Appendix V Tables 5, 8 and 10.

TABLE XIV-3

CLASSIFICATION OF GFCF IN PUBLIC ADMINISTRATION BY TYPE OF ASSET, 1957 - 1962*

(at Constant (1957) Prices)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	2449.1	2275.4	2046.6	2443.6	3332.4	4446.8
2	Other Construction and Works	156.5	96.4	124.5	139.5	152.4	174.7
3	Machinery and Other Equipment:						
	(i) Machinery and Equipment	129.8	82.1	164.8	142.8	97.6	108.1
	(ii) Furniture and Fixtures	122.7	78.4	168.3	174.7	140.4	163.8
	Total 3 :	252.5	160.5	333.1	317.5	238.0	271.9
4	Transport Equipment	228.2	161.7	227.5	192.3	229.1	147.2
5	TOTAL GFCF in Public Administration at Constant Prices :	3086.3	2694.0	2731.7	3092.9	3951.9	5040.6
	(1) as % of (5)	79.3	84.4	75.0	79.0	84.3	88.2
	(2) as % of (5)	5.1	3.6	4.5	4.5	3.9	3.5
	(3) as % of (5)	8.2	6.0	12.2	10.3	6.0	5.4
	(4) as % of (5)	7.4	6.0	8.3	6.3	5.8	2.9
		100.0	100.0	100.0	100.0	100.0	100.0

* Excluding expenditure on Repair works and on Buildings (other than dwellings) and other Construction for Military Purposes.

Sources: Figures of Table XIV-2 deflated by the Price Index Numbers given in Chapter II.

$ 2. SOURCES AND METHODS OF ESTIMATION

The capital expenditure of Government agencies falling within the boundary of this sector was derived from the Ordinary Budgets, the Development Budgets, and the Local Administrations' accounts. The figures thus derived represent expenditure on the acquisition of new assets by Government administrative agencies. Capital expenditure by these agencies on assets which are used for purposes other than administrative, is classified in other industry groups. For instance, Local Administration's expenditure on the construction of school buildings, streets and culverts is included in "Services" and "Transportation, Storage and Communications", respectively. The same principle applies to the Ordinary Budget and the Development Budget.

The Ordinary Budget's capital expenditure (Appendix V Table 5) consisted mainly of expenditure on the acquisition of new transport equipment and furniture and fixtures. Expenditure on "buildings", however, was not significant. It consisted of the construction of a few police posts and extension of existing office buildings. "Other construction and works", on the other hand, comprised expenditure on ducts for air-coolers, prison yards, and similar construction. "Machinery and equipment" included expenditure on statistical machinery used in some Government departments, especially

the Central Bureau of Statistics. Construction machinery purchased by the Ministry of Works is also included.

The Development Budget's capital expenditure (Appendix V Table 8) consisted mainly of expenditure on the construction of Government office buildings. Expenditures on transport equipment, office furniture and machinery for the administrative section of the Development and Planning Board are included, but as can be seen from Table 8 of Appendix V the preponderate item on which most of the Development Budget's expenditure was made was office buildings. The term office buildings, however, is used here to cover buildings such as : Presidential Palace and Parliament, law-courts, police stations, ministerial buildings (except the Ministry of Defence) and similar buildings.

In so far as the Local Administration's capital expenditures are concerned (Appendix V Table 10) they are similar in nature to those derived from the above two budgets.

* * * * *

CHAPTER XV

SERVICES

§ 1. DEFINITION

The definition of "Services" adopted here is similar to that covered by Groups 821-59 of the I.S.I.C. It embraces public and private establishments furnishing community services in such fields as education, health, recreation and other services. There is, however, one exception to this general definition. Sanitary services are included in this sector instead of being classified in "Electricity and Water". Hence the capital expenditures of Baghdad Sewage Services and part of that of the municipalities are considered as part of the capital formation in this sector.

The resulting estimates of GFCF are shown in Tables XV-1, XV-2, and XV-3. The first table presents the capital formation estimates at current prices, sub-divided between the public and the private sectors, and classified by type of asset. The second table gives the same information, but at constant prices. Table XV-3, on the other hand, gives details of public GFCF by type of asset and fields of expenditure during 1957-1962.

TABLE XV-1

CLASSIFICATION OF GFCF IN SERVICES BY TYPE OF ASSET, 1957 - 1962*

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Public	3806.0	4084.4	4481.3	4375.6	5462.1	4335.9
b. Private	602.4	569.5	821.6	379.4	867.0	855.2
Total 1 :	4408.4	4653.9	5302.9	4755.0	6329.1	5191.1
2 Other Construction and Works						
a. Public	309.2	269.3	1203.0	3135.6	3031.7	4072.3
b. Private	-	-	-	-	-	-
Total 2 :	309.2	269.3	1203.0	3135.6	3031.7	4072.3
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Public	341.4	312.1	650.1	1014.0	1026.1	564.4
b. Private	1196.5	1145.6	659.1	1154.1	1798.3	1865.1
Sub-total 3(i) :	1537.9	1457.7	1309.2	2168.1	2824.4	2429.5
(ii) Furniture and Fixtures						
a. Public	269.5	341.1	475.3	704.9	518.1	434.2
b. Private	529.2	623.0	707.2	946.5	931.0	1016.0
Sub-total 3(ii):	798.7	964.1	1182.5	1651.4	1449.1	1450.2
Total 3 :	2336.6	2421.8	2491.7	3819.5	4273.5	3879.7

(Continued)

TABLE XV-1 (continued)

4 Transport Equipment:						
a. Public	120.7	83.4	144.4	180.4	188.3	86.3
b. Private	19.0	23.0	28.7	44.2	41.5	37.3
Total 4 :	139.7	106.4	173.1	224.6	229.8	123.6
5 TOTAL GFCF in Services at Current Prices						
a. Public	4846.8	5090.3	6954.1	9410.5	10226.3	9493.1
b. Private	2347.1	2361.1	2216.6	2524.2	3637.8	3773.6
GRAND TOTAL :	7193.9	7451.4	9170.7	11934.7	13864.1	13266.7

* Excluding expenditure on Repair work.

Sources: a. For Public GFCF: Table XV-3 below.

b. For Private GFCF: See Chapter III, Part Two, Section B.

TABLE XV-2

CLASSIFICATION OF GFCF IN SERVICES BY TYPE OF ASSET, 1957 - 1962*

(at Constant (1957) Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Public	3806.0	4563.7	4554.2	4199.2	5277.4	4318.6
b. Private	602.4	636.3	835.0	364.1	837.7	851.8
Total 1 :	4408.4	5200.0	5389.2	4563.3	6115.1	5170.4
2 Other Construction and Works						
a. Public	309.2	301.0	1222.6	3009.2	2929.2	4056.1
b. Private	-	-	-	-	-	-
Total 2 :	309.2	301.0	1222.6	3009.2	2929.2	4056.1
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Public	341.4	303.9	606.4	988.3	992.4	552.3
b. Private	1196.5	1115.5	614.8	1124.9	1739.2	1825.0
Sub-total 3(i) :	1537.9	1419.4	1211.2	2113.2	2731.6	2377.3
(ii) Furniture and Fixtures						
a. Public	269.5	351.6	518.3	758.0	597.6	515.0
b. Private	529.2	642.3	771.2	1017.7	1073.8	1205.2
Sub-total 3(ii) :	798.7	993.9	1289.5	1775.7	1671.4	1720.2
Total 3 :	2336.6	2413.3	2500.7	3888.9	4403.0	4097.5

(Continued)

TABLE XV-2 (continued)

4 Transport Equipment:						
a. Public	120.7	80.5	127.4	155.0	164.2	72.9
b. Private	19.0	22.2	25.3	38.0	36.2	31.5
Total 4 :	139.7	102.7	152.7	193.0	200.4	104.4
5 TOTAL GFCF in Services at Constant Prices						
a. Public	4846.8	5600.7	7028.9	9109.7	9960.8	9514.9
b. Private	2347.1	2416.3	2246.3	2544.7	3686.9	3913.5
GRAND TOTAL :	7193.9	8017.0	9275.2	11654.4	13647.7	13428.4
(1) as % of (5)	61.3	64.9	58.1	39.2	44.8	38.5
(2) as % of (5)	4.3	3.7	13.2	25.8	21.5	30.2
(3) as % of (5)	32.5	30.1	27.0	33.4	32.2	30.5
(4) as % of (5)	1.9	1.3	1.7	1.6	1.5	0.8
	100.0	100.0	100.0	100.0	100.0	100.0

* Excluding exponditure on Repair Work

Sources: Figures of Table XV-1 above deflated by the Price Index Numbers given in Chapter II.

$ 2. SOURCES AND METHODS OF ESTIMATION

The same general method has been used for estimating GFCF in this sector as for the others. The expenditure approach was followed in arriving at public GFCF, the derivation of which was essentially from Government accounts. The commodity-flow method was employed in the case of private GFCF.

The only difference between the technique used in this sector and that used in others lies in the measurement of investment in transport equipment. Imported transport equipment ascribed to this sector is of two types as shown in AppendixIV Table 4. The first type consists of fire-fighting engines and road sweepers, which are usually acquired by public authorities who undertake the responsibility of providing fire protection and road cleaning. The second type consists of motor cycles and delivery cycles.

In distributing investment in transport equipment between the public and the private sectors, the second type was regarded as private investment, on the grounds that purchases of this type of transport equipment could not be traced in the accounts of Government agencies which are classified in "Services". The first type, however, was considered as constituting part of public investment; which, when added to item 2(j) of Table III-23

above, public investment in transport equipment was arrived at.[1)]

2.1. Public GFCF (Table XV-3)

Public GFCF in Services is divided into three categories according to the field in which the expenditure is made. They are :

a. Education

b. Health

c. Other.

The first category includes expenditure on school and other educational buildings, furniture, fixtures, and scientific equipment used in these institutions. Libraries (except books) and student hostels are also covered by this category.

The second category embraces all Government hospitals and health institutions, (it does not, however, include the capital expenditure for the administrative section of the Ministry of Health, which is included in the sector Public Administration).

The third category covers Government expenditure on the construction of parks, swimming pools, hotels, summer resorts and rest houses, sanitary systems, radio broadcasting and television centre (but not

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1) Item 2(j) of Table III-23, in effect, is the difference between public investment in transport equipment used in "Services" (shown in Table XV-3 below) and item 6(a) in Table 4 of Appendix IV.

the capital expenditure for the administrative section of the Ministry of Guidance), the opera house, and similar services projects. The capital expenditures of the Awqaf (Pious Bequest) Administration and the Directorate-General of Exhibitions are also included under this category.

Figures relating to public capital formation in services were derived from the Development Budgets (Appendix V Table 8), the Ordinary Budgets (Appendix V Table 6), Baghdad Sewage Services' Accounts (Table XV-4 below), the Municipalities' (including the Capital Municipality: Amanet el-Asima) capital expenditure statements (Appendix V Table 12), the Local Administrations' capital expenditure accounts (Appendix V Table 10), the Awqaf Administration's Budgets (Table XV-5 below), and the final accounts of the Directorate-General of Exhibitions (Table XV-6 below).

TABLE XV-3

CLASSIFICATION OF PUBLIC GFCF IN SERVICES BY TYPE OF ASSET AND FIELD OF EXPENDITURE, 1957 - 1962

(at Current Prices)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
a. Education	1836.2	2248.0	2195.4	2293.0	2840.1	1260.0
b. Medical and Health	919.2	1268.2	1033.7	950.2	1141.7	1815.1
c. Other	1050.6	568.2	1252.2	1132.4	1480.3	1260.8
Total 1 :	3806.0	4084.4	4481.3	4375.6	5462.1	4335.9
2 Other Construction and Works						
a. Education	-	-	-	-	-	-
b. Medical and Health	-	-	-	-	-	-
c. Other	309.2	269.3	1203.0	3135.6	3031.7	4072.3
Total 2 :	309.2	269.3	1203.0	3135.6	3031.7	4072.3
3 Machinery and Other Equipment:						
(i) Machinery and Equipment						
a. Education	136.0	92.7	166.6	323.4	442.3	113.5
b. Medical and Health	2.1	0.5	12.9	22.6	78.5	4.4
c. Other	203.3	218.9	470.6	668.0	505.3	446.5
Sub-total 3(i) :	341.4	312.1	650.1	1014.0	1026.1	564.4

(Continued)

TABLE XV-3 (Continued)

3	(ii) Furniture and Fixtures						
	a. Education	190.2	255.8	381.2	577.8	378.2	304.5
	b. Medical and Health	59.7	65.9	60.5	100.6	107.3	79.3
	c. Other	19.6	19.4	33.6	26.5	32.6	50.4
	Sub-total 3(ii) :	269.5	341.1	475.3	704.9	518.1	434.2
	Total 3 :	610.9	653.2	1125.4	1718.9	1544.2	998.6
4	Transport Equipment						
	a. Education	26.0	30.4	50.8	46.3	35.3	29.0
	b. Medical and Health	91.8	50.0	80.5	125.0	84.7	48.9
	c. Other	2.9	3.0	13.1	9.1	68.3	8.4
	Total 4 :	120.7	83.4	144.4	180.4	188.3	86.3
5	TOTAL PUBLIC GFCF in Services :	4846.8	5090.3	6954.1	9410.5	10226.3	9493.1
6	Expenditure on Repair Work :	124.0	129.7	317.5	346.8	428.3	520.5

Sources: Tables XV-4, XV-5, XV-6 below and Tables 6, 8, 10, and 12 of Appendix V.

TABLE XV-4

CAPITAL EXPENDITURE OF BAGHDAD SEWAGE SERVICES, 1957 - 1962

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	-	-	-	-	-	-
2	Other Construction and Works	2.7	31.3	596.7	2154.1	1357.3	800.5
3	Machinery and Other Equipment						
	(i) Machinery and Equipment	-	1.2	99.4	33.0	68.4	51.1
	(ii) Furniture and Fixtures	0.5	1.2	3.1	3.5	2.0	2.8
	Total 3 :	0.5	2.4	102.5	36.5	70.4	53.9
4	Transport Equipment	-	-	1.1	5.1	4.0	1.4
	TOTAL :	3.2	33.7	700.3	2195.7	1431.7	855.8

Sources: Detailed capital expenditure statements and final accounts of Baghdad Sewage Services Administration supplied to the writer.

TABLE XV-5

CAPITAL EXPENDITURE OF

AWQAF (endowments for Pious Purposes) ADMINISTRATION, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings (Religious and other types of buildings)	43.7	45.7	40.7	45.7	45.5	149.0
2 Other Construction and Works	-	-	-	-	-	-
3 Machinery and Other Equipment:						
(i) Machinery and Equipment	-	-	-	-	-	-
(ii) Furniture and Fixtures	5.1	4.4	5.1	3.7	3.6	21.6
4 Transport Equipment	-	-	-	-	-	-
TOTAL :	48.8	50.1	45.8	49.4	49.1	170.6

Sources: Capital expenditure accounts and the final accounts of the Awqaf Administration supplied to the writer.

TABLE XV-6

CAPITAL EXPENDITURE OF THE DIRECTORATE-GENERAL OF EXHIBITIONS (Established 1959)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings			-	-	153.0	6.0
2 Other Construction and Works			-	-	-	1.0
3 Machinery and Other Equipment						
(i) Machinery and Equipment			-	-	22.6	5.4
(ii) Furniture and Fixtures			6.1	2.0	7.0	3.3
Total 3 :			6.1	2.0	29.6	8.7
4 Transport Equipment			1.0	-	1.3	-
TOTAL :			7.1	2.0	183.9	15.7

Sources: Final accounts of the above Directorate supplied to the writer.

2.2. Private GFCF

Private GFCF in "Services" is estimated in a similar way as private GFCF in other sectors was estimated.

"Non-residential buildings" and "furniture and fixtures" are estimated in the manner described in chapter III above. They represent that part of total private capital formation in these two types of asset which is attributed to this sector (see Tables III-25 and III-26, respectively).

"Machinery and equipment" is derived by deducting public expenditure on this type of asset (item 3(i) Table XV-3 above) from the control total of machinery and equipment ascribed to this sector (see item 11 of Table III-21).

Finally, "transport equipment" represents that part of imported motor and delivery cycles attributed to this sector (see Appendix IV, Table 4 item 6(b)).

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BIBLIOGRAPHY

I. OFFICIAL PUBLICATIONS AND REPORTS

A. United Nations, and other Official Bodies

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (IBRD), A Report on the Economic Development in Iraq; John Hopkins University, 1952.

IBRD, Department of Operations, South Asia and Middle East, Current Economic Position and Prospect of Iraq; Report No. AS-100a, September 1963.

U.K. CENTRAL STATISTICAL OFFICE, National Income Statistics: Sources and Methods (H.M.S.O., London 1956).

U.K. CENTRAL STATISTICAL OFFICE, New Contributions to Economic Statistics; Second Series; Studies in Official Statistics No. 9 (H.M.S.O., London 1962).

U.N. Economic Commission for Europe: A Study of Development of Growth in Europe during the Nineteen-Fifties; Mimeo. Econ. Advisers/Conf./13, dated 2 March, 1961.

U.N. Food and Agricultural Organization: Mediterranean Development Project, Iraq; Country Report, No. 250, Rome 1959.

U.N. Statistical Office, Measurement of National Income and the Construction of Social Accounts; Studies and Reports on Statistical Methods, No. 7 U.N. Geneva, 1947.

U.N. Statistical Office, Indexes of Quantum in International Trade: Methods of Adjustment for Incomplete Coverage; Statistical paper, Series M, No. 3, August 1949.

U.N. Department of Economic Affairs: Measures for the Economic Development of Under-Developed Countries (New York, May 1951).

U.N. Statistical Office: Concepts and Definitions of Capital Formation; Studies in Methods, Series F, No. 3 (New York, July 1953).

U.N. Statistical Office, Statistical Papers, Series M, No. 16, Reports and Proceedings of the United Nations International Seminar on Statistical Organization (New York, 1953).

U.N. Statistical Office: Methods of National Income Estimation: Studies in Methods, Series F, No. 8, (New York, January 1955).

U.N. Statistical Office: Indexes to the International Standard Industrial Classification of All Economic Activities; Series M, No. 4, Add. 1 (New York, April 1956).

U.N. Statistical Office: Methods used in Compiling the U.N. Price Indexes for Basic Commodities in International Trade; Statistical paper, Series M, No. 29, (New York, 1958).

U.N. Statistical Office: A Short Manual on Sampling, Vol. I; Studies in Methods, Series F, No. 9 (New York 1960).

U.N. Statistical Office: A System of National Accounts and Supporting Tables; Series F, No. 2, Rev. 2 (New York, 1964).

U.N. Statistical Office: Yearbook of International Trade Statistics, 1959, 1960, 1961, and 1962; (New York, 1961, 1962, 1963, and 1964, respectively).

B. Iraq

Awqaf Administration, Awqaf Budgets and Capital Expenditures for the Financial Years: 1957-1962. Government Gazettes, Baghdad.

Directorate-General of Ports, Basrah, Administration Reports, April 1957 - March 1960 (Undated).

Iraqi Republican Railways: Report on the Administration of the Railways for the fiscal years 1956 - 1963 (Iraqi Railways Press, 1960, 1961, 1965).

Ministry of Agrarian Reforms, Directorate-General of Agricultural Machinery and Implements, Report on the Mechanization of Agriculture (Baghdad, April 1961).

Ministry of Economics, Principal Bureau of Statistics: Report on the Industrial Census of Iraq 1954 (Al-Noor Press, Baghdad, 1956).

Ministry of Economics, Principal Bureau of Statistics, Census of Road Transport, 1957; Mimeographed, Undated (in Arabic).

Ministry of Economics, Principal Bureau of Statistics, Report on the Housing Census of Iraq for 1956, (Al-Rabita Press, Baghdad, undated).

Ministry of Economics, Principal Bureau of Statistics: Report on the Census of Services and Service Industries in Iraq for 1957 (Government Press, Baghdad, 1958).

Ministry of Economics, Principal Bureau of Statistics: Report on the Agricultural and Livestock Census of Iraq, 1952-1953, Vol. 1 (Al-Akhbar House, Baghdad, 1954).

Ministry of Finance, Directorate-General of Accounts, Annual Reports of the Directorate-General of Accounts on the Accounts of the Republic of Iraq; (Reports for the fiscal years 1957/1958 - 1962/1963) (Government Press, Baghdad, 1960, 1961, 1962, 1963, 1964, and 1965, in Arabic).

Ministry of Finance, Directorate-General of Accounts; Annual Reports of the Directorate-General of Accounts on the Development and Planning Board's Expenditure; (Reports for the fiscal years 1957/1958 - 1962/1963) (Government Press, Baghdad, 1959, 1960, 1961, 1962, 1963 and 1964, in Arabic).

Ministry of Finance, Directorate-General of Accounts: Law of Government General Accounting System, No. 28 of 1940; (including accounting instructions) (Government Press, Baghdad, 1948).

Ministry of Guidance: Law of the Five Year Economic Plan 1965/1969; No. 87 of 1965; Baghdad 1st July 1965.

Ministry of Guidance: The Five-Year Detailed Economic Plan 1961/62 - 1965/66; Baghdad (undated).

Ministry of Planning, Central Bureau of Statistics: Statistical Abstract for Foreign Trade, 1958, 1959, 1960, 1961, and 1962 (Government Press, Baghdad, 1959, 1960, 1961, 1962, and 1963, respectively).

Ministry of Planning, Central Bureau of Statistics: Statistics of Permits for New Buildings and Repair Works, 1960 - 1961 (Zahra Press, Baghdad 1962).

Ministry of Planning, Central Bureau of Statistics: Statistics of Permits for New Buildings and Repair Works, 1962 (Government Press, Baghdad 1963).

Ministry of Planning, Central Bureau of Statistics: Results of the Construction Survey, 1961, and 1962 (Government Press, Baghdad, 1963 and 1964, respectively, in Arabic).

Ministry of Planning, Central Bureau of Statistics; Sample Survey of Building based on Building Permits 1960, Mimeographed (in Arabic).

Ministry of Planning, Central Bureau of Statistics; Report on the Statistics of Transport and Communications 1962, Mimeographed (in Arabic).

Ministry of Planning, Central Bureau of Statistics: Results of the Agricultural and Livestock Census in Iraq for the year 1958-1959 (Government Press, Baghdad, 1961).

II. BOOKS, ARTICLES, DISSERTATIONS, ETC.

ABBAS, S.A., 'Capital Formation in National Accounting, with Particular Reference to Pakistan'; Middle Eastern Studies in Income and Wealth: International Association for Research in Income and Wealth (Bowes and Bowes, London 1965).

ABU EL-HAJ, R., Oil Industry, a Strategic Factor in the Economic Development of Iraq, Unpublished Ph.D. dissertation, Columbia University, 1957.

ABU EL-HAJ, R., "Capital Formation in Iraq, 1922-1957", Journal of Economic Development and Cultural Change (Chicago University, July 1961).

ADY, Peter and COURCIER? Michel, Systems of National Accounts in Africa (O.E.E.C., Paris 1960).

ALLEN, R.G.D., "Price Index Numbers", Review of the International Statistical Institute, Vol. 31:3, 1963, pp.281-306.

ALLEN, R.G.D., and ELY, J.E., International Trade Statistics (Whitefriars Press, London 1953).

ASHOUR, I., The National Income Statistics of the Arab Countries, The Arabic Economic Review of the General Federation of the Arab Chambers of Commerce, Industry and Agriculture (Al-Bayan Press, Beirut, June 1962).

AUBREY, Henry G., "Investment Decisions in Under-developed Countries", Capital Formation and Economic Growth, N.B.E.R., (Princeton University Press, 1955).

AUKRUST, O., Investment and Economic Growth, Productivity Measurement Review, No. 16, February, 1959; pp.35-50.

BARNA, T., "International Comparison of National Accounts in Economic Analysis", Income and Wealth, Series III, International Association for Research in Income and Wealth, (Bowes and Bowes, Cambridge 1953).

BARNA, T., 'The Replacement Cost of Fixed Assets in British Manufacturing Industry in 1955', Journal of the Royal Statistical Society, Vol. 120, Part I, Series A, 1957.

BLANK, D.M., and WINNICK, L., 'Capital Formation in Private Non-farm Residential Construction', Problems of Capital Formation, N.B.E.R., Vol. Nineteen (Princeton University Press, 1957).

BRILL, Daniel H., "Financing of Capital Formation", Problems of Capital Formation, N.B.E.R., Vol. Nineteen (Princeton University Press, 1957).

BUCKLEY, Kenneth, "Capital Formation in Canada", Problems of Capital Formation, N.B.E.R., Vol. Nineteen, (Princeton University Press, 1957).

BURGE, R.W., "Deflation Within an Accounting Framework", Studies in Social and Financial Accounting; Income and Wealth, Series IX, International Association for Research in Income and Wealth (Bowes and Bowes, London 1961).

CAMBRIDGE, DEPARTMENT OF APPLIED ECONOMICS, Capital, Output and Employment, 1948 - 1960, No. 4 in A Programme for Growth (Chapman and Hall, London 1964).

CARTER, C.F., REDDAWAY, W.B., and STONE, R., The Measurement of Production Movements, (Cambridge University Press, 1948).

CHAPMAN, A.L., and KNIGHT, R., Wages and Salaries in the United Kingdom, 1920 - 1938 (Cambridge University Press, 1953).

CHENERY, H.B., and KRETSCHMER, K.S., 'Resource Allocation for Economic Development', Econometrica, Vol. 24, No. 4, 1956.

CLARK, Colin,'Investment in Fixed Capital Assets in Great Britain', London and Cambridge Economic Service, Special Memorandum, No. 38, 1934.

CLARK, Colin, The Conditions of Economic Progress, 3rd Ed. (Macmillan, London 1957).

CREAMER, Daniel, 'Capital and Output Trend in Manufacturing Industries, 1880 - 1948', National Bureau of Economic Research, Occasional Paper 41, 1954.

CREAMER, Daniel, "An Appraisal of Long-Term Capital Estimates: Some Reference Notes", Output, Input and Productivity Measurement, N.B.E.R., Vol. Twenty-five (Princeton University Press, 1961).

CREAMER, D., DOBROVOLSKY, S.P., and BORENSTEIN, I., "Capital in Manufacturing and Mining: Its Formation and Financing"; National Bureau of Economic Research (Princeton University Press, 1960).

DEAN, G., 'The Stock of Fixed Capital in the United Kingdom in 1961', Journal of the Royal Statistical Society, Series A, Vol.127, Part 3, 1964.

DEAN, G., "Fixed Investment in Britain and Norway, An Experiment in International Comparison"; J.R.S.S., Series A (General), Vol. 127, Part I, 1964.

DEANE, Phyllis, The Measurement of Colonial National Incomes (Cambridge University Press, 1948).

DEANE, Phyllis, Colonial Social Accounting, (Cambridge University Press, 1953).

DENISON, Edward F., "Theoretical Aspects of Quality Change, Capital Consumption, and Net Capital Formation", Problems of Capital Formation N.B.E.R., Vol. Nineteen (Princeton University Press, 1957).

DESAI, R.C., "Consumer Expenditure in India, 1931/2 - 1940/1", J.R.S.S., Vol. CXI, Part IV, 1948.

De SILVA, S.B.D., Investment and Economic Growth in Ceylon, Unpublished Ph.D. dissertation, University of London, 1962.

DEVONS, E., An Introduction to British Economic Statistics (Cambridge University Press, 1958).

Economist Intelligence Unit, "Middle East Oil and the Arabian Peninsula", Quarterly Economic Review, Annual Supplement, December 1964.

Economist Intelligence Unit, "Middle East Oil and the Arabian Peninsula", Quarterly Economic Review, No. 20, January 1965.

Economist Intelligence Unit, "Iraq", Quarterly Economic Review, No. 36, February 1965.

Economist Intelligence Unit, "Iraq", Quarterly Economic Review, No. 38, August 1965.

FABRICANT, Solomon, 'Capital Consumption and Adjustment', National Bureau of Economic Research, No. 35, New York, 1938.

FEI, J.C.H., and RANIS, G., 'Innovation, Capital Accumulation, and Economic Development', The American Economic Review, Vol. LIII, No. 3, June, 1963.

FENELON, K.G., Iraq National Income and Expenditure 1950 - 1956, (Al-Rabita Press, Baghdad, 1958).

FRANKEL, Herbert, "Concepts of Income and Welfare - in Advanced and Under-developed Societies - with Special Reference to the Incomparability of National Income Aggregates", Income and Wealth, Series III, International Association for Research in Income and Wealth (Bowes and Bowes, Cambridge, 1953).

GEARY, R.C., 'The Concept of ~~National~~ Net Volume of Output, with Special Reference to Irish Data', Journal of the Royal Statistical Society, Vol. 107, 1944.

GEARY, R.C., "Introduction to Problems in the Deflation of National Accounts"; also: "Productivity Aspects of Accounts Deflation", Studies in Social and Financial Accounting: Income and Wealth, Series IX, International Association for Research in Income and Wealth (Bowes and Bowes, London 1961).

GILBERT, Milton, and KRAVIS, Irving B., An International Comparison of National Products and the Purchasing Power of Currencies; O.E.E.C., Paris 1954.

GILBERT, Milton, "Statistical Sources and Methods - National Accounts Estimates and the Problem of Reliability", Income and Wealth, Series III, International Association of Research in Income and Wealth (Bowes and Bowes, Cambridge 1953).

GOLDSMITH, R.W., 'A Perpetual Inventory of National Wealth', National Bureau of Economic Research, Studies in Income and Wealth, Vol. 14, 1951.

GROSSMAN, Gregory, "Some Current Trends in Soviet Capital Formation", Capital Formation and Economic Growth, N.B.E.R. (Princeton University Press, 1955).

HANSEN, Alvin, Introductory Observations: Capital Formation and its Elements (New York, 1939).

HARROD, Roy, "Economic and Capital Investment", Capital Formation and Investment in Industry (Instanbul Matbaasi, 1963).

HASEEB, K., An Estimate of the National Income of Iraq 1953-1956, Ph.D. dissertation in the University of Cambridge, September 1959.

HASEEB, K., The National Income of Iraq 1953-1961, Royal Institute of International Affairs, (Oxford University Press, 1964).

HASEEB, K., The National Income of Iraq 1962-1963, The Central Bank of Iraq, Mimeographed, 1964.

HIRSHMAN, A.O., The Strategy of Economic Development (Yale Studies in Economics 10) New Haven (Yale University Press 1959).

IVERSON, Carl, A Report on Monetary Policy in Iraq, National Bank of Iraq, 1954.

KANAAN, Tahir Hamdi, A Study in the Structure of Iraqi Economy, Ph.D. dissertation in the University of Cambridge, 1963 (Unpublished).

KANAAN, Tahir Hamdi, Input-Output and Social Accounts of Iraq, 1960-1963, Republic of Iraq, The Ministry of Planning (Mimeographed), Baghdad, September 1965.

KEYNES, J.M., 'The Process of Capital Formation', The Economic Journal, September 1939.

KUZNETS, Simon, Commodity Flow and Capital Formation; N.B.E.R., Vol. One, (New York, 1938).

KUZNETS, S., National Product in Wartime (New York, 1945).

KUZNETS, S., National Income and its Composition, 1919-1938, N.B.E.R., (New York, 1954).

KUZNETS, S., 'International Differences in Capital Formation and Financing', Capital Formation and Economic Growth, National Bureau of Economic Research (Princeton University Press, Princeton 1955).

KUZNETS, S., assisted by JENKS, Elizabeth, Capital in the American Economy: Its Formation and Financing, N.B.E.R. (Princeton University Press, 1961).

LANGLEY, Kathleen M., The Industrialization of Iraq, Harvard Middle Eastern Monographs, Series V (Harvard University Press, Cambridge, Massachusettes, 1961).

LEONTIEF, W.W., and Others, Studies in the Structure of the American Economy: Theoretical and Empirical Explanations in Input-Output Analysis (Oxford University Press, New York, 1953).

LEVY, Marion J., Jr., "Some Social Obstacles to Capital Formation in Under-Developed Areas", Capital Formation and Economic Growth, N.B.E.R., (Princeton University Press, 1955).

LITTLE, Arthur D., Inc., A Plan for Industrial Development in Iraq, Cambridge 42, Massachusettes, May 1956.

LONGRIGG, S.H., Oil in the Middle East, (Oxford University Press, 1954).

LOWE, Adolph, "Structural Analysis of Real Capital Formation", Capital Formation and Economic Growth, N.B.E.R. (Princeton University Press, 1955).

MANIAKIN, V., Introduction to the National Accounting in Iraq 1956-1960, Ministry of Planning, Baghdad, May 1961, Mimeographed.

MASSELL, B.F., 'Capital Formation and Technilogical Change in United States Manufacturing', in The Review of Economics and Statistics, Vol. XLII, No. 2, May 1960; pp.182-188.

MAY, George O., "Changes in the Accounting Treatment of Capital Items During the Last Fifty Years", Problems of Capital Formation, N.B.E.R., Vol. Nineteen (Princeton University Press, 1957).

NICHOLSON, J.L., "Some Problems in the Measurement of Real National Income", Income and Wealth, Series IV, International Association for Research in Income and Wealth (Bowes and Bowes, London 1955).

NURKSE, Rangnar, Problems of Capital Formation in Under-developed Countries (Basil Blackwell, Oxford 1962).

OBBOSI, M.J., "The Agricultural Sector" Lectures on the Problems of Economic Development in Iraq, Vol. I; Institute of Higher Arabic Studies, Arab League, (Al-Kamaliyah Press, 1958 in Arabic).

OSHIMA, Harry T., 'National Income Statistics of Under-developed Countries", Journal of the American Statistical Association, Vol. 52, No. 278, July 1957.

PAIGE, Deborah and BOMBACH, Gottfreid, A Comparison of National Output and Productivity of the U.K. and the U.S.A., O.E.E.C., (Paris, 1959).

PREST, A.R., The Role of National Income Estimates in the Statistical Policy of an Under-developed Area: A Comment; Review of Economic Studies, Vol. XXI, 1953.

PREST, A.R., and ADAMS, A.A., Consumers Expenditure in the United Kingdom, 1900 - 1919 (Cambridge University Press, 1954).

PYATT, Graham, "A Measure of Capital", The Rewiew of Economic Studies, Vol. XXX, No. 3, 1963.

RAMAMURTI, B., and PEDERSENS, Hans Th., "Statistical Methods of Estimating Capital Formation Expenditure in ECAFE COUNTRIES", Asian Studies in Income and Wealth (Asia Publishing House, London 1965).

RANGNEKAR, D.K., Capital Development in India with Special Reference to Recent Trends in Investment; Ph.D. thesis submitted in the University of London, 1955.

RANGNEKAR, D.K., Poverty and Capital Development in India, Royal Institute of International Affairs (Oxford University Press, 1958).

RAO, V.K.R.V., "Some Reflections of the Comparability of Real National Incomes of Industrialized and Under-developed Countries", Income and Wealth, Series III, International Association for Research in Income and Wealth (Bowes and Bowes, Cambridge, 1953).

RAZZUKI, Hanna, "Government Accounting System", The Economist; Quarterly Journal of the Iraqi Economic Association, Vol. V, No. 3 (Al-Maaref Press, Baghdad, November 1964 in Arabic).

REDDAWAY, W.B., and SMITH, A.D., 'Progress in British Manufacturing Industries in the Period 1948-1950, Economic Journal, March, 1960.

REDDAWAY, W.B., Economic Progress for Under-developed Countries, Iraqi Federation of Industries, January, 1963.

REDFERN, Ph., 'Net Investment in Fixed Assets in the United Kingdom, 1938-1953', Journal of the Royal Statistical Society, Series A, Vol. 118, Part II, 1955.

ROSKAMP, Karl W., Capital Formation in West Germany, (Wayne State University Press, Detroit, 1965).

ROSOVSKY, Henry, Capital Formation in Japan, 1868-1940 (The Free Press of Glencoe, New York, 1961).

RUGGLES, Richard and Nancy, "Concepts of Real Capital Stock and Services", Output, Input and Productivity Measurement, National Bureau of Economic Research, Vol. Twenty-five (Princeton University Press, 1961).

SALTER, Lord, assisted by PAYTON, S.W., The Development of Iraq: A Plan of Action, Iraq Development Board, 1955.

SAYIGH, Yusif, A., "Government Economic Policies and Inducements for Capital Formation and Investment in Industry", Capital Formation and Investment in Industry (Instanbul Matboasi, 1963).

SCHULTZ, T.W., Agriculture in an Unstable Economy, (MxGraw Hill, New York, 1945).

SEERS, D., 'The Role of National Income Estimates in the Statistical Policy of an Under-developed Area', Review of Economic Studies, Vol. XX, 1953.

SOLOWO, R.M., 'Technical Change and Aggregate Production Function', The Review of Economics and Statistics, Vol XXXIX, No. 3, August 1957, pp.312-320.

STAMP, J., The National Capital and Other Statistical Studies, (London, 1937).

STONE, R., Quantity and Price Indexes in National Accounts, O.E.E.C., Paris, November, 1956.

STONE, Richard and Giovanni, National Income and Expenditure (Bowes and Bowes, London 1961).

STUDENSKI, Paul, The Income of Nations, (New York University Press, 1958).

SWEE, Goh Keng, Techniques of National Income Estimation in Under-Developed Territories, with Special Reference to Asia and Africa, Unpublished Ph.D. Thesis, London University, 1956.

ULMER, Melville J., Capital in Transportation, Communications, and Public Utilities: Its Formation and Financing; N.B.E.R., (Princeton University Press, 1960).

VINSKI, Ivo, "National Product and Fixed Assets in the Territory of Yugoslavia, 1900-1959", Studies in Social and Financial Accounting: Income and Wealth Series IX; International Association for Research in Income and Wealth (Bowes and Bowes, London 1961).

WARRINER, Doreen, Land and Poverty in the Middle East; R.I.I.A. (Oxford University Press, 1948).

WARRINER, Doreen, Land Reform and Economic Development in the Middle East (2nd Ed.) (Oxford University Press, London 1962).

WEBER, B., 'A New Index of Residential Construction and Long Cycles in Housing-Building in Great Britain, 1838-1950'; The Scottish Journal of Political Economy, Vol. II, No. 2, June 1955.

YAMANI, Taro, Statistics: An Introductory Analysis; (Harper and Row, New York, 1964).

YATES, Frank, Sampling Methods for Censuses and Surveys, Third Edition; (Griffin, London 1960).

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CAPITAL FORMATION IN IRAQ, 1957-1962

Jawad Mahmood Hashim

Volume Two

APPENDICES

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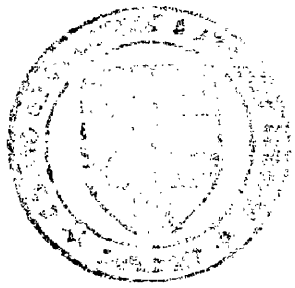

VOLUME TWO

APPENDIX I

This appendix is devoted to the relevant data on Private GFCF in new residential and non-residential buildings during 1960, 1961, and 1962. It contains 21 tables.

Data pertinent to residential buildings (dwellings) is given in Tables 1 - 12; while that referring to non-residential buildings is shown in Tables 13 - 18. Tables 19, 20, and 21 indicate the adjustment of private GFCF in non-residential buildings for the six months time-lag between the date of issuing the relevant building permits and the date of completion of the buildings. It is to be noted, however, that the figures shown in the last three tables are not adjusted to exclude buildings which belong to certain Government banks. Such an adjustment is made in Chapter III, Part Two.

Appendix I

TABLE 1

COST OF BUILDING NEW HOUSES DURING 1960

(ID)

Month	Estimated Cost	10% Mark-up	TOTAL Cost
January	776686	77669	854355
February	1011367	101137	1112504
March	1046080	104608	1150688
April	1686111	168611	1854722
May	1693165	169317	1862482
June	1208978	120898	1329876
July	1260997	126100	1387097
August	1714780	171478	1886258
September	1310594	131059	1441653
October	1167540	116754	1284294
November	893750	89375	983125
December	704248	70425	774673
TOTAL :	14474296	1447431	15921727

Sources: Statistics of Permits for New Buildings and Repair Works, 1960 and 1961, Ministry of Planning, Central Bureau of Statistics (Zahra Press, Baghdad, 1962) (in Arabic and English).

Appendix I

TABLE 2

COST OF BUILDING NEW HOUSES WITH SHOPS DURING 1960

(ID)

Month	Estimated Cost	10% Mark-up	TOTAL Cost
January	33050	3305	36355
February	45050	4505	49555
March	39190	3919	43109
April	72400	7240	79640
May	63250	6325	69575
June	52600	5260	57860
July	43660	4366	48026
August	40300	4030	44330
September	40200	4020	44220
October	29970	2997	32967
November	23750	2375	26125
December	25350	2535	27885
TOTAL :	508770	50877	559647

Sources: Ibid.

Appendix I

TABLE 3

HOUSES, 1960

Province	Number of Building Permits	Number of Rooms	Area of Construction Sq. Metres (000)	Type of Tenancy	
				For Owners' Use	For Rent
Mosul	1355	3578	147.3	1311	44
Sulaimaniya	919	2392	64.3	909	10
Arbil	401	1134	35.3	400	1
Kirkuk	515	1243	50.8	498	17
Diala	351	670	16.2	335	16
Ramadi	163	429	9.7	150	13
Baghdad	5585	23249	745.6	5489	96
Kut	155	424	17.3	149	6
Hilla	401	1440	44.3	367	34
Kerbela	493	1673	42.1	487	6
Diwaniya	638	1130	33.8	627	11
Amara	292	820	24.3	279	13
Nasiriya	281	564	15.6	279	2
Basrah	1076	2650	99.1	1057	19
TOTAL :	12625	41396	1345.7	12337	288

Sources: Ibid.

Appendix I

TABLE 4

"HOUSES WITH SHOPS" 1960

Province	Number of Building Permits	Number of Rooms	Number of Shops	Area of Construction Sq. Metres (000)	Type of Tenancy	
					For Owners' Use (Number)	For Rent (Number)
Mosul	18	43	89	3.4	1	17
Sulaimaniya	12	42	34	1.5	6	6
Arbil	7	22	31	0.8	5	2
Kirkuk	2	5	3	0.2	-	2
Diala	7	25	20	1.1	5	2
Ramadi	4	12	20	0.4	-	4
Baghdad	154	716	545	24.3	79	75
Kut	-	-	-	-	-	-
Hilla	8	39	32	1.2	2	6
Kerbela	14	46	46	2.0	1	13
Diwaniya	2	5	9	0.2	-	2
Amara	-	-	-	-	-	-
Nasiriya	8	20	14	0.7	8	-
Basrah	15	59	51	2.8	7	8
TOTAL :	251	1034	894	38.6	114	137

Sources: Ibid.

Appendix I

TABLE 5

COST OF BUILDING NEW "HOUSES" DURING 1961

(ID)

Province	January	February	March	April	May	June	July
Mosul	40670	40370	72895	103045	77465	119040	133081
Sulaimaniya	28980	29940	59261	108355	79835	78262	47358
Arbil	10400	13100	303300	25430	51050	36275	105030
Kirkuk	8182	41725	16675	27390	23670	5130	26040
Diala	24340	8050	21175	32052	45961	38169	39250
Ramadi	6750	4050	7070	12145	18100	25670	28515
Baghdad	579929	782385	726290	1409260	993226	1165535	1202521
Kut	4515	3600	8500	12640	28200	33765	16240
Hilla	20620	14175	42970	41525	63760	62000	104700
Kerbela	35500	29200	30700	54500	37350	47700	38350
Diwaniya	7350	13730	5710	35236	37950	74748	70826
Amara	17070	13920	13160	39340	18450	13500	25940
Nasiriya	3900	10100	2800	6500	9700	9850	23620
Basrah	101105	93776	137182	188243	98127	141777	165647
Total Estimated Cost :	889311	1098121	1447688	2095661	1582844	1851421	2027118
10% Mark-Up	88931	109812	144769	209566	158284	185142	202712
TOTAL COST :	978242	1207933	1592457	2305227	1741128	2036563	2229830

(Continued)

TABLE 5 (continued)

	August	September	October	November	December
Mosul	85925	53602	55367	90618	30030
Sulaimaniya	26095	5670	30470	14030	12660
Arbil	28500	35535	25648	19885	16450
Kirkuk	66235	18611	28850	9712	44040
Diala	34030	33100	11156	10860	7600
Ramadi	20845	11375	14650	9890	11180
Baghdad	1243185	1047788	943925	455188	477530
Kut	20680	11580	3500	12850	4785
Hilla	63500	38150	20520	26890	23540
Kerbela	55045	37045	54225	32980	30665
Diwaniya	59617	44345	97810	59396	59320
Amara	25020	21420	12040	26200	9500
Nasiriya	18595	29400	6470	15780	11500
Basrah	118792	126434	101909	119142	87197
Total Estimated Cost :	1866064	1514055	1406540	903421	825997
10% Mark-Up	186606	151406	140654	90342	82600
TOTAL COST :	2052670	1665461	1547194	993763	908597

Sources: Ibid.

Appendix I

TABLE 6

COST OF BUILDING NEW "HOUSES WITH SHOPS" DURING 1961

(ID)

Province	January	February	March	April	May	June	July
Mosul	-	-	-	2500	5700	1550	4250
Sulaimaniya	-	-	-	2000	500	7120	1350
Arbil	-	-	-	-	1700	1000	750
Kirkuk	-	3100	-	-	-	3322	2200
Diala	2000	-	-	1000	2700	-	2000
Ramadi	-	-	-	2500	2000	-	-
Baghdad	24200	19070	7850	32600	11750	2500	31500
Kut	-	-	-	-	2000	-	2700
Hilla	1250	2000	-	4750	--	-	-
Kerbela	400	-	-	8500	-	2500	1900
Diwaniya	-	-	-	2207	1460	-	-
Amara	-	-	-	-	-	300	-
Nasiriya	-	-	5000	-	-	6000	700
Basrah	4250	8500	3200	2200	9900	7800	4250
Total Estimated Cost :	32100	32670	16050	58257	37710	32092	51600
10% Mark-up	3210	3267	1605	5826	3771	3209	5160
TOTAL COST :	35310	35937	17655	64083	41481	35301	56760

(Continued)

TABLE 6 (Continued)

	August	September	October	November	December
Mosul	2500	4750	6000	600	-
Sulaimaniya	-	1300	1200	-	-
Arbil	600	-	-	-	-
Kirkuk	-	-	1800	1900	-
Diala	-	1500	-	-	-
Ramadi	-	-	-	-	-
Baghdad	25300	26900	13400	11600	22400
Kut	-	-	280	-	-
Hilla	4400	450	-	840	-
Kerbela	900	2700	10125	845	6100
Diwaniya	2550	1000	3000	-	-
Amara	-	-	-	-	500
Nasiriya	5000	1400	-	-	-
Basrah	7750	2600	1532	1200	5000
Total Estimated Cost :	49000	42600	37337	16985	34000
10% Mark-up	4900	4260	3734	1699	3400
TOTAL COST :	53900	46860	41071	18684	37400

Sources: Ibid.

Appendix I

TABLE 7

"HOUSES ONLY" 1961

Province	Number of Building Permits	Number of Rooms	Area of Construction Sq. Metres (000)	Type of Tenancy	
				For Owners' Use	For Rent
Mosul	953	3251	103.0	935	18
Sulaimaniya	564	2022	58.2	560	4
Arbil	491	1678	51.0	488	3
Kirkuk	271	799	30.5	266	5
Diala	370	1196	33.7	364	6
Ramadi	192	672	16.3	190	2
Baghdad	6418	30031	1020.3	6285	133
Kut	172	520	16.1	169	3
Hilla	388	1610	48.0	383	5
Kerbela	350	1357	40.5	349	1
Diwaniya	1099	2094	64.5	1089	10
Amara	335	913	28.2	332	3
Nasiriya	121	331	13.6	114	7
Basrah	766	3229	116.8	753	13
TOTAL :	12490	49703	1640.7	12277	213

Sources: Ibid.

Appendix I

TABLE 8

"HOUSES WITH SHOPS" 1961

Province	Number of Building Permits	Number of Rooms	Number of Shops	Area of Construction Sq. Metres (000)	Type of Tenancy	
					For Owners' Use (Number)	For Rent (Number)
Mosul	19	53	53	2.7	9	10
Sulaimaniya	12	36	32	1.4	5	6
Arbil	5	10	12	0.4	2	3
Kirkuk	6	16	18	0.7	2	4
Diala	6	22	17	0.9	4	2
Ramadi	3	12	3	0.5	2	1
Baghdad	95	464	371	20.5	55	40
Kut	3	11	14	0.5	2	2
Hilla	9	24	20	1.2	5	4
Kerbela	20	82	67	3.0	10	10
Diwaniya	6	27	25	0.8	3	3
Amara	2	3	5	0.1	2	-
Nasiriya	6	53	39	1.7	2	4
Basrah	40	133	118	5.7	32	8
TOTAL :	232	946	794	40.1	135	97

Sources: Ibid.

Appendix I

TABLE 9

COST OF BUILDING NEW "HOUSES" DURING 1962

(ID)

Province	January	February	March	April	May	June	July
Mosul	53133	56270	35720	72216	64300	103799	115145
Sulaimaniya	23720	34570	19050	20700	18410	31930	26150
Arbil	13900	15500	20850	47625	32300	45190	38490
Kirkuk	80100	51485	48980	52295	38822	29770	43402
Diala	2700	19850	27000	31550	17790	33620	27940
Ramadi	15350	960	5100	20445	9750	29089	19280
Baghdad	508630	738925	807445	1380734	990730	969720	1009530
Kut	25900	27320	22900	109450	33080	46170	21640
Hilla	23170	27600	23950	44250	36150	70100	24300
Kerbela	39850	41129	37855	42520	62245	41085	48780
Diwaniya	37990	26930	31970	36080	44850	33380	31035
Amara	12478	15240	13845	19380	21290	28190	29530
Nasiriya	21120	8960	16100	11152	28510	26400	19650
Basrah	117340	70850	82951	87270	68649	100383	137575
Total Estimated Cost :	975381	1135589	1193716	1975667	1466876	1588826	1592447
10% Mark-Up	97538	113559	119372	197567	146688	158883	159245
TOTAL COST :	1072919	1249148	1313088	2173234	1613564	1747709	1751692

(Continued)

TABLE 9 (continued)

	August	September	October	November	December
Mosul	125415	143525	174685	82530	112700
Sulaimaniya	44445	42245	23020	4650	14450
Arbil	34650	36190	45090	28300	3600
Kirkuk	29650	24581	5430	15629	23950
Diala	30205	27530	11350	11960	21250
Ramadi	21010	9730	18760	12320	8950
Baghdad	1000615	980642	706870	513840	490230
Kut	61380	39230	24080	8190	4250
Hilla	54000	34600	49550	50050	33550
Kerbela	97570	64010	55840	101300	44150
Diwaniya	45220	36610	13980	17610	11310
Amara	28410	38000	23100	8650	16550
Nasiriya	45510	54590	17117	37030	28860
Basrah	133779	125495	146839	38048	51080
Total Estimated Cost :	1751859	1656978	1315711	930107	864880
10% Mark-Up	175186	165698	131571	93011	86488
TOTAL COST :	1927045	1822676	1447282	1023118	951368

Sources: Statistics of Permits For New Buildings and Repair Works 1962, Ministry of Planning, Central Bureau of Statistics, Government Press, Baghdad, 1963 (in English and Arabic).

Appendix I

TABLE 10

COST OF BUILDING NEW "HOUSES WITH SHOPS" DURING 1962

(ID)

Province	January	February	March	April	May	June	July
Mosul	-	-	2500	12850	3520	3600	2400
Sulaimaniya	-	2500	-	-	-	-	-
Arbil	1800	-	-	4000	-	2000	2000
Kirkuk	3950	-	-	2000	-	-	-
Diala	2000	-	-	1800	1200	3000	-
Ramadi	-	-	-	-	-	-	-
Baghdad	4100	45850	10900	33600	15500	13300	15640
Kut	-	2500	-	-	-	-	-
Hilla	800	-	-	2500	4000	-	1500
Kerbela	4000	-	4100	2500	2100	-	1400
Diwaniya	-	-	-	-	-	-	200
Amara	400	4000	-	400	350	1500	1500
Nasiriya	-	-	-	1000	3000	5500	-
Basrah	2800	3000	1120	766	2500	2600	3750
Total Estimated Cost :	19850	57850	18620	61416	30970	29700	31390
10% Mark-up	1985	5785	1862	6142	3097	2970	3139
TOTAL COST :	21835	63635	20482	67558	34067	32670	34529

(Continued)

TABLE 10 (Continued)

	August	September	October	November	December
Mosul	2500	4100	1500	6800	-
Sulaimaniya	-	-	1300	-	-
Arbil	-	-	-	-	-
Kirkuk	-	800	-	-	-
Diala	-	-	-	1000	-
Ramadi	-	-	-	-	-
Baghdad	32270	25200	6400	23000	10600
Kut	-	-	1200	-	-
Hilla	1800	3900	-	-	-
Kerbela	1800	-	1200	3000	2700
Diwaniya	10000	-	-	-	-
Amara	-	-	900	-	3000
Nasiriya	-	4000	2000	1500	3500
Basrah	12650	11390	8500	16000	3850
Total Estimated Cost :	61020	49390	23000	51300	23650
10% Mark-Up	6102	4939	2300	5130	2365
TOTAL COST :	67122	54329	25300	56430	26015

Sources: Ibid.

Appendix I

TABLE 11

"HOUSES ONLY" 1962

Province	Number of Building Permits	Number of Rooms	Area of Construction Sq. Metres (000)	Type of Tenancy	
				For Owners' Use	For Rent
Mosul	1092	3516	133.8	1078	14
Sulaimaniva	253	925	31.8	252	1
Arbil	521	1343	38.6	511	10
Kirkuk	358	1044	43.8	356	2
Diala	218	897	29.6	212	6
Ramadi	168	586	15.8	167	1
Baghdad	6016	25927	928.0	5971	45
Kut	459	1524	50.6	459	-
Hilla	313	1322	41.4	312	1
Kerbela	413	1768	54.6	410	3
Diwaniya	776	1298	44.2	772	4
Amara	401	1167	32.7	390	11
Nasiriya	239	807	27.0	232	7
Basrah	695	2836	99.4	674	21
TOTAL :	11922	44960	1571.3	11796	126

Sources: Ibid.

Appendix I

TABLE 12

"HOUSES WITH SHOPS" 1962

Province	Number of Building Permits	Number of Rooms	Number of Shops	Area of Construction Sq. Metres (000)	Type of Tenancy	
					For Owners' Use (Number)	For Rent (Number)
Mosul	21	79	94	4.5	17	4
Sulaimaniya	2	10	9	0.4	-	2
Arbil	4	29	19	1.4	3	1
Kirkuk	4	10	10	0.6	3	1
Diala	5	24	17	0.9	3	2
Ramadi	-	-	-	-	-	-
Baghdad	101	444	340	19.3	73	28
Kut	2	9	9	0.3	1	1
Hilla	10	30	33	1.4	7	3
Kerbela	12	38	60	1.9	8	4
Diwaniya	2	7	10	0.4	2	-
Amara	10	19	38	1.1	6	4
Nasiriya	8	38	53	2.4	5	3
Basrah	33	133	107	6.1	26	7
TOTAL :	214	870	799	40.7	154	60

Sources: Ibid.

Appendix I

TABLE 13

COST OF NEW NON-RESIDENTIAL URBAN BUILDINGS DURING 1960

(ID)

Month	Estimated Cost	10% Mark-up	TOTAL Cost
January	146050	14605	160655
February	215534	21553	237087
March	106885	10689	117574
April	245381	24538	269919
May	117547	11755	129302
June	98097	9810	107907
July	120960	12096	133056
August	235203	23520	258723
September	160491	16049	176540
October	250109	25011	275120
November	222693	22269	244962
December	193024	19302	212326
TOTAL :	2111974	211197	2323171

Sources: Statistics of Permits for New Buildings and Repair Works, 1960 and 1961, Ministry of Planning, Central Bureau of Statistics (Zahra Press, Baghdad, 1962) (in Arabic and English).

Appendix I

TABLE 14

NUMBER OF PERMITS AND AREA OF CONSTRUCTION OF NEW NON-RESIDENTIAL BUILDINGS, 1960

Province	Buildings with Flats and Shops		Shops and other kinds of Buildings	
	Number of Permits	Area of Construction Sq. Metre	Number of Permits	Area of Construction Sq. Metre
1. Mosul	2	2235	233	15130
2. Sulaimaniya	3	544	145	10036
3. Arbil	4	600	35	3624
4. Kirkuk	-	-	138	7605
5. Diala	1	226	172	4777
6. Ramadi	1	225	10	418
7. Baghdad	107	24878	717	92287
8. Kut	-	-	60	1140
9. Hilla	-	-	55	4478
10. Kerbela	2	418	34	2256
11. Diwaniya	-	-	46	1868
12. Amara	1	1100	36	2560
13. Nasiriya	-	-	26	1021
14. Basrah	5	1688	63	6104
TOTAL :	126	31914	1770	153304

Sources: Ibid.

Appendix I

TABLE 15

COST OF NEW NON-RESIDENTIAL URBAN BUILDINGS DURING 1961.

(ID)

Month	Estimated Cost	10% Mark-up	Total Cost
January	372967	37297	410264
February	419505	41951	461456
March	169867	16987	186854
April	1000793	100079	1100872
May	314288	31429	345717
June	458680	45868	504548
July	625364	62536	687900
August	540441	54044	594485
September	807807	80781	888588
October	524015	52402	576417
November	435372	43537	478909
December	355283	35528	390811
TOTAL :	6024382	602439	6626821

Sources: Ibid.

Appendix I

TABLE 16

NUMBER OF PERMITS AND AREA OF CONSTRUCTION OF

NEW NON-RESIDENTIAL URBAN BUILDINGS, 1961

Province	Buildings with Flats and Shops		Shops and other kinds of Buildings	
	Number of Permits	Area of Construction Sq. Metres	Number of Permits	Area of Construction Sq. Metres
1. Mosul	5	6993	687	51348
2. Sulaimaniya	-	-	285	11198
3. Arbil	1	264	74	8297
4. Kirkuk	-	-	90	15443
5. Diala	1	312	338	10892
6. Ramadi	1	208	78	3623
7. Baghdad	154	98537	1852	218799
8. Kut	-	-	122	2862
9. Hilla	3	801	249	12004
10. Kerbela'	-	-	255	13516
11. Diwaniya	-	-	182	6269
12. Amara	-	-	75	3020
13. Nasiriya	-	-	202	5889
14. Basrah	10	4518	648	38877
TOTAL :	175	111633	5137	402037

Sources: Ibid.

Appendix I

TABLE 17

COST OF NEW NON-RESIDENTIAL URBAN BUILDINGS DURING 1962

(ID)

Month	Estimated Cost	10% Mark-up	TOTAL Cost
January	288956	28896	317852
February	334196	33420	367616
March	276853	27685	304538
April	788921	78892	867813
May	464694	46469	511163
June	369451	36945	406396
July	395952	39595	435547
August	518349	51835	570184
September	407012	40701	447713
October	516691	51669	568360
November	341777	34178	375955
December	391820	39182	431002
TOTAL :	5094672	509467	5604139

Sources: As Table 9 above.

Appendix I

TABLE 18

NUMBER OF PERMITS AND AREA OF CONSTRUCTION OF NEW NON-RESIDENTIAL BUILDINGS, 1962

Province	Buildings with Flats and Shops		Shops and other kinds of Buildings	
	Number of Permits	Area of Construction Sq. Metres	Number of Permits	Area of Construction Sq. Metres
1. Mosul	3	1886	1165	70034
2. Sulaimaniya	-	-	153	5759
3. Arbil	-	-	81	7722
4. Kirkuk	-	-	70	10674
5. Diala	1	280	515	15657
6. Ramadi	2	1413	64	2229
7. Baghdad	109	63500	1644	187623
8. Kut	-	-	139	3837
9. Hilla	1	750	164	7311
10. Kerbela	1	208	325	12364
11. Diwaniya	-	-	122	7639
12. Amara	1	1267	141	6999
13. Nasiriya	-	-	255	9699
14. Basrah	18	15781	938	39072
TOTAL :	136	85086	4132	386619

Sources: Ibid.

Appendix I

TABLE 19

ESTIMATION OF INVESTMENT IN

PRIVATE NON-RESIDENTIAL BUILDINGS, 1960

	ID 000
1. Total "total cost" of Permits issued during January - July 1960	1155.5
2. 5/6 of "total cost" of Permits issued during August 1960	215.6
3. 2/3 of "total cost" of Permits issued during September 1960	117.7
4. 1/2 of "total cost" of Permits issued during October 1960	137.6
5. 1/3 of "total cost" of Permits issued during November 1960	81.6
6. 1/6 of "total cost" of Permits issued during December 1960	35.4
Sub-total (1) to (6) :	1743.4
7. 17% of "total cost" of Permits issued during 1959	901.1
8. TOTAL INVESTMENT in Non-Residential Buildings (Private) 1960 :	2644.5

Sources: Table 13 above for the sub-total (1) to (6); and Table III-2 in Chapter III for the part brought forward from 1959.

Appendix I

TABLE 20

ESTIMATION OF INVESTMENT IN

PRIVATE NON-RESIDENTIAL BUILDINGS, 1961

	ID 000
1. Total "total cost" of Permits issued during January - July 1961	3697.6
2. 5/6 of "total cost" of Permits issued during August 1961	495.4
3. 2/3 of "total cost" of Permits issued during September 1961	592.4
4. 1/2 of "total cost" of Permits issued during October 1961	288.2
5. 1/3 of "total cost" of Permits issued during November 1961	159.6
6. 1/6 of "total cost" of Permits issued during December 1961	65.2
Sub-Total (1 to 6) :	5298.4
7. 1/6 of "total cost" of Permits issued during August 1960	43.1
8. 1/3 of "total cost" of Permits issued during September 1960	58.8
9. 1/2 of "total cost" of Permits issued during October 1960	137.6
10. 2/3 of "total cost" of Permits issued during November 1960	163.3
11. 5/6 of "total cost" of Permits issued during December 1960	177.0
Sub-Total (7 to 11):	579.8
12. TOTAL INVESTMENT in Non-Residential Buildings (Private) 1961 :	5878.2

Sources: Table 15 above for the Sub-Total (1 to 6); and
Table 13 above for the Sub-Total (7 to 11).

Appendix I

TABLE 21

ESTIMATION OF INVESTMENT IN

PRIVATE NON-RESIDENTIAL BUILDINGS, 1962

	ID 000
1. Total "total cost" of Permits issued during January - July 1962	3210.9
2. 5/6 of "total cost" of Permits issued during August 1962	475.1
3. 2/3 of "total cost" of Permits issued during September 1962	298.5
4. 1/2 of "total cost" of Permits issued during October 1962	284.2
5. 1/3 of "total cost" of Permits issued during November 1962	125.3
6. 1/6 of "total cost" of Permits issued during December 1962	71.8
Sub-Total (1 to 6) :	4465.8
7. 1/6 of "total cost" of Permits issued during August 1961	99.1
8. 1/3 of "total cost" of Permits issued during September 1961	296.2
9. 1/2 of "total cost" of Permits issued during October 1961	288.2
10. 2/3 of "total cost" of Permits issued during N November 1961	319.3
11. 5/6 of "total cost" of Permits issued during December 1961	325.7
Sub-Total (7 to 11):	1328.5
12. TOTAL INVESTMENT in Non-Residential Buildings (Private) 1962 :	5794.3

Sources: Table 17 above for the Sub-Total (1 to 6); and
Table 15 above for the Sub-Total (7 to 11).

APPENDIX II

IMPORTS OF MACHINERY AND EQUIPMENT

This appendix contains thirteen tables relating to the imports of machinery and equipment included in the GDFCF estimates.

Table 1 gives the definition of each item classified as machinery or equipment. Besides, it shows the conversion of Iraqi Customs Code to the Standard International Trade Classification and the International Standard Industrial Classification.

Table 2 shows the import figures of this type of asset during 1957 - 1962. For each item, the c.i.f. value, import duties and the marking-up are shown separately. The table, however, does not include oil companies' imports of machinery and equipment. The latter are shown in Table 13.

Tables 3 - 12 show the allocation of each type of machinery and equipment to the relevant industry group.

Finally, it is to be observed that the terms "industry group" and "sector" are used interchangeably in some of the tables.

Appendix II

TABLE 1

CLASSIFICATION AND DEFINITION OF IMPORTED MACHINERY AND EQUIPMENT

Conversion of Customs Code into
Standard International Trade Classification (S.I.T.C.)
and
International Standard Industrial Classification (I.S.I.C.)

	Customs Code	S.I.T.C.	I.S.I.C.	Definition of Machinery and Equipment
1	73.24	692.3(1)	350	Compressed Gas Cylinders and Similar Containers, of iron or steel.
2	82.01	695.1	350	Hand tools, the following: spades, shovels, picks, hoes, forks and rakes; axes, bill hooks and similar hevving tools; scythes, timber wedges and other tools of a kind used in agriculture, horticulture or forestry.
3	82.02	695.2(1)	350	Saws (non-mechanical) and blades for hand or machine saws (including toothless saw blades).
4	82.03	695.2(2)	350	Hand tools, the following: pliers (including cutting pliers), pincers, tweezers, tinmen's snips, bolt croppers and the like; perforating punches; pipe cutters; spanners and wrenches (but not including tap wrenches); files and rasps.

(Continued)

TABLE 1 (continued)

5	84.01 - 84.02	711.1 and 711.2	360	Steam and other vapour generating boilers (excluding central heating hot water boilers capable also of producing low pressure steam); auxiliary plant for use with steam and other vapour generating boilers (for example, economisers, superheaters, soot removers, gas recoverers and the like); condensers for vapour engines and power units.
6	84.03	719.1(1)	360	Producer gas and water gas generators, with or without purifiers; acetylene gas generators (water process) and similar gas generators, with or without purifiers.
7	84.04 - 84.05	711.3(1) and 711.3(2)	360	Steam engines (including mobile engines, but not steam tractors falling within heading No. 87.01 or mechanically propelled road rollers) with self-contained boilers; steam and other vapour power units, not incorporating boilers.
8	84.06/a/5	711.5	360	Internal combustion engines.
9	84.07	711.8(1)	360	Water wheels, water turbines and other water engines, including regulators thereof.
10	84.08/a	711.4(2)	360	Other engines and motors (spring operated).
11	84.08/b	711.6	360	Gas turbines (other than for aircrafts).
12	84.09	718.4(1)	360	Mechanically propelled road rollers.
13	84.10	719.2(1)	360	Pumps (including motor pumps and turbo pumps) for liquids, whether or not fitted with measuring devices; liquid elevators of buckets, chain, screw, hand and similar kinds.

(Continued)

TABLE 1 (continued)

14	84.11	719.2(2)	360	Air pumps, vacuum pumps and air or gas compressors (including motor and turbo pumps and compressors and free-piston generators for gas turbines); fans (other than electrical room-fans, garden fans and the like of item No. 85.06/a), blowers and the like.
15	84.13	719.1(3)	360	Furnace burners for liquid fuel (atomisers), for pulverised solid fuel or for gas; mechanical stokers, mechanical grates, mechanical ash dischargers and similar appliances.
16	84.14	719.1(4)	360	Industrial and laboratory furnaces and ovens, non-electrical.
17	84.15/a	719.1(5)	360	Refrigerators and refrigerating equipment (electrical and other) for industrial purposes (for the manufacturing of block ice, for quick freezing food products, chemical industries, etc.).
18	84.15/b/2 84.15/c 84.15/d	719.4	360	Refrigerators (other than domestic refrigerators); water coolers.
19	84.16	719.6(1)	360	Calendering and similar rolling machines (other than metal-working and metal-rolling machines and glass-working machines) and cylinders thereof.
20	84.17/a	719.1(9)	360	Machinery, plant and similar equipment for processing dairy products.

(Continued)

TABLE 1 (continued)

21	84.17/c	719.1(9)	360	Machinery, plant and similar equipment for heating materials with heat or cold (other than domestic equipment and other than those given in item No. 84.17/a).
22	84.18/a	712.3(1)	360	Cream separators and centrifugal clarifiers for milk.
23	84.18/b	719.2(3)	360	Domestic and laundry type centrifugal dryers.
24	84.18/c	719.2(3)	360	Centrifuges and filtering and purifying machinery for liquids and gases (other than those falling within items No. 84.18/a and 84.18/b).
25	84.19	719.6(2)	360	Machinery for cleaning or drying bottles or other containers; machinery for filling, closing, sealing, capsuling or labelling bottles, cans, boxes, bags or other containers; other packing or wrapping machinery; machinery for aerating beverages.
26	84.20	719.6(3)	360	Weighing machinery (excluding balances of a sensitivity of five centigrammes or better), including weight-operated counting and checking machines; weighing machine weights of all kinds.
27	84.21/a	719.6(4)	360	Agricultural pulverisors.
28	84.21/b	719.6(4)	360	Mechanical appliances for projecting, dispersing or spraying liquids or powders (other than agricultural pulverisers); fire extinguishers (charged or not).

(Continued)

TABLE 1 (continued)

29	84.22/a	719.3(1)	360	Lifting and loading and unloading machinery such as hoists, winches, cranes, pulley tackles.
30	84.22/b	719.3(1)	360	Other lifting and loading and unloading machines not falling under item No. 84.22/a.
31	84.23/a	718.4(2)	360	Ditchers machinery.
32	84.23/b	718.4(2)	360	Levellers machinery (for earth, minerals or ores).
33	84.23/c	718.4(2)	360	Excavating, levelling, boring and extracting machinery (other than those falling within items 84.23/a and 84.23/b).
34	84.24/a	712.1	360	Agricultural and horticultural machinery: ploughs.
35	84.24/b	712.1	360	Agricultural and horticultural machinery: harrows and cultivators.
36	84.24/c	712.1	360	Other agricultural machinery such as seed drills, fertilizer spreaders, etc.
37	84.25/a	712.2	360	Harvesting and threshing machinery.
38	84.25/b	712.2	360	Lawn mowers.
39	84.25/c	712.2	360	Other agricultural and horticultural machines such as straw and fodder presses, winnowing and similar cleaning machines for seeds, grain or leguminous vegetables and egg-grading and other grading machines for agricultural produce (other than those of a kind used in the bread, grain milling industry falling within heading No. 84.29).

(Continued)

TABLE 1 (continued)

40	84.26	712.3(9)	360	Dairy machinery (including milking machines).
41	84.27	712.9(1)	360	Pressers, crushers and other machinery of a kind used in wine-making, cider-making, fruit juice preparation or the like.
42	84.28	712.9(9)	360	Other agricultural, horticultural, poultry-keeping machinery, germination plant fitted with mechanical or thermal equipment; poultry incubators and brooders.
43	84.29	718.3(1)	360	Machinery of a kind used in the bread grain milling industry, and other machinery (other than farm type machinery) for making cereals or dried leguminous vegetables.
44	84.30	718.3(9)	360	Machinery, not falling within any other heading of this chapter, of a kind used in the following food or drink industries: bakery; confectionery; chocolate manufacture; macaroni; ravioli or similar cereal food manufacture; the preparation of meat, fish, fruit or vegetables (including mincing or slicing machines; sugar manufacture or brewing.
45	84.31 - 84.33	718.1(1) 718.2(1) 718.1(2)	360	Machinery for making or finishing cellulosic pulp paper or paperboard; book-binding machinery; machinery for making up paper pulp, paper or paperboard.

(Continued)

Table 1 (continued)

46	84.34 - 84.35	718.2(2) 718.2(9)	360	Printing machinery; machinery apparatus and accessories for type-founding and type-setting; machinery, other than the machine tools of heading Nos. 84.45, 84.46 or 84.47.
47	84.36	717.1(1)	360	Machines for extruding man-made textiles, machines of a kind used for processing natural or man-made textiles filures; textile spinning and twisting machines; textile doubling, throwing and reeling (including weft-winding) machines.
48	84.37	717.1(2)	360	Weaving machines, knitting machines and machines for making gimped yarn, tulle, lace, embroidery, trimming braid or net; machines for preparing yarns for use on such machines, including warping and warp sizing machines.
49	84.38	717.1(3)	360	Auxiliary machinery for use with machines of heading No. 84.37 (for example, dobbies, Jacquards, automatic stop motions and shuttle changing mechanisms).
50	84.39	717.1(4)	360	Machinery for the manufacture or finishing of felt in the piece or in shapes, including felt-hat making machines and hat-making blocks.
51	84.40/a	717.1(5)	360	Machinery for washing, cleaning, dying, bleaching, drying, dressing, finishing or coating textile yarns, fabrics or made-up textile articles; machines of a kind used in the manufacture of linoleum or other floor coverings for applying the paste to the base fabric or other support; machines of a type used for printing a repetitive design or words or overall colour on textiles, leather, wallpaper, wrapping paper, etc.

(Continued)

TABLE 1 (continued)

52	84.40/b	725.0(2)	360	Domestic and laundry type washing machines, wringers and mangles.
53	84.40/d	725.0(2)	360	Other laundry type machines n.e.c.
54	84.41/a/1	717.3	360	Sewing machines (Domestic type).
55	84.41/a/2	717.3	360	Sewing machines (other than domestic type).
56	84.42	717.2	360	Machinery (other than sewing machines) for preparing, tanning or working hides, skins or leather (including shoe and boot machinery).
57	84.43 - 84.44	715.2(1) 715.2(2)	360	Converters, ladles, ingot moulds and casting machines, of a kind used in metallurgy and in metal foundries; rolling mills and rolls therefor.
58	84.45	715.1	360	Machine tools for working metal or metallic carbides, not being machines falling within heading Nos. 84.49 or 84.50.
59	84.46	719.5(1)	360	Machine tools for working stone, ceramics, concrete, asbestos-cement and like mineral materials or for working glass in the cold, other than machines falling within heading No. 84.49.
60	84.47	719.5(2)	360	Machine tools for working wood, cork, bone, ebonite (vulcanite), hard artificial plastic materials or other hard carving materials, other than machines falling within heading No. 84.49.

(Continued)

TABLE 1 (continued)

61	84.49	719.5(3)	360	Tools for working in the hand, pneumatic or with self contained non-electric motor.
62	84.50	715.2(3)	360	Gas-operated welding, brazing, cutting and surface tempering appliances.
63	84.52	714.2	360	Calculating machines; accounting machines, cash registers, postage-franking machines, ticket-issuing machines and similar machines, incorporating a calculating device.
64	84.53	714.3	360	Statistical machines of a kind operated in conjunction with punched cards (for example, sorting, calculating and tabulating machines); accounting machines operated in conjunction with similar punched card; auxiliary machines for use with such machines (for example, punching and checking machines).
65	84.56	718.5(1)	360	Machinery for sorting, screening, separating, washing, crushing, grinding or mixing earth, stone, ores or other mineral substances, in solid (including powder and paste) form; machinery for agglomerating, moulding or shaping solid mineral products in powder or paste form; machines for forming foundry moulds of sand.
66	84.57	718.5(2)	360	Glass-working machines (other than machines for working glass in the cold); machines for assembling electric filament and discharge lamps and electronic and similar tubes and valves.

(Continued)

TABLE 1 (continued)

67	84.58	719.6(5)	360	Automatic vending machines (for example, stamp, cigarette, chocolate and food machines), not being games of skill or chance.
68	84.59	711.7 719.8	360	Machinery and mechanical appliances (except those suitable for use solely or principally as parts of other machines or apparatus), not falling within any other heading of this chapter.
69	84.60	719.9(1)	360	Moulding boxes for metal foundry; moulds of a type used for metal (other than ingot moulds), for metallic Carbides, for glass, for mineral materials (for example, ceramic pastes, concrete or cement) or for rubber or artificial plastic materials.
70	85.01/a/1 85.01/a/2	722.1	370	Electrical generators.
71	85.01/b/1 85.01/b/2 85.01/b/3	722.1	370	Electrical motors.
72	85.01/c/1 85.01/c/2	722.1	370	Electrical transformers, converters (rotary or static), rectifiers and rectifying apparatus, inductors.
73	85.02	729.9(1)	370	Electro-magnets; permanent magnets and articles of special materials for permanent magnets, being blanks of such magnets; electro-magnetic and permanent chucks, clamps, vices and similar work holders; electro-magnetic clutches and couplings; electro-magnetic brakes, electro-magnetic lifting heads.

(Continued)

TABLE 1 (continued)

74	85.05	729.6	370	Tools for working in the hand, with self-contained motors.
75	85.07/a 85.07/b	725.0(4)	370	Shavers and hair clippers with self-contained electric motors.
76	85.11	729.9(2)	370	Industrial and laboratory electric furnaces and ovens; electric induction and dielectric heating equipment; electric welding, brazing and soldering machines and apparatus and similar electric machines and apparatus for cutting.
77	85.12/a	725.0(5)	370	Electric heating resistors.
78	85.12/c	725/0(5)	370	Electric instantaneous or storage water heaters and immersion heaters; electric soil heating apparatus.
79	85.13/a	724.9(1)	370	Electrical line telephonic and telegraphic apparatus (including such apparatus for carrier-current line systems); telephone sets.
80	85.13/b	724.9(1)	370	Electrical line telephonic and telegraphic, etc. (other than telephone sets included in item 85.13/a).
81	85.14	724.9(2)	370	Microphones and stands therefor; loudspeakers; audio-frequency electric amplifiers.
82	85.15/c	724.9(9)	370	Radiotelegraphic and radiotelephonic transmission and reception apparatus; radio-broadcasting and television transmission apparatus; radio navigational aid apparatus, radar apparatus (excluding radio and television sets).
83	85.15/e	724.9(9)	370	

(Continued)

TABLE 1 (continued)

84	85.16	729.9(3)	370	Electric traffic control equipment for railways, roads or inland waterways and equipment used for similar purposes in port installations or upon airfields.
85	85.18	729.9(5)	370	Electrical capacitors, fixed or variable.
86	85.22	729.7 and 729.9(9)	370	Electrical goods and apparatus (except those suitable for use solely or principally as parts of other machines or apparatus), not falling within any other heading of this chapter.
87	85.25	723.2(1)	370	Insulators of any material.
88	87.01/a	712.5	383	Agricultural tractors.
89	90.05	861.3(1)	391	Refracting telescopes.
90	90.06	861.3(2)	391	Astronomical instruments (for example, reflecting telescopes, transit instruments and equatorial telescopes) and mountings therefor, but not including instruments for radio-astronomy.
91	90.07/a	861.4	391	Photographic equipment for composing and preparing printing plates and cylinders (but not including cameras).
92	90.08	861.5	391	Cinematographic equipment, projectors, sound recorders and sound reproducers.
93	90.09	861.6(1)	391	Image projectors (other than cinematographic projectors); photographic (except cinematographic) enlargers and reducers.

(Continued)

TABLE 1 (continued)

94	90.10	861.6(9)	391	Apparatus and equipment of a kind used in photographic or cinematographic laboratories, not falling within any other heading of this chapter.
95	90.11 - 90.12	861.3(3) 861.3(4)	391	Microscopes and diffraction apparatus, electron and proton; compound optical microscopes, whether or not provided with means for photographing or projecting the image.
96	90.13	861.3(9)	391	Optical appliances and instruments (but not including lighting appliances other than searchlights or spot-lights), not falling within any other heading of this chapter.
97	90.14	861.9(1)	391	Surveying (including photogrammetrical surveying), hydrographic, navigational, meteorological, hydrological, and geophysical instruments; compasses, rangefinders.
98	90.15	861.9(2)	391	Balances of a sensitivity of five centigrammes or better, with or without their weights.
99	90.16	861.9(3)	391	Drawing, marking-out and mathematical calculating instruments, drafting machines, pantographs, disc calculators and the like; measuring or checking instruments, appliances and machines not falling within any other heading of this chapter.
100	90.17	726.1 861.7(1)	391	Medical, dental, surgical and veterinary instruments and appliances (including electro-medical apparatus and ophthalmic instruments).

(Continued)

TABLE 1 (continued)

101	90.18	861.7(2)	391	Mechano-therapy appliances, massage apparatus; psychological aptitude-testing apparatus; artificial respiration, ozone therapy, aerosol therapy or similar apparatus, breathing appliances.
102	90.20	726.2	391	Apparatus based on the use of X-rays or of the radiations from radio-active substances (including radiography and radiotherapy apparatus); X-ray generators; X-ray tubes; X-ray screens; X-ray high tension generators; X-ray control panels and desks; X-ray examination or treatment tables, chairs and the like.
103	90.21	861.9(4)	391	Instruments, apparatus or models, designed solely for demonstrational purposes (for example in education or exhibition), unsuitable for other uses.
104	90.22	861.9(5)	391	Machines and appliances for testing mechanically the hardness, strength, compressibility, elasticity and the like properties of industrial materials (for example, metals, wood, textiles, paper or plastics).
105	90.23	861.9(6)	391	Hydrometers and similar instruments; thermometers, pyrometers, barometers, hygrometers, pyschrometers, recording or not; any combination of these instruments.
106	90.24	861.9(7)	391	Instruments and apparatus for measuring, checking or automatically controlling the flow, depth, pressure or other variables of liquids or gases, or for automatically controlling temperature, not boing articles falling within heading No. 90.14.

(Continued)

TABLE 1 (continued)

107	90.25	861.9(8)	391	Instruments and apparatus for physical or chemical analysis (such as polarimeters, refractometers, spectrometers, gas analysis apparatus); instruments and apparatus for measuring or checking viscosity, porosity, expansion, surface tension or the like.
108	90.26	729.5(1) 861.8(1)	391	Gas, liquid and electricity supply or production meters; calibrating meters therefor.
109	90.27	861.8(2)	391	Revolution counters, production counters and the like.
110	90.28	729.5(2)	391	Electrical measuring, checking, analysing or automatically controlling instruments and apparatus.

* * * * *

Appendix II

TABLE 2

IMPORTS OF MACHINERY AND EQUIPMENT

(Other than Oil Companies' Imports)

(ID 000)

*Import Duties

	Customs Code		Industry Group	1957	1958	1959	1960	1961	1962
1	73.24	c.i.f.		41.1	16.8	53.0	7.9	48.8	27.3
		Mark-up		10.3	4.2	13.3	2.0	12.2	6.8
		*Imp.dut.		4.1	1.7	5.3	0.8	4.9	2.7
		Total	3	55.5	22.7	71.6	10.7	65.9	36.8
2	82.1	c.i.f.		53.0	28.3	30.8	33.5	64.2	50.0
		Mark-up		17.6	9.4	10.3	11.2	21.4	16.7
		Imp.dut.		5.3	2.8	3.1	3.3	6.4	5.0
		Total	1	75.9	40.5	44.2	48.0	92.0	71.7
3	82.2	c.i.f.		31.8	41.7	21.7	25.1	41.0	36.1
		Mark-up		8.0	10.4	5.4	6.3	10.3	9.0
		Imp.dut.		3.2	4.2	2.2	2.5	4.1	3.6
		Total	3	43.0	56.3	29.3	33.9	55.4	48.7
4	82.03	c.i.f.		222.5	395.6	151.5	212.7	191.7	199.3
		Mark-up		55.6	99.0	37.9	53.2	48.0	49.8
		Imp.dut.		22.2	39.5	15.1	21.3	19.2	20.0
		Total	3	300.3	534.1	204.5	287.2	258.9	269.1

(Continued)

TABLE 2 (continued)

5	84.01 - 84.02	c.i.f.		392.6	761.0	358.0	48.4	74.4	64.0
		Mark-up		130.7	253.4	119.2	16.1	24.8	21.3
		Imp.dut.		-	-	-	-	-	-
		Total	3	523.3	1014.4	477.2	64.5	99.2	85.3
6	84.03	c.i.f.		8.2	56.0	17.8	2.8	52.2	53.8
		Mark-up		2.7	18.6	5.9	1.0	17.4	17.9
		Imp.dut.		0.4	2.8	1.0	0.1	2.6	2.7
		Total	3	11.3	77.4	24.7	3.9	72.2	74.4
7	84.04 - 84.05	c.i.f.		41.6	5.8	18.2	0.9	2.6	-
		Mark-up		13.9	1.9	6.1	0.3	0.9	-
		Imp.dut.		-	-	-	-	-	-
		Total	3	55.5	7.7	24.3	1.2	3.5	-
8	84.06/a/5	c.i.f.		756.8	408.5	306.9	455.0	631.2	557.2
		Mark-up		252.0	136.0	102.3	151.5	210.2	185.5
		Imp.dut.		75.7	41.0	30.7	45.5	63.1	55.7
		Total	3	1084.5	585.5	439.9	652.0	904.5	798.4
9	84.07	c.i.f.		130.0	5.3	2.3	0.5	2.6	4.3
		Mark-up		43.3	1.8	0.8	0.2	0.9	1.4
		Imp.dut.		-	-	-	-	-	-
		Total	1	173.3	7.1	3.1	0.7	3.5	5.7
10	84.08/a	c.i.f.		17.9	65.2	29.7	47.4	22.4	15.2
		Mark-up		6.0	21.7	10.0	15.8	7.5	5.1
		Imp.dut.		2.7	9.8	4.5	7.1	3.4	2.3
		Total	3	26.6	96.7	44.2	70.3	33.3	22.6

(Continued)

TABLE 2 (continued)

11	84.08/b	c.i.f.		35.6	6.2	43.0	1.0	21.4	7.9
		Mark-up		11.9	2.1	14.3	0.3	7.1	2.6
		Imp.dut.		1.8	0.3	2.1	0.1	1.0	0.4
		Total	3	49.3	8.6	59.4	1.4	29.5	10.9
12	84.09	c.i.f.		145.7	83.7	58.4	66.4	109.1	93.3
		Mark-up		48.5	27.9	19.4	22.1	36.3	31.1
		Imp.dut.		-	-	-	-	-	-
		Total	4	194.2	111.6	77.8	88.5	145.4	124.4
13	84.10	c.i.f.		419.4	246.7	408.4	405.1	883.9	830.8
		Mark-up		139.7	82.1	136.0	135.0	294.3	276.6
		Imp.dut.		21.0	12.3	20.4	20.3	44.2	41.5
		Total	1	580.1	341.1	564.8	560.4	1222.4	1148.9
14	84.11	c.i.f.		276.6	322.0	146.7	135.9	200.7	248.9
		Mark-up		92.1	107.2	49.0	45.3	66.8	83.0
		Imp.dut.		13.8	16.1	7.3	6.8	10.0	12.4
		Total	3	382.5	445.3	203.0	188.0	277.5	344.3
15	84.13	c.i.f.		3.2	14.2	15.2	3.3	1.2	4.7
		Mark-up		1.1	4.7	5.1	1.1	0.4	1.6
		Imp.dut.		0.2	0.7	0.8	0.2	0.1	0.2
		Total	3	4.5	19.6	21.1	4.6	1.7	6.5
16	84.14	c.i.f.		64.0	7.1	0.6	0.6	9.2	29.5
		Mark-up		21.3	2.4	0.2	0.2	3.1	9.8
		Imp.dut.		3.2	0.4	-	-	0.5	1.5
		Total	3	88.5	9.9	0.8	0.8	12.8	40.8

(Continued)

TABLE 2 (continued)

17	84.15/a	c.i.f.		91.5	123.0	57.7	55.8	197.1	214.6
		Mark-up		30.5	41.0	19.2	18.6	65.6	71.5
		Imp.dut.		4.6	6.2	3.0	2.8	10.0	10.7
		Total	3	126.6	170.2	79.9	77.2	272.7	296.8
18	84.15/b/2	c.i.f.		140.7	136.0	57.0	129.2	168.7	180.0
	84.15/c	Mark-up		46.9	45.3	19.0	43.0	56.2	60.0
	84.15/d	Imp.dut.		28.1	27.2	11.4	25.8	33.7	36.0
		Total	11	215.7	208.5	87.4	198.0	258.6	276.0
19	84.16	c.i.f.		16.6	19.0	14.0	20.5	16.8	33.8
		Mark-up		5.5	6.3	4.7	6.8	5.6	11.3
		Imp.dut.		0.8	1.0	0.7	1.0	0.8	1.7
		Total	3	22.9	26.3	19.4	28.3	23.2	46.8
20	84.17/a	c.i.f.		15.6	0.3	1.5	15.3	7.8	9.3
		Mark-up		5.2	0.1	0.5	5.1	2.6	3.1
		Imp.dut.		-	-	-	-	-	-
		Total	3	20.8	0.4	2.0	20.4	10.4	12.4
21	84.17/c	c.i.f.		100.6	74.4	83.8	38.5	119.5	150.6
		Mark-up		33.5	24.8	28.0	12.8	39.8	50.2
		Imp.dut.		5.0	3.7	4.2	1.9	6.0	7.5
		Total	11	139.1	102.9	116.0	53.2	165.3	208.3
22	84.18/a	c.i.f.		0.4	1.2	-	3.5	1.0	0.6
		Mark-up		0.1	0.4	-	1.2	0.3	0.2
		Imp.dut.		-	-	-	-	-	-
		Total	3	0.5	1.6	-	4.7	1.3	0.8

(Continued)

TABLE 2 (continued)

23	84.18/b	c.i.f.		6.2	2.6	1.8	1.0	-	1.4
		Mark-up		2.1	0.9	0.6	0.3	-	0.5
		Imp.dut.		0.9	0.4	0.3	0.2	-	0.2
		Total	11	9.2	3.9	2.7	1.5	-	2.1
24	84.18/c	c.i.f.		97.4	159.3	61.5	75.7	228.5	96.6
		Mark-up		32.4	53.0	20.5	25.2	76.1	32.2
		Imp.dut.		4.9	8.0	3.1	3.8	11.4	4.8
		Total	5	134.7	220.3	85.1	104.7	316.0	133.6
25	84.19	c.i.f.		62.4	131.6	23.7	63.7	120.0	423.6
		Mark-up		20.8	43.8	7.9	21.2	40.0	141.2
		Imp.dut.		3.1	6.6	1.2	3.2	6.0	21.2
		Total	3	86.3	182.0	32.8	88.1	166.0	586.0
26	84.20	c.i.f.		44.0	56.8	47.7	51.4	34.1	41.2
		Mark-up		14.7	18.9	16.0	17.1	11.4	13.7
		Imp.dut.		4.4	5.7	4.8	5.1	3.4	4.1
		Total	3, 6, 7	63.1	81.4	68.5	73.6	48.9	59.0
27	84.21/a	c.i.f.		5.6	47.3	15.7	21.0	4.3	4.4
		Mark-up		1.9	15.8	5.2	7.0	1.4	1.5
		Imp.dut.		-	-	-	-	-	-
		Total	1	7.5	63.1	20.9	28.0	5.7	5.9
28	84.21/b	c.i.f.		66.0	44.4	70.7	60.3	52.4	67.3
		Mark-up		22.0	14.8	23.5	20.1	17.5	22.4
		Imp.dut.		3.3	2.2	3.5	3.0	2.6	3.4
		Total	11	91.3	61.4	97.7	83.4	72.5	93.1

(Continued)

TABLE 2 (continued)

29	84.22/a	c.i.f.		517.1	346.3	372.3	213.0	280.1	482.1
		Mark-up		172.2	115.3	124.0	71.0	93.3	160.5
		Imp.dut.		41.4	27.7	29.8	17.0	22.4	38.6
		Total	3, 4, 6	730.7	489.3	526.1	301.0	395.8	681.2
30	84.22/b	c.i.f.		70.5	72.5	39.6	164.4	141.5	44.8
		Mark-up		23.5	24.1	13.2	54.7	47.1	14.9
		Imp.dut.		3.5	3.6	2.0	8.2	7.1	2.2
		Total	3, 4, 6	97.5	100.2	54.8	227.3	195.7	61.9
31	84.23/a	c.i.f.		437.6	142.1	229.2	173.6	302.2	262.4
		Mark-up		145.7	47.3	76.3	57.8	100.6	87.4
		Imp.dut.		-	-	-	-	-	-
		Total	1	583.3	189.4	305.5	231.4	402.8	349.8
32	84.23/b	c.i.f.		255.3	83.0	133.7	101.3	97.6	201.0
		Mark-up		85.0	27.6	44.5	33.7	32.5	67.0
		Imp.dut.		-	-	-	-	-	-
		Total	4	340.3	110.6	178.2	135.0	130.1	268.0
33	84.23/c	c.i.f.		1130.4	367.3	592.0	448.6	799.2	679.5
		Mark-up		376.4	122.3	197.1	149.4	266.1	226.3
		Imp.dut.		-	-	-	-	-	-
		Total	2, 4	1506.8	489.6	789.1	598.0	1065.3	905.8
34	84.24/a	c.i.f.		100.9	58.7	18.8	42.5	104.5	133.7
		Mark-up		33.6	19.5	6.3	14.2	34.8	44.5
		Imp.dut.		-	-	-	-	-	-
		Total	1	134.5	78.2	25.1	56.7	139.3	178.2

(Continued)

TABLE 2 (continued)

35	84.24/b	c.i.f.		14.2	15.5	16.8	3.4	28.0	21.4
		Mark-up		4.7	5.2	5.6	1.1	9.3	7.1
		Imp.dut.		-	-	-	-	-	-
		Total	1	18.9	20.7	22.4	4.5	37.3	28.5
36	84.24/c	c.i.f.		43.0	16.3	56.3	9.5	-	72.0
		Mark-up		14.3	5.4	18.7	3.2	-	24.0
		Imp.dut.		-	-	-	-	-	-
		Total	1	57.3	21.7	75.0	12.7	-	96.0
37	84.25/a	c.i.f.		586.5	508.4	28.2	85.3	83.0	243.0
		Mark-up		195.3	169.3	9.4	28.4	27.6	81.0
		Imp.dut.		-	-	-	-	-	-
		Total	1	781.8	677.7	37.6	113.7	110.6	324.0
38	84.25/b	c.i.f.		6.8	6.7	7.5	7.3	13.5	21.3
		Mark-up		2.3	2.2	2.5	2.4	4.5	7.1
		Imp.dut.		0.7	0.7	0.8	0.7	1.4	2.1
		Total	1	9.8	9.6	10.8	10.4	19.4	30.5
39	84.25/c	c.i.f.		36.1	12.1	4.7	5.8	10.1	13.7
		Mark-up		12.0	4.0	1.6	1.9	3.4	4.6
		Imp.dut.		-	-	-	-	-	-
		Total	1	48.1	16.1	6.3	7.7	13.5	18.3
40	84.26	c.i.f.		58.5	21.5	5.0	1.4	5.7	3.5
		mark-up		19.5	7.2	1.7	0.5	1.9	1.2
		Imp.dut.		-	-	-	-	-	-
		Total	3	78.0	28.7	6.7	1.9	7.6	4.7

(Continued)

TABLE 2 (continued)

41	84.27	c.i.f.		222.6	123.4	2.6	0.6	-	3.8
		Mark-up		74.1	41.1	0.9	0.2	-	1.3
		Imp.dut.		-	-	-	-	-	-
		Total	3	296.7	164.5	3.5	0.8	-	5.1
42	84.28	c.i.f.		4.8	4.2	4.2	8.0	4.2	13.2
		Mark-up		1.6	1.4	1.4	2.7	1.4	4.4
		Imp.dut.		-	-	-	-	-	-
		Total	1	6.4	5.6	5.6	10.7	5.6	17.6
43	84.29	c.i.f.		163.2	159.0	125.0	636.3	93.5	314.5
		Mark-up		54.3	53.0	41.6	212.0	31.1	104.7
		Imp.dut.		8.2	8.0	6.3	31.8	4.7	15.7
		Total	3	225.7	220.0	172.9	880.1	129.3	434.9
44	84.30	c.i.f.		906.4	303.1	57.4	54.6	220.0	187.8
		Mark-up		301.8	101.0	19.1	18.2	73.3	62.5
		Imp.dut.		-	-	-	-	-	-
		Total	3	1208.2	404.1	76.5	72.8	293.3	250.3
45	84.31 -	c.i.f.		25.8	10.5	39.0	44.8	89.0	43.3
	84.33	Mark-up		8.6	3.5	13.0	15.0	29.6	14.4
		Imp.dut.		1.3	0.5	2.0	2.2	4.5	2.2
		Total	3	35.7	14.5	54.0	62.0	123.1	59.9
46	84.34 -	c.i.f.		237.7	105.5	189.1	150.4	148.7	169.1
	84.35	Mark-up		79.2	35.1	63.0	50.1	49.5	56.3
		Imp.dut.		-	-	-	-	-	-
		Total	3	316.9	140.6	252.1	200.5	198.2	225.4

TABLE 2 (continued)

47	84.36	c.i.f.		24.5	21.2	39.3	14.3	148.7	126.1
		Mark-up		8.2	7.0	13.1	4.8	49.5	42.0
		Imp.dut.		-	-	-	-	-	-
		Total	3	32.7	28.2	52.4	19.1	198.2	168.1
48	84.37	c.i.f.		26.7	68.3	20.8	68.1	97.6	136.3
		Mark-up		9.0	22.7	6.9	22.7	32.5	45.4
		Imp.dut.		-	-	-	-	-	-
		Total	3	35.7	91.0	27.7	90.8	130.1	181.7
49	84.38	c.i.f.		138.4	340.0	153.0	137.8	250.4	2043.0
		Mark-up		46.1	113.2	51.0	46.0	83.4	680.3
		Imp.dut.		6.9	17.0	7.7	6.9	12.5	102.2
		Total	3	191.4	470.2	211.7	190.7	346.3	2825.5
50	84.39	c.i.f.		0.3	0.4	5.6	0.3	3.0	-
		Mark-up		0.1	0.1	1.9	0.1	1.0	-
		Imp.dut.		-	-	-	-	-	-
		Total	3	0.4	0.5	7.5	0.4	4.0	-
51	84.40/a	c.i.f.		159.5	115.7	121.2	316.8	288.4	257.6
		Mark-up		53.1	38.5	40.4	105.5	96.1	85.8
		Imp.dut.		16.0	11.6	12.1	31.7	28.8	25.8
		Total	11	228.6	165.8	173.7	454.0	413.3	369.2
52	84.40/b	c.i.f.		32.2	9.6	29.1	32.2	32.0	46.0
		Mark-up		10.7	3.2	9.7	10.7	10.6	15.3
		Imp.dut.		1.6	0.5	1.5	1.6	1.6	2.3
		Total	3	44.5	13.3	40.3	44.5	44.2	63.6

(Continued)

TABLE 2 (continued)

53	84.40/d	c.i.f.		-	-	-	-	29.8	13.4
		Mark-up		-	-	-	-	10.0	4.5
		Imp.dut.		-	-	-	-	1.5	0.7
		Total	3	-	-	-	-	41.3	18.6
54	84.41/a/1	c.i.f.		59.2	107.2	69.4	146.4	149.0	115.0
	(50% only)	Mark-up		19.7	35.7	23.1	48.8	49.6	38.3
		Imp.dut.		8.9	16.1	10.4	22.0	22.4	17.3
		Total	3	87.8	159.0	102.9	217.2	221.0	170.6
55	84.41/a/2	c.i.f.		27.4	23.3	30.6	69.3	61.5	41.0
		Mark-up		9.1	7.8	10.2	23.1	20.5	13.7
		Imp.dut.		1.4	1.2	1.5	3.5	3.1	2.0
		Total	3	37.9	32.3	42.3	95.9	85.1	56.7
56	84.42	c.i.f.		61.8	100.2	52.2	26.1	120.0	147.0
		Mark-up		20.6	33.4	17.4	8.7	40.0	49.0
		Imp.dut.		3.1	5.0	2.6	1.3	6.0	7.4
		Total	3	85.5	138.6	72.2	36.1	166.0	203.4
57	84.43 -	c.i.f.		8.6	26.1	14.6	15.2	43.4	20.0
	84.44	Mark-up		2.9	8.7	4.9	5.1	14.5	6.7
		Imp.dut.		0.4	1.3	0.7	0.8	2.2	1.0
		Total	3	11.9	36.1	20.2	21.1	60.1	27.7
58	84.45	c.i.f.		130.0	161.4	65.0	89.5	131.3	119.2
		Mark-up		26.0	32.3	13.0	17.9	26.3	23.8
		Imp.dut.		6.5	8.1	3.3	4.5	6.7	6.0
		Total	3	162.5	201.8	81.3	111.9	164.3	149.0

(Continued)

TABLE 2 (continued)

59	84.46	c.i.f.		87.7	149.0	62.6	138.1	140.8	53.0
		Mark-up		17.5	29.8	12.5	27.6	28.2	10.6
		Imp.dut.		4.4	7.5	3.1	6.9	7.0	2.7
		Total	2	109.6	186.3	78.2	172.6	176.0	66.3
60	84.47	c.i.f.		100.2	67.9	28.8	59.7	175.8	75.4
		Mark-up		20.0	13.6	5.8	11.9	35.2	15.1
		Imp.dut.		5.0	3.4	1.4	3.0	8.8	3.8
		Total	3	125.2	84.9	36.0	74.6	219.8	94.3
61	84.49	c.i.f.		117.8	91.5	15.0	39.0	66.2	45.3
		Mark-up		23.6	18.3	3.0	7.8	13.2	9.0
		Imp.dut.		5.9	4.6	0.8	2.0	3.3	2.3
		Total	3	147.3	114.4	18.8	48.8	82.7	56.6
62	84.50	c.i.f.		40.7	68.1	64.7	26.9	82.2	44.7
		Mark-up		13.6	22.7	21.5	9.0	27.4	15.0
		Imp.dut.		2.0	3.4	3.2	1.3	4.1	2.2
		Total	3	56.3	94.2	89.4	37.2	113.7	61.9
63	84.52	c.i.f.		144.1	105.0	86.2	77.3	130.4	123.4
		Mark-up	See	28.8	21.0	17.2	15.5	26.1	24.7
		Imp.dut.	Note (2)	21.6	15.8	12.9	11.5	19.6	18.5
		Total	below	194.5	141.8	116.3	104.5	176.1	166.6
64	84.53	c.i.f.		6.2	47.0	1.4	1.8	3.2	1.0
		Mark-up	See	1.2	9.4	0.3	0.4	0.6	0.2
		Imp.dut.	Note (2)	0.6	4.7	0.1	0.2	0.3	0.1
		Total	below	8.0	61.1	1.8	2.4	4.1	1.3

(Continued)

TABLE 2 (continued)

65	84.56	c.i.f.		2031.1	569.8	347.1	351.6	504.0	572.6
		Mark-up		676.4	189.7	115.6	117.1	167.8	190.7
		Imp.dut.		101.6	28.5	17.4	17.6	25.2	28.6
		Total	3	2809.1	788.0	480.1	486.3	697.0	791.9
66	84.57	c.i.f.		-	1.2	-	-	-	2.8
		Mark-up		-	0.4	-	-	-	0.9
		Imp.dut.		-	-	-	-	-	-
		Total	3	-	1.6	-	-	-	3.7
67	84.58	c.i.f.		-	-	6.0	0.3	4.1	3.0
		Mark-up		-	-	2.0	0.1	1.4	1.0
		Imp.dut.		-	-	0.9	-	0.6	0.5
		Total	11	-	-	8.9	0.4	6.1	4.5
68	84.59	c.i.f.		223.0	221.0	446.6	232.1	265.0	963.7
		Mark-up		74.3	73.6	148.7	77.3	88.2	321.0
		Imp.dut.		11.2	11.0	22.3	11.6	13.3	48.2
		Total	3	308.5	305.6	617.6	321.0	366.5	1332.9
69	84.60	c.i.f.		76.6	54.5	23.1	28.2	34.7	44.5
		Mark-up		15.3	10.9	4.6	5.6	6.9	8.9
		Imp.dut.		3.8	2.7	1.2	1.4	1.7	2.2
		Total	3	95.7	68.1	28.9	35.2	43.3	55.6
70	85.01/a/1	c.i.f.		499.5	352.1	715.5	216.9	141.5	355.4
	85.01/a/2	Mark-up		166.3	117.2	238.3	72.2	47.1	118.3
		Imp.dut.		-	-	-	-	-	-
		Total	5	665.8	469.3	953.8	289.1	188.6	473.7

(Continued)

TABLE 2 (continued)

71	85.01/b/1	c.i.f.		241.4	230.0	280.0	372.7	132.3	162.0
	85.01/b/2	Mark-up		80.4	76.6	93.2	124.1	44.1	54.0
	85.01/b/3	Imp.dut.		12.1	11.5	14.0	18.6	6.6	8.1
		Total	5	333.9	318.1	387.2	515.4	183.0	224.1
72	85.01/c/1	c.i.f.		125.1	660.5	340.5	465.0	222.2	283.7
	85.01/c/2	Mark-up		41.7	220.0	113.3	154.8	74.0	94.5
		Imp.dut.		6.3	33.0	17.0	23.3	11.1	14.2
		Total	5	173.1	913.5	470.8	643.1	307.3	392.4
73	85.02	c.i.f.		13.4	30.0	17.5	7.5	6.5	0.5
		Mark-up		4.5	10.0	5.8	2.5	2.2	0.2
		Imp.dut.		1.3	3.0	1.8	0.8	0.7	0.1
		Total	3	19.2	43.0	25.1	10.8	9.4	0.8
74	85.05	c.i.f.		37.0	39.2	17.5	61.4	71.1	77.0
		Mark-up		7.4	7.8	3.5	12.3	14.2	15.4
		Imp.dut.		1.9	2.0	0.9	3.1	3.6	3.9
		Total	2, 3, 4	46.3	49.0	21.9	76.8	88.9	96.3
75	85.07/a	c.i.f.		9.6	16.3	10.6	24.6	21.2	20.5
	85.07/b	Mark-up		1.9	3.3	2.1	4.9	4.2	4.1
		Imp.dut.		1.4	2.4	1.6	3.7	3.2	3.1
		Total	11	12.9	22.0	14.3	33.2	28.6	27.7
76	85.11	c.i.f.		45.6	43.0	41.2	66.0	77.5	82.3
		Mark-up		15.2	14.3	13.7	22.0	25.8	27.4
		Imp.dut.		2.3	2.2	2.1	3.3	3.9	4.1
		Total	3	63.1	59.5	57.0	91.3	107.2	113.8

(Continued)

TABLE 2 (continued)

77	85.12/a	c.i.f.		2.9	33.0	1.0	1.5	1.9	1.9
		Mark-up		1.0	11.0	0.3	0.5	0.6	0.6
		Imp.dut.		0.3	3.3	0.1	0.2	0.2	0.2
		Total	3	4.2	47.3	1.4	2.2	2.7	2.7
78	85.12/c	c.i.f.		51.6	33.5	26.8	51.6	37.4	36.4
		Mark-up		17.2	11.1	8.9	17.2	12.5	12.1
		Imp.dut.		10.3	6.7	5.4	10.3	7.5	7.3
		Total	3	79.1	51.3	41.1	79.1	57.4	55.8
79	85.13/a	c.i.f.		83.0	21.2	55.6	8.2	98.4	91.0
		Mark-up		16.6	4.2	11.1	1.6	19.7	18.2
		Imp.dut.		12.5	3.2	8.3	1.2	14.8	13.7
		Total	6	112.1	28.6	75.0	11.0	132.9	122.9
80	85.13/b	c.i.f.		701.1	880.5	521.1	115.8	170.8	130.9
		Mark-up		140.2	176.1	104.2	23.2	34.2	26.2
		Imp.dut.		-	-	-	-	-	-
		Total	6	841.3	1056.6	625.3	139.0	205.0	157.1
81	85.14	c.i.f.		6.8	8.4	17.0	18.0	14.1	13.9
		Mark-up		1.4	1.7	3.4	3.6	2.8	2.8
		Imp.dut.		1.4	1.7	3.4	3.6	2.8	2.8
		Total	11	9.6	11.8	23.8	25.2	19.7	19.5
82	85/15/c	c.i.f.		-	-	-	-	74.4	70.2
		Mark-up		-	-	-	-	24.8	23.4
		Imp.dut.		-	-	-	-	18.6	17.6
		Total	11	-	-	-	-	117.8	111.2

(Continued)

TABLE 2 (continued)

83	85.15/e	c.i.f.		25.3	43.4	16.1	68.7	58.6	50.5
		Mark-up		8.4	14.5	5.4	22.9	19.5	16.8
		Imp.dut.		1.3	2.2	0.8	3.4	2.9	2.5
		Total	11	35.0	60.1	22.3	95.0	81.0	69.8
84	85.16	c.i.f.		12.2	4.6	2.7	1.0	7.0	3.1
		Mark-up		4.0	1.5	0.9	0.3	2.3	1.0
		Imp.dut.		0.6	0.2	0.1	-	0.4	0.2
		Total	6	16.8	6.3	3.7	1.3	9.7	4.3
85	85.18	c.i.f.		2.5	3.6	5.4	2.0	24.3	5.7
		Mark-up		0.8	1.2	1.8	0.7	8.1	1.9
		Imp.dut.		0.4	0.5	0.8	0.3	3.6	0.9
		Total	3	3.7	5.3	8.0	3.0	36.0	8.5
86	85.22	c.i.f.		70.4	104.7	184.5	586.8	70.3	39.2
		Mark-up		23.4	35.0	61.4	195.4	23.4	13.0
		Imp.dut.		7.0	10.5	18.5	58.7	7.0	3.9
		Total	3	100.8	150.2	264.4	840.9	100.7	56.1
87	85.25	c.i.f.		35.6	70.1	50.6	56.6	38.9	91.1
		Mark-up		12.0	23.3	16.8	18.8	13.0	30.3
		Imp.dut.		3.6	7.0	5.1	5.7	3.9	9.1
		Total	5	51.2	100.4	72.5	81.1	55.8	130.5
88	87.01/a	c.i.f.		787.5	315.5	54.2	312.6	929.3	1552.5
		Mark-up		262.3	105.1	18.0	104.1	309.5	517.0
		Imp.dut.		-	-	-	-	-	-
		Total	1	1049.8	420.6	72.2	416.7	1238.8	2069.5

(Continued)

TABLE 2 (continued)

89	90:05	c.i.f.		1.7	3.3	3.7	1.6	4.4	3.8
		Mark-up		0.3	0.7	0.7	0.3	0.9	0.8
		Imp.dut.		0.2	0.5	0.6	0.2	0.7	0.6
		Total	11	2.2	4.5	5.0	2.1	6.0	5.2
90	90.06	c.i.f.		-	0.5	0.1	-	0.1	19.1
		Mark-up		-	0.1	-	-	-	3.8
		Imp.dut.		-	-	-	-	-	1.0
		Total	11	-	0.6	0.1	-	0.1	23.9
91	90.07/a	c.i.f.		0.6	3.5	1.5	2.3	0.7	-
		Mark-up		0.1	0.7	0.3	0.5	0.1	-
		Imp.dut.		-	0.2	0.1	0.1	-	-
		Total	11	0.7	4.4	1.9	2.9	0.8	-
92	90.08	c.i.f.		32.7	25.4	17.4	39.0	25.0	36.8
		Mark-up		6.5	5.1	3.5	7.8	5.0	7.4
		Imp.dut.		8.2	6.4	4.4	9.8	6.3	9.2
		Total	11	47.4	36.9	25.3	56.6	36.3	53.4
93	90.09	c.i.f.		20.8	8.5	7.7	10.2	11.0	5.5
		Mark-up		4.2	1.7	1.5	2 0	2.2	1.1
		Imp.dut.		4.2	1.7	1.5	2.0	2.2	1.1
		Total	11	29.2	11.9	10.7	14.2	15.4	7.7
94	90.10	c.i.f.		12.2	13.7	3.8	16.5	8.5	13.0
		Mark-up		2.4	2.7	0.8	3.3	1.7	2.6
		Imp.dut.		1.8	2.1	0.6	2.5	1.3	2 0
		Total	11	16.4	18.5	5.2	22.3	11.5	17.6

(Continued)

TABLE 2 (continued)

95	90.11 - 90.12	c.i.f.		20.8	11.0	10.6	47.2	18.8	18.6
		Mark-up		4.2	2.2	2.1	9.4	3.8	3.7
		Imp.dut.		2.1	1.1	1.1	4.7	1.9	1.9
		Total	11	27.1	14.3	13.8	61.3	24.5	24.2
96	90.13	c.i.f.		4.2	-	1.3	5.0	2.3	1.1
		Mark-up		0.8	-	0.3	1.0	0.5	0.2
		Imp.dut.		0.4	-	0.1	0.5	0.2	0.1
		Total	11	5.4	-	1.7	6.5	3.0	1.4
97	90.14	c.i.f.		21.6	44.1	42.6	30.0	457.0	6.0
		Mark-up	See	4.3	8.8	8.5	6.0	91.4	1.2
		Imp.dut.	Note (3)	2.2	4.4	4.3	3.0	45.7	0.6
		Total	below	28.1	57.3	55.4	39.0	594.1	7.8
98	90.15	c.i.f.		5.6	6.0	1.0	4.6	7.0	7.8
		Mark-up	See	1.1	1.2	0.2	0.9	1.4	1.6
		Imp.dut.	Note (3)	0.6	0.6	0.1	0.5	0.7	0.8
		Total	below	7.3	7.8	1.3	6.0	9.1	10.2
99	90.16	c.i.f.		70.7	52.6	41.0	43.1	81.5	50.0
		Mark-up	See	14.1	10.5	8.2	8.6	16.3	10.0
		Imp.dut.	Note (3)	7.1	5.3	4.1	4.3	8.2	5.0
		Total	below	91.9	68.4	53.3	56.0	106.0	65.0
100	90.17	c.i.f.		125.5	127.5	76.1	129.0	150.4	197.3
		Mark-up		25.1	25.5	15.2	25.8	30.1	39.5
		Imp.dut.		10.0	10.2	6.1	10.3	12.0	15.8
		Total	11	160.6	163.2	97.4	165.1	192.5	252.6

(Continued)

TABLE 2 (continued)

101	90.18	c.i.f.		1.7	2.7	1.4	2.8	2.3	3.4
		Mark-up		0.3	0.5	0.3	0.5	0.5	0.7
		Imp.dut.		0.1	0.2	0.1	0.2	0.2	0.3
		Total	11	2.1	3.4	1.8	3.5	3.0	4.4
102	90.20	c.i.f.		22.5	31.1	51.4	62.0	72.5	135.0
		Mark-up		4.5	6.2	10.3	12.4	14.5	27.0
		Imp.dut.		1.8	2.5	4.1	5.0	5.8	10.8
		Total	11	28.8	39.8	65.8	79.4	92.8	172.8
103	90.21	c.i.f.		24.0	17.0	15.0	35.3	37.2	34.6
		Mark-up		4.8	3.4	3.0	7.1	7.4	6.9
		Imp.dut.		1.9	1.4	1.2	2.8	3.0	2.8
		Total	11	30.7	21.8	19.2	45.2	47.6	44.3
104	90.22	c.i.f.		17.4	14.5	21.3	16.0	54.7	59.0
		Mark-up		3.5	2.9	4.3	3.2	10.9	11.8
		Imp.dut.		1.7	1.5	2.1	1.6	5.5	5.9
		Total	3	22.6	18.9	27.7	20.8	71.1	76.7
105	90.23	c.i.f.		18.6	16.3	10.7	13.7	11.4	30.3
		Mark-up		3.7	3.3	2.1	2.7	2.3	6.1
		Imp.dut.		1.9	1.6	1.1	1.4	1.1	3.0
		Total	11	24.2	21.2	13.9	17.8	14.8	39.4
106	90.24	c.i.f.		25.7	22.8	26.0	43.7	34.6	54.4
		Mark-up		5.1	4.6	5.2	8.7	7.0	10.9
		Imp.dut.		2.6	2.3	2.6	4.4	3.5	5.4
		Total	3	33.4	29.7	33.8	56.8	45.1	70.7

(Continued)

TABLE 2 (continued)

107	90.25	c.i.f.		71.8	61.3	17.3	51.2	75.8	121.3
		Mark-up		14.4	12.3	3.5	10.2	15.2	24.3
		Imp.dut.		7.2	6.1	1.7	5.1	7.6	12.1
		Total	11	93.4	79.7	22.5	66.5	98.6	157.7
108	90.26	c.i.f.		128.2	125.8	169.7	156.0	163.0	271.4
		Mark-up		25.6	25.2	34.0	31.2	32.6	54.3
		Imp.dut.		10.3	10.1	13.6	12.5	13.0	21.7
		Total	5	164.1	161.1	217.3	199.7	208.6	347.4
109	90.27	c.i.f.		2.0	4.0	1.7	5.0	5.4	6.0
		Mark-up		0.4	0.8	0.3	1.0	1.1	1.2
		Imp.dut.		0.3	0.6	0.3	0.8	0.8	0.9
		Total	3	2.7	5.4	2.3	6.8	7.3	8.1
110	90.28	c.i.f.		13.3	21.1	13.7	27.7	38.8	43.1
		Mark-up		2.7	4.2	2.7	5.5	7.8	8.6
		Imp.dut.		1.3	2.1	1.4	2.8	3.9	4.3
		Total	3	17.3	27.4	17.8	36.0	50.5	56.0
		Total c.i.f. value:		14992.5	11466.8	8593.8	9183.0	11949.2	15535.1
		Total Mark-up:		4683.4	3480.9	2652.1	2851.4	3647.8	4898.0
		Total Import duties:		593.3	525.8	399.8	553.2	656.6	769.2
		GRAND TOTAL :-		20269.2	15473.5	11645.7	12587.6	16253.6	21202.3

Sources: See Note (4) below

Appendix II

EXPLANATORY NOTES ON TABLE 2

(1) Arabic numerals inserted in the column designated as "Industry Group" refer to the order of each industry listed in Chapter III, Section B. They are:

1. Agriculture
2. Mining and Quarrying (other an Oil Companies)
3. Manufacturing
4. Construction
5. Electricity and Water
6. Transportation, Storage and Communications
7. Wholesale and Retail Trade
8. Banking and Insurance
9. ----------
10. Public Administration
11. Services.

For the industry group number (9) namely, "Ownership of Dwellings", no machinery is allocated because its investment is confined to the building, not its contents.

(2) For the distribution of Items 84.52 and 84.53 by industry group, they were added together, and purchases of "Banking and Insurance" and "Public Administration" (as

identified from their accounts) of machines falling within these two items were deducted. The remainder was then attributed to the industry group "Services", on the grounds that this type of machinery is mainly used at schools and colleges for educational purposes. The calculation is shown below:

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Total items (Customs Code) 84.52 and 84.53	202.5	202.9	118.1	106.7	180.2	167.9
2	Less purchases of "Banking and Insurance"	79.3	70.8	50.1	24.0	54.4	126.6
3	Less purchases of "Public Administration"	25.0	3.1	2.0	5.0	5.2	1.2
4	TOTAL : Attributed to "Services"	98.2	129.0	66.0	77.7	120.6	40.1

(3) For the distribution of Items 90.14, 90.15, and 90.16 by industry group, they were added together, and purchases of "Public Administration" (as identified from Government Ordinary Budget) of equipment falling within these items were deducted. The remainder

was attributed to "Services", on the grounds that this equipment is used by professionals and scientists whose activities fall within the category of Services. The calculation is shown below:

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Total items (Customs Code) 90.14, 90.15, and 90.16	127.3	133.5	110.0	101.0	709.2	83.0
2	Less purchases of "Public Administration"	22.0	13.0	13.2	15.2	15.5	4.3
3	TOTAL : Attributed to "Services"	105.3	120.5	96.8	85.8	693.7	78.7

(4) The sources of information from which this Table was compiled are as follows:

(a) The c.i.f. values are derived from: Foreign Trade Statistical Abstract (F.T.S.), 1958, 1959, 1960, 1961, and 1962; Ministry of Planning, Central Bureau of Statistics; Government Press, Baghdad, 1959, 1960, 1961, 1962, and 1963 respectively.

(b) Import duties are calculated at the rates prescribed and in accordance with the

Provisions of the Import Schedule annexed to the Law of Customs Tarriff No. 77 of 1955 as amended by the First Amendment Law No. 4 of 1956, and other amendments thereafter.

Appendix II

SUPPLEMENT TO TABLE 2

on the

MARKING-UP OF IMPORTS OF MACHINERY AND EQUIPMENT

a. The following items were marked-up by 33.3% of their c.i.f. values:-

82.01	84.16	84.24/a	84.38	85.01/a/1 and 2
84.01 - 84.02	84.17/a	84.24/b	84.39	85.01/b/1, 2, 3
84.03	84.17/c	84.24/c	84.40/a	85.01/c/1 and 2
84.04 - 84.05	84.18/a	84.25/a	84.40/b	85.02
84.06/a/5	84.18/b	84.25/b	84.40/d	85.11
84.07	84.18/c	84.25/c	84.41/a/1	85.12/a
84.08/a	84.19	84.26	84.41/a/2	85.12/c
84.08/b	84.20	84.27	84.42	85.15/c
84.09	84.21/a	84.28	84.43 - 84.44	85.15/e
84.10	84.21/b	84.29	84.50	85.16
84.11	84.22/a	84.30	84.56	85.18
84.13	84.22/b	84.31 - 84.33	84.57	85.22
84.14	84.23/a	84.34 - 84.35	84.58	85.25
84.15/a	84.23/b	84.36	84.59	87.01/a
84.15/b/2, c, d	84.23/c	84.37		

b. The following items were marked-up by 25% of their c.i.f. values:-

73.24
82.02
82.03

(Continued)

c. The following items were marked-up by 20% of their c.i.f. values:-

84.45	85.05	90.07/a	90.15	90.23
84.46	85.07/a and b	90.08	90.16	90.24
84.47	85.13/a	90.09	90.17	90.25
84.49	85.13/b	90.10	90.18	90.26
84.52	85.14	90.11 - 90.12	90.20	90.27
84.53	90.05	90.13	90.21	90.28
84.60	90.06	90.14	90.22	

Appendix II

TABLE 3

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : AGRICULTURE

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	82.01	75.9	40.5	44.2	48.0	92.0	71.7
2	84.07	173.3	7.1	3.1	0.7	3.5	5.7
3	84.10	580.1	341.1	564.8	560.4	1222.4	1148.9
4	84.21/a	7.5	63.1	20.9	28.0	5.7	5.9
5	84.23/a	583.3	189.4	305.5	231.4	402.8	349.8
6	84.24/a	134.5	78.2	25.1	56.7	139.3	178.2
7	84.24/b	18.9	20.7	22.4	4.5	37.3	28.5
8	84.24/c	57.3	21.7	75.0	12.7	-	96.0
9	84.25/a	781.8	677.7	37.6	113.7	110.6	324.0
10	84.25/b	9.8	9.6	10.8	10.4	19.4	30.5
11	84.25/c	48.1	16.1	6.3	7.7	13.5	18.3
12	84.28	6.4	5.6	5.6	10.7	5.6	17.6
13	87.01/a	1049.8	420.6	72.2	416.7	1238.8	2069.5
	Total 1 - 13	3526.7	1891.4	1193.5	1501.6	3290.9	4344.6

(Continued)

Appendix II

TABLE 3 (continued)

	Total 1 - 13	3526.7	1891.4	1193.5	1501.6	3290.9	4344.6
14	Less Municipalities purchases of Agricultural Machinery (included in the "Services" sector)	93.0	120.7	81.0	73.3	43.8	39.8
15	Less Purchases of other Government Departments (included in "Public Administration")	62.4	58.0	157.9	123.3	75.7	103.0
	TOTAL Machinery and Equipment attributed to "Agriculture":	3371.3	1712.7	954.6	1305.0	3171.4	4201.8

Appendix II

TABLE 4

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : MINING AND QUARRYING

(ID 000)

Customs Code		1957	1958	1959	1960	1961	1962
1	(84.23/c)*	88.6	29.6	51.0	41.0	76.1	82.4
2	84.46	109.6	186.3	78.2	172.6	176.0	66.3
3	(85.05)	1.2	1.4	0.6	1.6	2.0	2.2
	TOTAL Machinery and Equipment attributed to "Mining and Quarrying" :	199.4	217.3	129.8	215.2	254.1	150.9

* Bracketed Customs Code means that the item is distributed between several sectors.

Appendix II

TABLE 5

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : MANUFACTURING

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	73.24	55.5	22.7	71.6	10.7	65.9	36.8
2	82.02	43.0	56.3	29.3	33.9	55.4	48.7
3	82.03	300.3	534.1	204.5	287.2	258.9	269.1
4	84.01 - 84.02	523.3	1014.4	477.2	64.5	99.2	85.3
5	84.03	11.3	77.4	24.7	3.9	72.2	74.4
6	84.04 - 84.05	55.5	7.7	24.3	1.2	3.5	-
7	84.06/a/5	1084.5	585.5	439.9	652.0	904.5	798.4
8	84.08/a	26.6	96.7	44.2	70.3	33.3	22.6
9	84.08/b	49.3	8.6	59.4	1.4	29.5	10.9
10	84.11	382.5	445.3	203.0	188.0	277.5	344.3
11	84.13	4.5	19.6	21.1	4.6	1.7	6.5
12	84.14	88.5	9.9	0.8	0.8	12.8	40.8
13	84.15/a	126.6	170.2	79.9	77.2	272.7	296.8
14	84.16	22.9	26.3	19.4	28.3	23.2	46.8
15	84.17/a	20.8	0.4	2.0	20.4	10.4	12.4

(Continued)

TABLE 5 (continued)

16	84.18/a	0.5	1.6	-	4.7	1.3	0.8
17	84.19	86.3	182.0	32.8	88.1	166.0	586.0
18	(84.20)*	23.5	31.5	29.4	31.6	20.5	25.5
19	(84.22/a)	277.4	185.0	218.4	139.6	181.0	337.2
20	(84.22/b)	37.0	38.0	22.8	105.4	89.5	30.7
21	84.26	78.0	28.7	6.7	1.9	7.6	4.7
22	84.27	296.7	164.5	3.5	0.8	-	5.1
23	84.29	225.7	220.0	172.9	880.1	129.3	434.9
24	84.30	1208.2	404.1	76.5	72.8	293.3	250.3
25	84.31 - 84.33	35.7	14.5	54.0	62.0	123.1	59.9
26	84.34 - 84.35	316.9	140.6	252.1	200.5	198.2	225.4
27	84.36	32.7	28.2	52.4	19.1	198.2	168.1
28	84.37	35.7	91.0	27.7	90.8	130.1	181.7
29	84.38	191.4	470.2	211.7	190.7	346.3	2825.5
30	84.39	0.4	0.5	7.5	0.4	4.0	-
31	84.40/b	44.5	13.3	40.3	44.5	44.2	63.6
32	84.40/d	-	-	-	-	41.3	18.6
33	84.41/a/1 (50% only)	87.8	159.0	102.9	217.2	221.0	170.6
34	84.41/a/2	37.9	32.3	42.3	95.9	85.1	56.7
35	84.42	85.5	138.6	72.2	36.1	166.0	203.4
36	84.43 - 84.44	11.9	36.1	20.2	21.1	60.1	27.7

(Continued)

Appendix II

TABLE 5 (continued)

37	84.45	162.5	201.8	81.3	111.9	164.3	149.0
38	84.47	125.2	84.9	36.0	74.6	219.8	94.3
39	84.49	147.3	114.4	18.8	48.8	82.7	56.6
40	84.50	56.3	94.2	89.4	37.2	113.7	61.9
41	84.56	2809.1	788.0	480.1	486.3	697.0	791.9
42	84.57	-	1.6	-	-	-	3.7
43	84.59	308.5	305.6	617.6	321.0	366.5	1332.9
44	84.60	95.7	68.1	28.9	35.2	43.3	55.6
45	85.02	19.2	43.0	25.1	10.8	9.4	0.8
46	(85.05)	25.3	26.2	12.8	52.7	61.8	72.1
47	85.11	63.1	59.5	57.0	91.3	107.2	113.8
48	85.12/a	4.2	47.3	1.4	2.2	2.7	2.7
49	85.12/c	79.1	51.3	41.1	79.1	57.4	55.8
50	85.18	3.7	5.3	8.0	3.0	36.0	8.5
51	85.22	100.8	150.2	264.4	840.9	100.7	56.1
52	90.22	22.6	18.9	27.7	20.8	71.1	76.7
53	90.24	33.4	29.7	33.8	56.8	45.1	70.7
54	90.27	2.7	5.4	2.3	6.8	7.3	8.1
55	90.28	17.3	27.4	17.8	36.0	50.5	56.0
	TOTAL Machinery and Equipment attributed to "Manufacturing" :	9984.8	7577.6	4991.1	6063.1	6863.3	10837.4

* Bracketed Customs Code means that the item is distributed between several sectors.

Appendix II

TABLE 6

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : CONSTRUCTION

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	84.09	194.2	111.6	77.8	88.5	145.4	124.4
2	(84.22/a)*	216.5	151.0	144.0	59.6	73.5	102.2
3	(84.22/b)	28.9	31.0	15.0	45.0	36.2	9.2
4	84.23/b	340.3	110.6	178.2	135.0	130.1	268.0
5	(84.23/c)	1418.2	460.0	738.1	557.0	989.2	823.4
6	(85.05)	19.8	21.4	8.5	22.5	25.1	22.0
	Total 1 - 6	2217.9	885.6	1161.6	907.6	1399.5	1349.2
7	Less Municipalities purchases of Construction Machinery included in the "Services" sector	31.8	30.9	234.3	444.0	256.5	284.9
8	Less Construction Machinery purchased by General Government and included in the "Public Administration" sector	20.4	10.2	3.6	3.0	4.5	2.0
	TOTAL Construction Machinery and Equipment attributed to "Construction" :	2165.7	844.5	923.7	460.6	1138.5	1062.3

Appendix II

TABLE 7

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : ELECTRICITY AND WATER

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	84.18/c	134.7	220.3	85.1	104.7	316.0	133.6
2	85.01/a/1 and 2	665.8	469.3	953.8	289.1	188.6	473.7
3	85.01/b/1, 2, and 3	333.9	318.1	387.2	515.4	183.0	224.1
4	85.01/c/1 and 2	173.1	913.5	470.8	643.1	307.3	392.4
5	85.25	51.2	100.4	72.5	81.1	55.8	130.5
6	90.26	164.1	161.1	217.3	199.7	208.6	347.4
	TOTAL Machinery and Equipment attributed to "Electricity and Water :	1522.8	2182.7	2186.7	1833.1	1259.3	1701.7

Appendix II

TABLE 8

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : TRANSPORTATION, STORAGE AND COMMUNICATIONS

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	(84.20)*	20.0	26.1	22.0	23.0	16.0	18.3
2	(84.22/a)	236.8	153.3	163.7	101.8	141.3	241.8
3	(84.22/b)	31.6	31.2	17.0	76.9	70.0	22.0
4	85.13/a (Communications)	112.1	28.6	75.0	11.0	132.9	122.9
5	85.13/b	841.3	1056.6	625.3	139.0	205.0	157.1
6	85.16	16.8	6.3	3.7	1.3	9.7	4.3
	TOTAL Machinery and Equipment attributed to "Transportation, Storage and Communications" :	1258.6	1302.1	906.7	353.0	574.9	566.4

* Bracketed Customs code means that the item is distributed between several sectors.

Appendix II

TABLE 9

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : WHOLESALE AND RETAIL TRADE

(ID 000)

Customs Code	1957	1958	1959	1960	1961	1962
(84.20)*	19.6	23.8	17.1	19.0	12.4	15.2

TABLE 10

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : BANKING AND INSURANCE

(ID 000)

Customs Code	1957	1958	1959	1960	1961	1962
(84.52 and 84.53)*	79.3	70.8	50.1	24.0	54.4	126.6

* Bracketed Customs Code means that the item is distributed between several sectors.

Appendix II

TABLE 11

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : PUBLIC ADMINISTRATION

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	(84.52 and 84.53)*	25.0	3.1	2.0	5.0	5.2	1.2
2	(90.14, 90.15 and 90.16)	22.0	13.0	13.2	15.2	15.5	4.3
3	Agricultural Machinery (See Table 3)	62.4	58.0	157.9	123.3	75.7	103.0
4	Construction Machinery (See Table 6)	20.4	10.2	3.6	3.0	4.5	2.0
	TOTAL Machinery and Equipment attributed to "Public Administration" :	129.8	84.3	176.7	146.5	100.9	110.5

* Bracketed Customs Code means that the item is distributed between several sectors.

Appendix II

TABLE 12

DISTRIBUTION OF IMPORTED MACHINERY AND EQUIPMENT

(other than Oil Companies' imports)

BY INDUSTRY GROUP : SERVICES

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	84.15/b/2, c and d	215.7	208.5	87.4	198.0	258.6	276.0
2	84.17/c	139.1	102.9	116.0	53.2	165.3	208.3
3	84.18/b	9.2	3.9	2.7	1.5	-	2.1
4	84.21/b	91.3	61.4	97.7	83.4	72.5	93.1
5	84.40/a	228.6	165.8	173.7	454.0	413.3	369.2
6	(84.52 and 84.53)*	98.2	129.0	66.0	77.7	120.6	40.1
7	84.58	-	-	8.9	0.4	6.1	4.5
8	85.07/a and b	12.9	22.0	14.3	33.2	28.6	27.7
9	85.14	9.6	11.8	23.8	25.2	19.7	19.5
10	85.15/c	-	-	-	-	117.8	111.2
11	85.15/e	35.0	60.1	22.3	95.0	81.0	69.8
12	90.05	2.2	4.5	5.0	2.1	6.0	5.2
13	90.06	-	0.6	0.1	-	0.1	23.9
14	90.07/a	0.7	4.4	1.9	2.9	0.8	-
15	90.08	47.4	36.9	25.3	56.6	36.3	53.4

(Continued)

TABLE 12 (continued)

16	90.09	29.2	11.9	10.7	14.2	15.4	7.7
17	90.10	16.4	18.5	5.2	22.3	11.5	17.6
18	90.11 - 90.12	27.1	14.3	13.8	61.3	24.5	24.2
19	90.13	5.4	-	1.7	6.5	3.0	1.4
20	(90.14, 90.15 and 90.16)	105.3	120.5	96.8	85.8	693.7	78.7
21	90.17	160.6	163.2	97.4	165.1	192.5	252.6
22	90.18	2.1	3.4	1.8	3.5	3.0	4.4
23	90.20	28.8	39.8	65.8	79.4	92.8	172.8
24	90.21	30.7	21.8	19.2	45.2	47.6	44.3
25	90.23	24.2	21.2	13.9	17.8	14.8	39.4
26	90.25	93.4	79.7	22.5	66.5	98.6	157.7
	Total 1 - 26	1413.1	1306.1	993.9	1650.8	2524.1	2104.8
27	Plus Municipalities purchases of Construction Machinery (See Table 6)	31.8	30.9	234.3	444.0	256.5	284.9
28	Plus Municipalities purchases of Agricultural Machinery (See Table 3)	93.0	120.7	81.0	73.3	43.8	39.8
	TOTAL Machinery and Equipment attributed to "Services" :	1537.9	1457.7	1309.2	2168.1	2824.4	2429.5

*Bracketed Customs Code means that the item is distributed between several sectors.

Appendix II

TABLE 13

c.i.f. VALUE OF OIL COMPANIES' IMPORTS OF MACHINERY AND EQUIPMENT

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	73.24	13.6	4.3	16.1	6.6	16.2	2.4
2	82.01	8.4	1.1	1.0	0.7	5.2	0.3
3	82.02	1.5	0.4	0.5	0.5	0.7	0.2
4	82.03	33.5	26.7	51.5	39.3	60.6	11.4
5	84.01 - 84.02	328.8	53.7	39.7	249.9	179.6	0.2
6	84.03	-	-	31.6	25.0	1118.7	120.0
7	84.04 - 84.05	1.7	-	13.5	36.0	3.5	-
8	84.06/a/5	115.4	3.3	26.2	29.6	2.3	9.6
9	84.07	-	-	8.2	96.7	2.2	-
10	84.08/b	-	-	-	16.4	273.0	0.6
11	84.09	0.7	21.6	30.3	8.8	1.7	0.5

(Continued)

TABLE 13 (continued)

12	84.10	279.0	170.2	202.8	844.0	-	45.8
13	84.11	168.6	53.2	99.8	266.1	297.0	82.2
14	84.13	4.7	0.1	-	5.1	17.4	-
15	84.14	0.7	3.5	0.4	-	8.6	-
16	84.15/a	53.7	6.7	4.7	8.7	2.1	0.2
17	84.15/b/2	8.0	4.4	16.0	15.2	5.5	0.5
18	84.15/c	-	-	20.6	3.9	7.1	0.3
19	84.15/d	-	34.0	11.8	13.3	10.0	9.7
20	84.16	0.7	-	-	-	0.1	-
21	84.17/c	1.8	29.5	41.3	0.8	5.7	1.3
22	84.18/c	26.7	37.8	36.8	34.4	56.8	20.4
23	84.19	5.6	0.6	1.2	0.1	4.1	0.1
24	84.20	0.7	0.8	6.3	1.1	0.2	6.0
25	84.21/b	9.3	9.3	14.1	16.8	4.2	6.8
26	84.22/a	34.4	8.4	85.3	169.7	237.5	3.5

(Continued)

TABLE 13 (continued)

27	84.22/b	0.9	0.3	9.4	6.4	0.8	0.3
28	84.23/a	332.1	448.0	989.5	536.3	48.6	2.4
29	84.23/b	-	-	-	-	2.0	-
30	84.23/c	-	-	-	-	48.8	6.5
31	84.25/b	0.2	0.7	1.0	-	1.7	0.5
32	84.30	-	-	0.4	-	0.8	-
33	84.37	-	-	-	0.6	-	-
34	84.40/a	2.9	1.4	0.1	0.6	-	0.2
35	84.40/b	19.1	2.5	1.3	1.7	0.5	-
36	84.43 -84.44	2.7	-	1.4	1.9	0.2	-
37	84.45	8.1	0.3	28.1	12.2	20.0	-
38	84.47	-	2.6	-	-	-	-
39	84.49	34.8	67.1	31.3	9.0	3.5	0.5
40	84.50	68.4	0.1	21.7	10.0	47.8	0.1
41	84.52	14.2	21.7	3.4	1.6	2.6	0.8

(Continued)

TABLE 13 (continued)

42	84.53	1.4	-	-	-	0.3	3.8
43	84.56	6.3	8.6	11.5	21.0	6.2	2.6
44	84.58	3.0	-	-	-	-	-
45	84.59	142.3	171.0	22.0	52.0	13.5	0.5
46	84.60	-	-	1.1	0.1	-	-
47	85.01/a/1 and 2	101.9	1.1	35.9	95.3	124.0	1.8
48	85.01/b/1, 2, and 3	36.1	15.5	70.3	38.4	61.4	33.4
49	85.01/c/1 and 2	26.4	44.5	27.5	9.2	28.5	13.7
50	85.05	5.3	0.3	3.0	0.3	0.6	0.3
51	85.11	0.3	0.2	10.0	38.2	15.4	1.0
52	85.12/a and c	3.7	8.2	10.4	8.3	14.9	2.2
53	85.13/a and b	52.1	22.6	24.5	58.0	50.5	12.8
54	85.14 + 85.15/e	4.2	1.0	3.1	4.2	2.2	0.7
55	85.18 + 85.22 + 85.25	14.1	1.8	5.3	5.7	37.4	22.7

(Continued)

TABLE 13 (continued)

56	90.05, 90.08, 90.10 - 90.12, 90.14 - 90.18, 90.20 - 90.28	120.2	169.6	292.0	130.4	219.5	63.5
	Total c.i.f. value	2098.2	1458.7	2363.9	2930.1	3071.7	492.3
	+ 10% Mark-up	209.8	145.9	236.4	293.0	307.3	49.2
	GRAND TOTAL :-	2308.0	1604.6	2600.3	3223.1	3379.0	541.5

Sources: As Table 2 above.

* * * * *

APPENDIX III

IMPORTED FURNITURE AND FIXTURES

This appendix contains two tables. Table 1 shows the definition of each imported item which we regarded as furniture and fixtures. It also shows the conversion of each item's customs code into the Standard International Trade Classification and the International Standard Industrial classification.

Table 2 contains the actual import figures of the items listed in Table 1, their import duties and mark-up. The mark-up, however, is taken as 25 per cent of the c.i.f. value of each item.

Appendix III

TABLE 1

CLASSIFICATION AND DEFINITION OF IMPORTED FURNITURE AND FIXTURES

Conversion of Customs Code into
Standard International Trade Classification (S.I.T.C.)
and
International Standard Industrial Classification (I.S.I.C.)

	Customs Code	S.I.T.C.	I.S.I.C.	Definition of Furniture and Fixtures
1	40.08	621.0(4)	300	Plates, sheets, strip, rods and profile shapes, of unhardened vulcanised rubber.
2	59.09	655.4(4)	239	Coated fabrics.
3	50.10	657.4(2)	239	Linoleum and materials prepared on a textile base in a similar manner to linoleum, whether or not cut to shape or of a kind used as floor covering; floor coverings consisting of a coating applied on a textile base, cut to shape or not.
4	70.09	664.8	332	Glass mirrors (including rear-view mirrors), unframed, framed or backed.
5	73.36	697.1(1)	350	Stoves, ranges, cookers, grates, fire and other space heaters.
6	73.37	812.1	350	Central heating boilers (excluding steam-generating boilers of heading No. 84.01), air heaters, unit heaters and radiators, etc.

(Continued)

TABLE 1 (continued)

7	83.03	698.2	350	Safes, strong-boxes, armoured or reinforced strong-rooms, strong-room linings and strong-room doors; cash and deed boxes and the like, of base metal.
8	83.04	895.1(1)	350	Filing cabinets, racks, sorting boxes, paper trays, paper rests and similar office equipment of base metal, other than office furniture falling within heading No. 94.03.
9	83.07	812.4(2)	350	Lamps and lighting fittings, of base metal (excluding switches, electric lamp holders, electric lamps for vehicles, electric battery or magneto lamps).
10	84.12	697.9(3)	350	Air conditioning machines.
11	84.51	714.1	360	Typewriters, other than typewriters incorporating calculating mechanisms; cheque-writing machines.
12	84.54	714.9(1)	360	Other office machines (for example, hectograph or stencil duplicating machines, addressing machines, coin-sorting machines, coin-counting machines, pencil-sharpening machines, perforating and stapling machines).
13	85.06/a	725.0(3)	370	Electro-mechanical domestic appliances, with self-contained electric motors: room-fans, garden-fans and the like.
14	85.06/b 85.06/c	725.0(3)	370	Electrical vacuum cleaners and the like.
15	94.01/a	821.0(1)	260	Chairs, seats and the like, of wood.

(Continued)

TABLE 1 (continued)

16	94.01/b	821.0(1)	260	Chairs and other seats, of base metal.
17	94.01/c	821.0(1)	260	Chairs and other seats, other than those included within heading No. 94.01/a and 94.01/b.
18	94.02	821.0(2)	260	Medical, dental, surgical or veterinary furniture (for example, operating tables, hospital beds with mechanical fittings); dentists and similar chairs with mechanical elevating, rotating or reclining movement, etc.
19	94.03/a	821.0(9)	260	Other furniture of wood.
20	94.03/b	821.0(9)	260	Other furniture of base metal.
21	94.03/c	821.0(9)	260	Other furniture, n.e.c.

* * * * *

Appendix III

TABLE 2

IMPORTS OF FURNITURE AND FIXTURES

(including Oil Companies Imports)

(ID 000)

	Customs Code		1957	1958	1959	1960	1961	1962
1	83.03	c.i.f.	73.6	48.4	51.4	49.4	79.6	46.5
		Mark-up	18.4	12.1	12.9	12.3	19.9	11.6
		Import duties	11.0	7.3	7.7	7.4	11.9	7.0
		Total	103.0	67.8	72.0	69.1	111.4	65.1
2	83.04	c.i.f.	69.2	22.7	9.0	6.5	6.0	4.0
		Mark-up	17.3	5.7	2.2	1.6	1.5	1.0
		Import duties	10.4	3.4	1.4	1.0	1.0	0.6
		Total	96.9	31.8	12.6	9.1	8.5	5.6
3	84.12	c.i.f	442.7	584.2	366.1	623.3	598.8	605.2
		Mark-up	110.7	146.0	91.5	155.8	150.0	151.3
		Import duties	88.5	116.8	73.2	124.7	119.8	121.0
		Total	641.9	847.0	530.8	903.8	868.6	877.5
4	84.51	c.i.f.	76.0	60.6	32.6	67.9	77.8	69.5
		Mark-up	19.0	15.1	8.1	17.0	19.4	17.4
		Import duties	11.4	9.0	5.0	10.2	11.7	10.4
		Total	106.4	84.7	45.7	95.1	108.9	97.3

(Continued)

Appendix III

TABLE 2 (continued)

5	84.54	c.i.f.	31.6	34.7	29.1	44.4	41.0	49.5
		Mark-up	7.9	8.7	7.3	11.1	10.2	12.4
		Import duties	4.7	5.2	4.4	6.7	6.2	7.4
		Total	44.2	48.6	40.8	62.2	57.4	69.3
6	85.06/a	c.i.f.	410.6	487.4	397.3	749.4	872.0	773.5
		Mark-up	102.7	122.0	99.3	187.3	218.0	193.4
		Import duties	32.8	39.0	31.8	60.0	69.8	62.0
		Total	546.1	648.4	528.4	996.7	1159.8	1028.9
7	85.06/b	c.i.f.	26.2	42.2	25.5	28.3	37.0	28.3
	85.06/c	Mark-up	6.6	10.6	6.4	7.1	9.2	7.1
		Import duties	5.2	8.4	5.1	5.7	7.4	5.7
		Total	38.0	61.2	37.0	41.1	53.6	41.1
8	94.01/a	c.i.f.	9.4	7.7	2.0	9.8	13.2	6.6
		Mark-up	2.4	1.9	0.5	2.4	3.3	1.7
		Import duties	3.8	3.1	0.8	3.9	5.3	2.6
		Total	15.6	12.7	3.3	16.1	21.8	10.9
9	94.01/b	c.i.f.	50.3	41.8	21.6	32.3	11.4	5.6
		Mark-up	12.6	10.4	5.4	8.0	2.9	1.4
		Import duties	12.6	10.4	5.4	8.0	2.9	1.4
		Total	75.5	62.6	32.4	48.3	17.2	8.4
10	94.01/c	c.i.f.	7.1	1.5	2.4	3.6	10.8	7.0
		Mark-up	1.8	0.4	0.6	0.9	2.7	1.8
		Import duties	2.1	0.5	0.7	1.1	3.2	2.1
		Total	11.0	2.4	3.7	5.6	16.7	10.9

(Continued)

TABLE 2 (continued)

11	94.02	c.i.f.	10.4	16.5	2.7	10.4	10.0	14.3
		Mark-up	2.6	4.1	0.7	2.6	2.5	3.6
		Import duties	0.8	1.3	0.2	0.8	0.8	1.1
		Total	13.8	21.9	3.6	13.8	13.3	19.0
12	94.03/a	c.i.f.	15.1	32.5	32.3	63.6	47.2	18.7
		Mark-up	3.8	8.1	8.1	15.9	11.8	4.7
		Import duties	6.0	13.0	13.0	25.4	19.0	7.5
		Total	24.9	53.6	53.4	104.9	78.0	30.9
13	94.03/b	c.i.f.	116.0	218.3	77.0	100.2	123.6	39.5
		Mark-up	29.0	54.6	19.2	25.0	31.0	10.0
		Import duties	29.0	54.6	19.2	25.0	31.0	10.0
		Total	174.0	327.5	115.4	150.2	185.6	59.5
14	94.03/c	c.i.f.	14.2	12.3	10.5	6.0	1.4	1.4
		Mark-up	3.6	3.1	2.6	1.5	0.4	0.4
		Import duties	4.3	3.7	3.2	1.8	0.4	0.4
		Total	22.1	19.1	16.3	9.3	2.2	2.2
15	73.36/a	c.i.f.	413.8	481.2	673.1	941.4	572.0	517.2
	73.36/b	Mark-up	103.5	120.3	168.3	235.4	143.0	129.3
		Import duties	62.0	72.2	101.0	141.2	85.8	77.6
		Total	579.3	673.7	942.4	1318.0	800.8	724.1
16	73.37	c.i.f.	16.7	14.8	19.7	8.6	7.5	15.4
		Mark-up	4.2	3.7	4.9	2.1	1.9	3.9
		Import duties	2.5	2.2	3.0	1.3	1.1	2.3
		Total	23.4	20.7	27.6	12.0	10.5	21.6

(Continued)

Appendix III

TABLE 2 (continued)

17	59.09	c.i.f.	68.0	82.5	71.5	113.1	83.2	69.3
		Mark-up	17.0	20.6	18.0	28.3	20.8	17.3
		Import duties	6.8	8.3	7.2	11.3	8.3	6.9
		Total	91.8	111.4	96.7	152.7	112.3	93.5
18	59.10	c.i.f.	15.0	9.8	24.0	24.0	20.0	12.0
		Mark-up	3.8	2.5	6.0	6.0	5.0	3.0
		Import duties	3.8	2.5	6.0	6.0	5.0	3.0
		Total	22.6	14.8	36.0	36.0	30.0	18.0
19	40.08	c.i.f.	38.5	43.7	52.8	63.0	80.0	84.0
		Mark-up	9.6	10.9	13.2	15.8	20.0	21.0
		Import duties	7.7	8.7	10.6	12.6	16.0	16.8
		Total	55.8	63.3	76.6	91.4	116.0	121.8
20	70.09	c.i.f.	70.0	56.8	83.7	82.0	68.8	80.0
		Mark-up	17.5	14.2	21.0	20.5	17.2	20.0
		Import duties	11.0	9.5	15.9	15.6	9.6	17.4
		Total	98.5	80.5	120.6	118.1	95.6	117.4
21	83.07	c.i.f.	181.6	193.8	169.0	263.7	437.0	470.0
		Mark-up	45.4	48.5	42.2	66.0	109.3	117.5
		Import duties	27.2	29.0	25.3	40.6	56.8	83.6
		Total	254.2	271.3	236.5	370.3	603.1	671.1
		Total c.i.f. value:	2156.0	2493.4	2153.3	3290.9	3198.3	2917.5
		Total Mark-up:	539.4	623.5	538.4	822.6	800.0	729.8
		Total Import duties:	343.6	408.1	340.1	510.3	473.0	446.8
		GRAND TOTAL :-	3039.0	3525.0	3031.8	4623.8	4471.3	4094.1

TABLE 2 (continued)

Note:

* The c.i.f. value of each item is marked-up by 25%.

Sources: 1. The c.i.f. values of imported Furniture and Fixtures are derived from: Foreign Trade Statistical Abstract (F.T.S.), 1958, 1959, 1960, 1961, and 1962, Ministry of Planning, Central Bureau of Statistics, Government Press, Baghdad, 1959, 1960, 1961, 1962, and 1963, respectively.

2. Import duties are calculated at the rates prescribed and in accordance with the provisions of Import Schedule annexed to the Law of Customs Tarriff No. 77 of 1955 as amended by the First Amendment Law No. 4 of 1956; and other amendments thereafter.

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APPENDIX IV

IMPORTS OF TRANSPORT EQUIPMENT

This appendix contains five tables giving detailed information on the import of transport equipment. Table 1 gives the definitions of the items classified as transport equipment, with the conversion of Iraqi Customs Code to the Standard Internation Trade classification and the International Standard Industrial classification. Table 2 gives the import figures of this type of asset. Tables 3 and 4, on the other hand, show the distribution of these equipments by industry group.[1] The former shows the allocation of each type of transport equipment to the appropriate industry; the latter shows each industry's share from such an allocation.

Oil Companies' imports of transport equipment are shown in Table 5.

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1) The terms "industry group" and "sector" are used interchangeably.

Appendix IV

TABLE 1

CLASSIFICATION AND DEFINITION OF IMPORTED TRANSPORT EQUIPMENT

Conversion of Customs Code into

Standard International Trade Classification (S.I.T.C.)

and

International Standard Industrial Classification (I.S.I.C.)

	Customs Code	S.I.T.C.	I.S.I.C.	Definition of Transport Equipment
1	84.06/a/1	711.5	360	Internal combustion piston engines for motor cycles or cycles.
2	84.06/a/2	711.5	360	Internal combustion piston engines for motor vehicles (other than railways).
3	84.06/a/-3/b	711.4(1)	360	Internal combustion piston engines for aircrafts.
4	84.06/a/4	711.5	360	Internal combustion piston engines for water crafts.
5	86.01 - 86.03	731.1 731.2 731.3	382	Rail locomotives and tenders.
6	86.04	731.4	382	Mechanically propelled railway and tramway coaches, vans and trucks, and mechanically propelled track inspection trolleys.

(Continued)

TABLE 1 (continued)

7	86.05	731.5	382	Railway and tramway passenger coaches and luggage vans; hospital coaches, prison coaches, testing coaches, travelling post office coaches and other special purpose railway coaches.
8	86.06 - 86.07	731.6(1) and 731.6(2)	382	Railway and tramway goods vans, goods wagons and trucks; workshops, cranes and other service vehicles.
9	86.08	731.6(3)	382	Road-rail and similar containers specially designed and equipped to be equally suitable for transport by rail, road and ship.
10	86.10	719.6(6)	382	Railway and tramway track fixtures and fittings; mechanical equipment, not electrically powered, for signalling to or controlling road, rail or other vehicles, ships or aircrafts; parts of the foregoing fixtures, fittings and equipments.
11	87.01/b	732.5	383	Road tractors, whether or not fitted with power tak take-offs, winches or pulleys.
12	87.02/a/1	732.1	383	Motor vehicles designed for transporting ten passengers or less, weighing more than 1650 kilos.
13	87.02/a/2	732.1	383	Motor vehicles designed for transporting ten passengers or less, weighing less than 1650 kilos.
14	87.02/a/3	732.1	383	Other motor vehicles for passenger transport.
15	87.02/b	732.2	383	Motor vehicles for the transport of goods or materials (including dumpers).

(Continued)

TABLE 1 (continued)

16	87.02/c/1	732.3	383	Motor vehicles for the transport of persons, goods or materials, and any vehicles exempted from Customs Import Duty to a party enjoying the privilege of exemption if sold by him to a party not enjoying such privilege: designed for transporting ten passengers or less.
17	87.02/c/2	732.3	383	Motor vehicles of the kind described in 87/02/c/1, but for transporting more than ten passengers.
18	87.02/c/3	732.3	383	Motor vehicles of the kind described in 87.02/c/1, but for the transport of goods or materials (including dumpers).
19	87.02/c/4	732.3	383	Motor vehicles of the kind described in 87.02/c/1, but second-hand.
20	87.03/a	732.4	383	Special purpose motor lorries and vans: fire-engines and fire escapes and road sweepers.
21	87.03/b	732.4	383	Special purpose motor lorries and vans (other than those included in heading 87.03/a) such as crane lorries, searchlight lorries, mobile workshops and mobile radiological units.
22	87.04 and 87.05	732.6 732.7 732.8(1)	383	Chassis fitted with engines and bodies (including cabs) for motor vehicles falling within heading Nos. 87.01, 87.02 or 87.03.

(Continued)

TABLE 1 (continued)

23	87.07	719.3(2)	383	Works trucks, mechanically propelled, of the types used in factories or warehouses for short distance transport or handling of goods (for example, fork-lift trucks and platform trucks), tractors of the type used on railway station platforms; parts of the foregoing trucks and tractors.
24	87.09	732.9(1)	383	Motor-cycles, auto-cycles and cycles fitted with an auxiliary motor, with or without side-cars; side-cars of all kinds.
25	87.10/a,b	733.1(1)	383	Cycles (including delivery tricycles), not motorized.
26) 27)	87.14/a,b	733.3	383	Motor vehicles trailers specially designed for the conveyance of passengers (including caravans).
28	88.01/b 88.02/b	734.9(1)	386	Balloons and airships (other than those imported for the Ministry of Defence); flying machines, gliders (other than those imported by the Ministry of Defence).
29	89.01/a 89.01/b/1 89.01/b/2	735.3	381	Ships, boats and floating structures, whether or not self-propelled (but excluding war ships of all kinds).
30	89.02	735.9(1)	381	Tugs.
31	89.03	735.9(2)	381	Lights-vessels, fire-floats, dredgers of all kinds; floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks.

(Continued)

TABLE 1 (continued)

32	89.04 - 89.05	735.8 and 735.9(3)	381	Ships, boats and other vessels for breaking up; floating structures other than vessels (for example, coffer-dams, landing stages, buoys and beacons).

* * * * *

Appendix IV

TABLE 2

IMPORTS OF TRANSPORT EQUIPMENT

(other than Oil Companies' Imports)

(ID 000)

*Import duties

	Customs Code		Industry Group	1957	1958	1959	1960	1961	1962
1	84.06/a/1	c.i.f.		3.0	1.7	1.1	1.2	0.3	2.8
		Mark-up		1.0	0.6	0.4	0.4	0.1	0.9
		*Imp.dut.		0.5	0.2	0.2	0.2	-	0.4
		Total	6	4.5	2.5	1.7	1.8	0.4	4.1
2	84.06/a/2	c.i.f.		77.8	50.2	23.0	35.4	87.2	64.5
		Mark-up		25.8	16.7	7.7	11.5	29.1	21.4
		Imp.dut.		11.6	7.5	3.5	5.3	13.1	9.7
		Total	6	115.2	74.4	34.2	52.2	129.4	95.6
3	84.06/a/3	c.i.f.		1.7	28.0	1.4	14.6	9.0	3.4
	84.06/b	Mark-up		0.6	9.4	0.5	4.9	3.0	1.1
		Imp.dut		0.1	1.4	0.1	0.7	0.5	0.2
		Total	6	2.4	38.8	2.0	20.2	12.5	4.7
4	84.06/a/4	c.i.f.		12.2	15.0	16.8	26.0	57.7	41.3
		Mark-up		4.0	5.0	5.6	8.7	19.2	13.8
		Imp.dut.		-	-	-	-	-	-
		Total	6	16.2	20.0	22.4	34.7	76.9	55.1

(Continued)

TABLE 2 (continued)

5	86.01 - 86.03	c.i.f.		76.8	38.5	5.4	2.1	22.3	-
		Mark-up		25.6	12.8	1.8	0.7	7.4	-
		Imp.dut.		-	-	-	-	-	-
		Total	6	102.4	51.3	7.2	2.8	29.7	-
6	86.04	c.i.f.		-	10.0	9.6	-	2.4	-
		Mark-up		-	3.3	3.2	-	0.8	-
		Imp.dut.		-	-	-	-	-	-
		Total	6	-	13.3	12.8	-	3.2	-
7	86.05	c.i.f.		-	50.0	-	-	-	-
		Mark-up		-	16.7	-	-	-	-
		Imp.dut.		-	-	-	-	-	-
		Total	6	-	66.7	-	-	-	-
8	86.06 - 86.07	c.i.f.		65.4	75.2	37.6	4.1	-	3.0
		Mark-up		21.8	25.0	12.5	1.4	-	1.0
		Imp.dut.		-	-	-	-	-	-
		Total	6	87.2	100.2	50.1	5.5	-	4.0
9	86.08	c.i.f.		20.1	-	-	16.1	-	-
		Mark-up		6.7	-	-	5.4	-	-
		Imp.dut.		-	-	-	-	-	-
		Total	6	26.8	-	-	21.5	-	-
10	86.10	c.i.f.		10.2	-	127.8	-	-	-
		Mark-up		3.4	-	42.6	-	-	-
		Imp.dut.		-	-	-	-	-	-
		Total	6	13.6	-	170.4	-	-	-

(Continued)

TABLE 2 (continued)

11	87.01/b	c.i.f.		41.6	370.1	186.1	223.2	38.0	52.6
		Mark-up		13.9	123.3	61.9	74.3	12.6	17.5
		Imp.dut.		6.2	55.5	28.0	33.4	5.7	8.0
		Total	4	61.7	548.9	276.0	330.9	56.3	78.1
12	87.02/a/1	c.i.f.		2981.9	2665.4	225.8	39.0	30.4	34.4
		Mark-up	See	992.9	887.6	75.2	13.0	10.1	11.5
		Imp.dut.	Table 3	984.0	879.6	135.5	23.4	18.3	20.6
		Total	below	4958.8	4432.6	436.5	75.4	58.8	66.5
13	87.02/a/2	c.i.f.		343.5	138.3	824.8	1759.5	1904.6	1008.8
		Mark-up	See	114.4	46.1	274.6	585.9	634.2	335.9
		Imp.dut.	Table 3	113.3	45.7	494.8	1055.8	1142.8	605.3
		Total	below	571.2	230.1	1594.2	3401.2	3681.6	1950.0
14	87.02/a/3	c.i.f.		-	-	949.8	662.5	907.9	1404.6
		Mark-up	See	-	-	316.3	220.6	302.3	467.7
		Imp.dut.	Table 3	-	-	379.9	265.0	363.2	561.9
		Total	below	-	-	1646.0	1148.1	1573.4	2434.2
15	87.02/b	c.i.f.		2354.3	2134.2	1250.5	2814.5	3923.9	3929.2
		Mark-up		783.9	710.8	416.4	937.3	1306.8	1308.4
		Imp.dut.	2, 3, 4,	400.2	362.8	312.8	703.8	981.0	982.3
		Total	6, 7.	3538.4	3207.8	1979.7	4455.6	6211.7	6219.9
16	87.02/c/1	c.i.f.		-	7.6	-	-	53.7	73.4
		Mark-up	See	-	2.5	-	-	17.9	24.4
		Imp.dut.	Table 3	-	2.5	-	-	32.2	44.0
		Total	below	-	12.6	-	-	103.8	141.8

(Continued)

TABLE 2 (continued)

17	87.02/c/2	c.i.f.		-	9.7	-	0.3	35.4	24.2
		Mark-up		-	3.2	-	0.1	11.8	8.1
		Imp.dut.		-	2.4	-	0.1	14.1	9.7
		Total	6	-	15.3	-	0.5	61.3	42.0
18	87.02/c/3	c.i.f.		73.1	38.4	-	508.7	28.8	94.5
		Mark-up		24.3	12.8	-	169.4	9.6	31.5
		Imp.dut.	2, 3, 4,	12.4	6.5	-	127.2	7.2	23.7
		Total	6, 7.	109.8	57.7	-	805.3	45.6	149.7
19	87.02/c/4	c.i.f.		-	-	129.0	-	779.0	505.9
		Mark-up	See	-	-	43.0	-	259.4	168.5
		Imp.dut.	Table 3	-	-	51.6	-	311.9	202.4
		Total	below	-	-	223.6	-	1350.3	876.8
20	87.03/a	c.i.f.		14.3	13.8	7.7	75.1	124.2	44.6
		Mark-up		4.7	4.6	2.6	25.0	42.3	14.8
		Imp.dut.		2.2	2.1	1.2	11.2	18.7	6.7
		Total	11	21.2	20.5	11.5	111.3	185.2	66.1
21	87.03/b	c.i.f.		104.3	197.5	143.8	222.6	168.7	90.3
		Mark-up		34.8	65.7	48.0	74.2	56.3	30.1
		Imp.dut.		15.6	29.5	21.6	33.4	25.3	13.5
		Total	6	154.7	292.7	213.4	330.2	250.3	133.9
22	87.04 and 87.05	c.i.f.		36.3	72.7	28.3	27.5	63.0	49.6
		Mark-up		12.1	24.2	9.5	9.2	21.0	16.5
		Imp.dut.		10.9	21.8	8.5	8.3	19.0	14.9
		Total	6	59.3	118.7	46.3	45.0	103.0	81.0

(Continued)

TABLE 2 (continued)

23	87.07	c.i.f.		27.9	74.6	96.0	80.0	36.3	66.9
		Mark-up		9.3	24.8	32.0	26.7	12.1	22.3
		Imp.dut.		4.2	11.2	14.4	12.0	5.5	10.0
		Total	3, 6	41.4	110.6	142.4	118.7	53.9	99.2
24	87.09	c.i.f.		43.8	44.7	46.8	78.6	86.8	69.0
		Mark-up	See	14.6	14.9	15.6	26.2	28.9	23.0
		Imp.dut.	Table 3	11.0	11.2	11.7	19.7	21.7	17.3
		Total	below	69.4	70.8	74.1	124.5	137.4	109.3
25	87.10/a	c.i.f.		159.1	210.0	254.1	364.6	334.3	293.6
	87.10/b	Mark-up	See	53.0	70.0	84.6	121.4	111.4	97.8
		Imp.dut.	Table 3	17 5	23.1	28.0	40.1	36.8	32.3
		Total	below	229.6	303.1	366.7	526.1	482.5	423.7
26	87.14/a	c.i.f.		5.4	16.0	80.2	3.9	-	1.0
		Mark-up		1.8	5.3	26.7	1.3	-	0.3
		Imp.dut.		1.4	4.0	32.1	1.5	-	0.4
		Total	6	8.6	25.3	139.0	6.7	-	1.7
27	87.14/b	c.i.f.		88.5	83.4	59.0	71.0	88.7	226.3
		Mark-up		29.5	27.8	19.6	23.7	29.6	75.4
		Imp.dut.		13.2	12.5	14.6	17.8	22.2	56.6
		Total	6	131.2	123.7	93.2	112.5	140.5	358.3
28	88.01/b	c.i.f.		-	69.6	19.1	60.0	0.7	-
	88.02/b	Mark-up		-	23.2	6.4	20.0	0.2	-
		Imp.dut.		-	7.0	2.0	6.0	0.1	-
		Total	6	-	99.8	27.5	86.0	1.0	-

(Continued)

TABLE 2 (continued)

29	89.01/a	c.i.f.		34.1	19.1	66.7	24.5	491.3	230.5
	89.01/b/1	Mark-up		11.4	6.4	22.2	8.2	163.6	76.8
	89.01/b/2	Imp.dut.		5.1	3.0	10.0	3.7	73.7	34.6
		Total	6	50.6	28.5	98.9	36.4	728.6	341.9
30	89.02	c.i.f.		-	19.3	6.3	214.2	376.4	-
		Mark-up		-	6.4	2.1	71.3	125.3	-
		Imp.dut.		-	1.9	0.6	21.4	37.6	-
		Total	6	-	27.6	9.0	306.9	539.3	-
31	89.03	c.i.f.		3.7	-	93.4	205.3	20.0	-
		Mark-up		1.2	-	31.1	68.4	6.7	-
		Imp.dut.		0.2	-	4.7	10.3	1.0	-
		Total	6	5.1	-	129.2	284.0	27.7	-
32	89.04 -	c.i.f.		8.2	1.7	97.4	34.6	80.5	-
	89.05	Mark-up		2.7	0.6	32.4	11.5	26.8	-
		Imp.dut.		0.4	0.1	4.8	1.7	4.0	-
		Total	6	11.3	2.4	134.6	47.8	111.3	-
	Total c.i.f. value:			6587.2	6454.7	4787.5	7569.1	9751.5	8314.4
	Total Mark-up:			2193.4	2149.7	1594.5	2520.7	3248.5	2768.7
	Total Import duties:			1610.0	1491.5	1560.6	2402.0	3155.6	2654.5
	GRAND TOTAL :-			10390.6	10095.9	7942.6	12491.8	16155.6	13737.6

(Notes and Sources overleaf)

TABLE 2 (continued)

Note:

* The c.i.f. value of each item is marked up by 33.3%.

Sources: 1. The c.i.f. values of imported transport equipment are derived from: Foreign Trade Statistical Abstract (F.T.S.), 1958, 1959, 1960, 1961 and 1962, Ministry of Planning, Central Bureau of Statistics, Government Press, 1959, 1960, 1961, 1962, and 1963, respectively.

2. Import duties are calculated at the rates prescribed and in accordance with the provisions of the Import Schedule annexed to the Law of Customs Tarriff No. 77 of 1955 as amended by the First Amendment Law No. 4 of 1956; and other amendments thereafter.

Appendix IV

TABLE 3

IMPORTS OF TRANSPORT EQUIPMENT (other than Oil Companies)

AND THEIR DISTRIBUTION BY INDUSTRY GROUP

(ID 000)

Items 84.06/a/1, 2, 3, 4

	1957	1958	1959	1960	1961	1962
Transportation, Storage and Communications	138.3	135.7	60.3	108.9	219.2	159.5

Items 86.01 - 86.03, 86.04, 86.05, 86.06 - 86.07, 86.08, 86.10

	1957	1958	1959	1960	1961	1962
Transportation, Storage and Communications	230.0	231.5	240.5	29.8	32.9	4.0

Item 87.01/b

	1957	1958	1959	1960	1961	1962
Construction	61.7	548.9	276.0	330.9	56.3	78.1

(Continued)

Appendix IV

TABLE 3 (continued)

Item 87.02/b

75% of this item is taken to the sector "Transportation, Storage and Communications". The other 25% is distributed between "Mining and Quarrying (other than Oil Companies)", "Manufacturing", "Construction", "Wholesale and Retail Trade" according to their annual contribution to G.D.P.

		1957	1958	1959	1960	1961	1962
1	Mining and Quarrying (other than Oil Companies)	16.2	16.1	10.0	17.0	23.5	24.4
2	Manufacturing	331.2	306.2	216.6	540.0	753.0	806.0
3	Construction	258.5	250.0	142.8	230.7	305.9	244.2
4	Wholesale and Retail Trade	278.7	229.7	125.6	326.3	470.6	480.4
	Total 1 - 4 = 25%	884.6	802.0	495.0	1114.0	1553.0	1555.0
5	Transport, Storage and Communications = 75%	2653.8	2405.8	1484.7	3341.6	4658.7	4664.9
	Total Item 87.02/b	3538.4	3207.8	1979.7	4455.6	6211.7	6219.9

(Continued)

TABLE 3 (Continued)

Item 87.02/c/2

	1957	1958	1959	1960	1961	1962
Transportation, Storage and Communications	-	15.3	-	0.5	61.3	42.0

Item 87.02/c/3

This item is distributed among the following sectors in the same way as Item 87.02/b was distributed.

		1957	1958	1959	1960	1961	1962
1	Mining and Quarrying (other than Oil Companies)	0.5	0.3	-	3.0	0.2	0.6
2	Manufacturing	10.3	5.5	-	97.6	5.5	19.4
3	Construction	8.0	4.5	-	41.7	2.2	6.0
4	Wholesale and Retail Trade	8.6	4.1	--	59.0	3.5	11.4
	Total 1 - 4 = 25%	27.4	14.4	-	201.3	11.4	37.4
5	Transportation, Storage and Communications = 75%	82.4	43.3	-	604.0	34.2	112.3
	Total Item 87.02/c/3	109.8	57.7	-	805.3	45.6	149.7

(Continued)

Appendix IV

TABLE 3 (continued)

Item 87.03/a

	1957	1958	1959	1960	1961	1962
Services	21.2	20.5	11.5	111.3	185.2	66.1

Item 87.03/b

	1957	1958	1959	1960	1961	1962
Transportations, Storage and Communications	154.7	292.7	213.4	330.2	250.3	133.9

Items 87.04 and 87.05

	1957	1958	1959	1960	1961	1962
Transportations, Storage and Communications	59.3	118.7	46.3	45.0	103.0	81.0

(Continued)

Appendix IV

TABLE 3 (continued)

Item 87.07

This item is distributed between the sectors "Manufacturing" and "Transportation, Storage and Communications" in the ratio of 25% and 75% respectively.

		1957	1958	1959	1960	1961	1962
1	Manufacturing (25%)	10.4	27.6	35.4	29.7	13.9	24.2
2	Transportation, Storage and Communications (75%)	31.0	83.0	107.0	89.0	40.0	75.0

Items 87.14/a and 87.14/b

	1957	1958	1959	1960	1961	1962
Transportation, Storage and Communications	139.8	149.0	232.2	119.2	140.5	360.0

Items 88.01/b and 88.02/b

	1957	1958	1959	1960	1961	1962
Transportation, Storage and Communications	-	99.8	27.5	86.0	1.0	-

(Continued)

TABLE 3 (continued)

Items 89.01/a and b/1, 2, 89.02, 89.03, 89.04 - 89.05

	1957	1958	1959	1960	1961	1962
Transportation, Storage and Communications	67.0	58.5	371.7	675.1	1406.9	341.9

Items 87.02/a/1, 2, 3, and c/1, 4

25% of the total of these items is considered as "Taxis" and hence included in the industry designated as "Transportation, Storage and Communications". The remainder is included in the "Residual" shown in Table 4 below.

		1957	1958	1959	1960	1961	1962
1	Total items (87.02/a/1, 2, 3) and (87.02/c/1, 4)	5530.0	4675.3	3900.3	4624.7	6767.9	5469.3
2	25% of (1) = Taxis	1383.0	1169.0	975.1	1156.2	1692.0	1367.3
3	(1) - (2) = Residual	4147.0	3506.3	2925.2	3468.5	5075.9	4102.0

(Continued)

TABLE 3 (continued)

Items 87.09, 87.10/a, 87.10/b

35% of the total of these items is distributed between the following sectors, according to their contribution to G.D.P. The rest of the item is included in the "Residual" shown in Table 4 below.

		1957	1958	1959	1960	1961	1962
1	Mining and Quarrying (other than Oil Companies)	1.2	1.5	1.8	2.0	2.0	1.6
2	Manufacturing	24.3	28.4	38.8	62.5	59.5	52.8
3	Construction	19.0	23.2	25.6	26.7	24.2	16.0
4	Transportation, Storage, and Communications	20.7	23.6	29.0	45.5	46.5	37.8
5	Wholesale and Retail Trade	20.4	21.3	22.5	37.7	37.2	31.4
6	Services	19.0	23.0	28.7	44.2	41.5	37.3
	Total 1 - 6 = 35%	104.6	121.0	146.4	218.6	210.9	176.9
7	Residual = 65%	194.4	252.9	294.4	432.0	409.0	356.1
	Total 1 - 7	299.0	373.9	440.8	650.6	619.9	533.0

Appendix IV

TABLE 4

SUMMARY OF THE DISTRIBUTION OF IMPORTED TRANSPORT EQUIPMENT

BY INDUSTRY GROUP

(ID 000)

		1957	1958	1959	1960	1961	1962
A.	Mining and Quarrying (other than Oil Companies):						
a	(87.02/b)	16.2	16.1	10.0	17.0	23.5	24.4
b	(87.02/c/3)	0.5	0.3	-	3.0	0.2	0.6
c	(87.09 + 87.10/a and b)	1.2	1.5	1.8	2.0	2.0	1.6
	Total A	17.9	17.9	11.8	22.0	25.7	26.6
B.	Manufacturing:						
a	(87.02/b)	331.2	306.2	216.6	540.0	753.0	806.0
b	(87.02/c/3)	10.3	5.5	-	97.6	5.5	19.4
c	(87.07)	10.4	27.6	35.4	29.7	13.9	24.2
d	(87.09 + 87.10/a and b)	24.3	28.4	38.8	62.5	59.5	52.8
	Total B	376.2	367.7	290.8	729.8	831.9	902.4

(Continued)

TABLE 4 (continued)

C.	Construction:						
a	87.01/b	61.7	548.9	276.0	330.9	56.3	78.1
b	(87.02/b)	258.5	250.0	142.8	230.7	305.9	244.2
c	(87.02/c/3)	8.0	4.5	-	41.7	2.2	6.0
d	(87.09 + 87.10/a and b)	19.0	23.2	25.6	26.7	24.2	16.0
	Total C	347.2	826.6	444.4	630.0	388.6	344.3
D.	Transportation, Storage and Communications:						
a	84.06/a/1, 2, 3, 4	138.3	135.7	60.3	108.9	219.2	159.5
b	86.01 - 86.08, 86.10	230.0	231.5	240.5	29.8	32.9	4.0
c	(87.02/b)	2653.8	2405.8	1484.7	3341.6	4658.7	4664.9
d	87.02/c/2	-	15.3	-	0.5	61.3	42.0
e	(87.02/c/3)	82.4	43.3	-	604.0	34.2	112.3
f	87.03/b	154.7	292.7	213.4	330.2	250.3	133.9
g	87.04 + 87.05	59.3	118.7	46.3	45.0	103.0	81.0
h	(87.07)	31.0	83.0	107.0	89.0	40.0	75.0
i	(87.09 + 87.10/a and b)	20.7	23.6	29.0	45.5	46.5	37.8
j	87.14/a and 87.14/b	139.8	149.0	232.2	119.2	140.5	360.0
k	88.01/b + 88.02/b	-	99.8	27.5	86.0	1.0	-

(Continued)

TABLE 4 (continued)

D.	Transportation, Storage and Communications (continued):						
l	89.01/a and b/1 and 2 + 89.02 + 89.03 + 89.04 + 89.05	67.0	58.5	371.7	675.1	1406.9	341.9
m	Taxis = 25% of total items:						
	87.02/a/1, 2, 3, and 87.02/c/1 and 4.	1383.0	1169.0	975.1	1156.2	1692.0	1367.3
	Total D	4960.0	4825.9	3787.7	6631.0	8686.5	7379.6
E.	Wholesale and Retail Trade:						
a	(87.02/b)	278.7	229.7	125.6	326.3	470.6	480.4
b	(87.02/c/3)	8.6	4.1	-	59.0	3.5	11.4
c	(87.09 + 87.10/a and b)	20.4	21.3	22.5	37.7	37.2	31.4
	Total E	307.7	255.1	148.1	423.0	511.3	523.2
F.	Services:						
a	87.03/a	21.2	20.5	11.5	111.3	185.2	66.1
b	(87.09 + 87.10/a and b)	19.0	23.0	28.7	44.2	41.5	37.3
	Total F	40.2	43.5	40.2	155.5	226.7	103.4

(continued)

Appendix IV

TABLE 4 (continued)

G.	The Residual:						
a	(87.09 + 87.10/a and b)	194.4	252.9	294.4	432.0	409.0	356.1
b	75% of total items: 87.02/a/1, 2, 3, and 87.02/c/1 and 4.	4147.0	3506.3	2925.2	3468.5	5075.9	4102.0
	Total G	4341.4	3759.2	3219.6	3900.5	5484.9	4458.1
	TOTAL A - G :-	10390.6	10095.9	7942.6	12491.8	16155.6	13737.6

Remarks:

1) Bracketed Customs Code means that the item is distributed between several sectors.

2) "The Residual" includes (in addition to transport equipment regarded as Consumers' Durables) purchases of some public and private bodies which ought to be deducted and allocated to their relevant sectors. This is done in Chapter III, Table 18, where the control of GFCF in "Transport Equipment" is calculated.

Appendix IV

TABLE 5

c.i.f. VALUE OF OIL COMPANIES' IMPORTS OF TRANSPORT EQUIPMENT

(ID 000)

	Customs Code	1957	1958	1959	1960	1961	1962
1	84.06/a/1	2.1	2.4	-	-	-	-
2	84.06/a/2	194.8	5.8	7.6	36.1	3.4	2.0
3	84.06/a/3	19.3	4.7	-	-	-	-
4	84.06/a/4	0.8	-	3.6	-	-	1.2
5	86.06 - 86.07	1.6	-	-	-	-	-
6	86.08	5.0	-	-	-	-	-
7	87.01/b	240.5	43.3	273.6	27.0	40.8	-
8	87.02/a/1	123.3	85.2	57.0	1.2	1.2	-
9	87.02/a/2	12.0	12.5	31.5	18.7	6.5	0.5
10	87.02/a/3	-	-	41.2	64.6	80.2	5.6
11	87.02/b	498.7	382.0	373.0	265.0	90.8	-

(Continued)

Appendix IV

TABLE 5 (continued)

12	87.02/c/2	10.1	1.8	-	-	50.7	9.6
13	87.02/c/3	-	-	-	-	102.3	16.2
14	87.02/c/4	-	-	-	-	7.7	0.6
15	87.03/a	26.9	-	6.0	15.7	12.8	11.4
16	87.03/b	197.1	212.5	144.2	59.1	98.0	-
17	87.04	22.0	-	0.4	-	-	-
18	87.07	0.7	1.8	22.0	10.0	2.8	-
19	87.14/a	13.7	15.0	71.1	7.4	25.7	-
20	87.14/b	49.8	79.1	143.8	66.4	59.3	23.0
21	88.02/b	-	-	-	65.2	2.0	-
22	89.01/a and b/1 and b/2	22.0	0.4	-	12.0	-	-
23	89.04 - 89.05	-	-	3.0	-	-	-
	TOTAL :-	1440.4	846.5	1178.0	648.5	584.1	70.1

Sources: As Table 2 above.

* * * * *

APPENDIX V

GOVERNMENT ACCOUNTS

This appendix contains twelve tables pertaining to the classification by industry group of the capital expenditures of some Government accounts.

Tables 1 to 6 show the allocation of the figures derived from the Ordinary Budget to five industries. Tables 7 and 8 show the allocation of the Development Board's capital expenditure (Development Budget) into the relevant industries. Tables 9 and 10 contain the capital expenditure of the Local Administrations and its allocation; while Tables 11 and 12 contain the Municipalities capital expenditure and its allocation.

In all these tables the expenditure figures are arranged in a manner which suits the purpose of classifying capital expenditure by type of asset.

Appendix V

TABLE 1

ORDINARY BUDGET - CAPITAL EXPENDITURE, 1957 - 1962*

(Summary Table)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	31.8	2.6	8.7	9.4	8.3	5.7
2	Other Construction and Works	536.6	524.6	851.5	1143.5	598.5	697.6
3	Machinery and other Equipment:						
	(i) Machinery and Equipment	1024.1	603.8	530.4	465.6	362.7	274.0
	(ii) Furniture	239.8	289.1	319.1	355.2	269.8	201.3
4	Transport Equipment	231.7	205.8	297.6	260.4	305.1	204.5
	Total Capital Expenditure	2064.0	1625.9	2007.3	2234.1	1544.4	1383.1
5	Expenditure on Repair Works:						
	(i) Buildings	137.9	113.7	163.5	144.1	164.2	251.2
	(ii) Roads and Bridges	362.5	352.4	464.3	470.0	504.8	483.2
	Total Expenditure on Repair Work	500.4	466.1	627.8	614.1	669.0	734.4

* Note that the figures in this Table are the aggregate of the figures shown in Tables 2-6 below.

Sources: Ministry of Finance, Annual Reports of the Directorate General of Accounts on the Accounts of the Republic of Iraq, (Reports for the fiscal years 1957/1958 - 1962/1963), Government Press, Baghdad, 1960, 1961, 1962, 1963, 1964, 1965 (in Arabic).

Appendix V

TABLE 2

THE ORDINARY BUDGET'S CAPITAL EXPENDITURE IN "AGRICULTURE"

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	-	-	-	-	-	-
2	Other Construction and Works	109.2	87.3	139.0	275.0	300.0	269.4
3	Machinery and other Equipment:						
	(i) Machinery and Equipment	-	-	-	-	-	-
	(ii) Furniture	-	-	-	-	-	-
4	Transport Equipment	-	-	-	-	-	-
	Total	109.2	87.3	139.0	275.0	300.0	269.4

Sources: Ibid.

Appendix V

TABLE 3

THE ORDINARY BUDGET'S CAPITAL EXPENDITURE IN

"MANUFACTURING"

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	-	-	-	-	-	-
2	Other Construction and Works	-	-	-	-	-	-
3	Machinery and other Equipment:						
	(i) Machinery and Equipment	347.6	26.6	26.2	38.6	44.5	67.7
	(ii) Furniture	0.7	0.5	0.5	0.7	0.5	0.5
4	Transport Equipment	-	-	-	-	-	-
	Total	348.3	27.1	26.7	39.3	45.0	68.2

Sources: Ibid.

Appendix V

TABLE 4

THE ORDINARY BUDGET'S CAPITAL EXPENDITURE IN

"TRANSPORTATION, STORAGE AND COMMUNICATIONS"

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	-	-	-	-	-	-
2	OtherConstruction and Works	312.0	367.9	638.5	795.2	259.8	366.8
3	Machinery and other Equipment						
	(i) Machinery and Equipment (mainly Communication, telephonic and telegraphic equipment)	410.5	421.3	289.9	17.4	16.4	19.3
	(ii) Furniture	3.0	5.6	3.8	6.8	3.8	6.0
	Total 3:	413.5	426.9	293.7	24.2	20.2	25.3
4	Transport Equipment	-	-	-	-	-	-
	Total	725.5	794.8	932.2	819.4	280.0	392.1
	Expenditure on Repair Works of:						
	(i) Buildings	-	-	-	-	-	-
	(ii) Roads, Bridges, and Culverts	362.5	352.4	464.3	470.0	504.8	483.2

Sources: Ibid.

Appendix V

TABLE 5

THE ORDINARY BUDGET'S CAPITAL EXPENDITURE IN

"PUBLIC ADMINISTRATION"

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	5.4	2.6	8.7	9.4	8.3	4.7
2	Other Construction and Works	115.4	69.4	74.0	73.3	38.7	61.4
3	Machinery and other Equipment						
	(i) Machinery and Equipment	70.8	26.4	42.3	23.2	25.2	17.1
	(ii) Furniture	84.8	59.0	109.1	114.1	73.7	64.5
	Total 3:	155.6	85.4	151.4	137.3	98.9	81.6
4	Transport Equipment	168.8	147.0	255.0	223.8	262.8	168.3
	Total	445.2	304.4	489.1	443.8	408.7	316.0
	Expenditure on Repair Works of: Buildings	122.2	95.0	143.5	122.6	137.2	209.2

Sources: Ibid.

Appendix V

TABLE 6

THE ORDINARY BUDGET'S CAPITAL EXPENDITURE IN "SERVICES"

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings						
(a) Education	-	-	-	-	-	-
(b) Health	26.4	-	-	-	-	-
(c) Other Services	-	-	-	-	-	1.0
Total 1:	26.4	-	-	-	-	1.0
2 Other Construction and Works						
(a) Education	-	-	-	-	-	-
(b) Health	-	-	-	-	-	-
(c) Other Services	-	-	-	-	-	-
Total 2:	-	-	-	-	-	-
3 Machinery and other Equipment						
(i) Machinery and Equipment						
(a) Education	136.0	92.7	149.0	281.2	173.1	113.5
(b) Health	2.1	0.5	1.6	5.2	8.0	4.4
(c) Other Services	57.1	36.3	21.4	100.0	95.5	52.0
Sub-total 3(i)	195.2	129.5	172.0	386.4	276.6	169.9

(Continued)

TABLE 6 (continued)

3 (ii) Furniture						
(a) Education	93.0	159.7	148.2	133.4	81.8	47.2
(b) Health	58.3	64.3	57.5	97.6	105.4	78.0
(c) Other Services	-	-	-	2.6	4.6	5.1
Sub-total 3(ii)	151.3	224.0	205.7	233.6	191.8	130.3
Total 3:	346.5	353.5	377.7	620.0	468.4	300.2
4 Transport Equipment						
(a) Education	21.0	15.8	16.6	12.1	14.3	16.0
(b) Health	39.0	40.0	15.0	20.5	25.0	13.2
(c) Other Services	2.9	3.0	11.0	4.0	3.0	7.0
Total 4:	62.9	58.8	42.6	36.6	42.3	36.2
Total 1 - 4 :	435.8	412.3	420.3	656.6	510.7	337.4
Expenditure on Repair Works of Buildings:						
(a) Education	-	-	-	-	-	-
(b) Health	15.7	18.7	20.0	21.5	27.0	42.0
(c) Other Services	-	-	-	-	-	-

Sources: Ibid.

Appendix V

TABLE 7

DEVELOPMENT AND PLANNING BOARD'S CAPITAL EXPENDITURE, 1957-1962

(Summary Table)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	5238.0	6141.9	5022.7	6154.0	8768.3	8113.8
2	Other Construction and Works	31228.8	27989.2	17833.9	21641.3	24803.0	21352.0
3	Machinery and other Equipment						
	(i) Machinery and Equipment	1056.4	3041.0	2796.3	1401.3	2248.9	3912.5
	(ii) Furniture and Fixtures	45.2	77.3	45.7	112.1	95.6	54.8
	Total 3:	1101.6	3118.3	2842.0	1513.4	2344.5	3967.3
4	Transport Equipment	76.0	72.5	70.8	114.0	154.3	62.0
	Total 1 - 4 :	37,644.4	37321.9	25769.4	29422.7	36070.1	33495.1

Sources: Ministry of Finance, Annual Reports of the Directorate General of Accounts on the Development and Planning Board's Expenditure, (Reports for the fiscal years 1957/1958 - 1962/1963), Government Press, Baghdad, 1959, 1960, 1961, 1962, 1963 and 1964 (in Arabic).

Appendix V

TABLE 8

SECTORAL DISTRIBUTION OF THE

DEVELOPMENT AND PLANNING BOARD'S CAPITAL EXPENDITURE, 1957-1962

(ID 000)

	1957	1958	1959	1960	1961	1962
I Non-Residential Buildings:						
1 Agriculture	-	-	13.2	202.4	697.6	380.0
2 Manufacturing	508.7	1535.7	715.1	336.3	1039.8	1963.5
3 Electricity and Water	95.4	259.0	306.5	471.6	250.6	390.4
4 Transportation, Storage and Communications	-	-	8.7	76.9	49.4	14.4
5 Public Administration	2050.3	1626.6	1420.3	1749.6	2452.0	1868.1
6 Services	2583.6	2720.6	2558.9	3317.2	4278.9	3497.4
Total I:	5238.0	6141.9	5022.7	6154.0	8768.3	8113.8
II Other Construction and Works:						
1 Agriculture	14063.6	12967.8	10487.8	9971.8	9885.8	5465.4
2 Manufacturing	268.8	807.7	363.2	71.5	1518.2	4018.8
3 Electricity and Water	3714.3	5068.7	765.2	3727.6	1589.7	1473.0
4 Transportation, Storage and Communications	13182.1	9145.0	6167.0	7832.8	10704.5	7962.0
5 Public Administration	-	-	-	-	33.5	34.0
6 Services	-	-	50.7	37.6	1071.3	2398.8
Total II:	31228.8	27989.2	17833.9	21641.3	24803.0	21352.0

(Continued)

TABLE 8 (continued)

III	Machinery and Other Equipment:						
	(i) Machinery and Equipment:						
	1 Agriculture	1.0	-	263.1	32.4	61.7	-
	2 Manufacturing	514.8	1584.0	671.2	-	881.0	2527.0
	3 Electricity and Water	300.3	1206.9	1661.6	1216.3	896.0	1385.5
	4 Transportation, Storage and Communications	240.0	250.0	171.5	93.0	70.5	-
	5 Public Administration	0.3	0.1	-	-	-	-
	6 Services	-	-	28.9	59.6	339.7	-
	Sub-total (III-i):	1056.4	3041.0	2796.3	1401.3	2248.9	3912.5
	(ii) Furniture and Fixtures:						
	1 Agriculture	-	-	-	-	-	-
	2 Manufacturing	5.2	16.0	6.8	-	9.0	25.0
	3 Electricity and Water	16.6	53.1	37.0	44.4	74.9	29.8
	4 Transportation, Storage and Communications	-	-	-	-	-	-
	5 Public Administration	23.4	8.2	1.1	-	-	-
	6 Services	-	-	0.8	67.7	11.7	-
	Sub-total (III-ii):	45.2	77.3	45.7	112.1	95.6	54.8
	Total III:	1101.6	3118.3	2842.0	1513.4	2344.5	3967.3

(Continued)

TABLE 8 (continued)

IV Transport Equipment:						
1 Agriculture	-	-	-	25.0	3.3	-
2 Manufacturing	-	-	-	-	22.0	32.0
3 Electricity and Water	20.0	53.0	68.0	89.0	69.0	30.0
4 Transportation, Storage and Communications	-	-	-	-	-	-
5 Public Administration	56.0	19.5	2.8	-	-	-
6 Services	-	-	-	-	60.0	-
Total IV:	76.0	72.5	70.8	114.0	154.3	62.0
TOTAL I - IV :	37644.4	37321.9	25769.4	29422.7	36070.1	33495.1

Sources: Ibid.

Appendix V

TABLE 9

LOCAL ADMINISTRATION'S CAPITAL EXPENDITURE, 1957 - 1962

(Summary Table)

(ID 000)

		1957	1958	1959	1960	1961	1962
1	Non-Residential Buildings	1325.4	1507.6	1868.1	1539.3	1778.8	3132.8
2	Other Construction and Works	282.7	191.8	627.9	434.6	264.0	142.4
3	Machinery and other Equipment:						
	(i) Machinery and Equipment	58.7	57.8	134.4	123.3	75.7	93.4
	(ii) Furniture and Fixtures	113.1	106.5	279.3	428.1	334.6	332.2
	Total 3:	171.8	164.3	413.7	551.4	410.3	425.6
4	Transport Equipment	61.2	25.6	99.7	138.7	80.7	54.7
	Total Capital Expenditure :	1841.1	1889.3	3009.4	2664.0	2533.8	3755.5
	Expenditure on Repair and Maintenance of:						
	(a) Buildings	100.6	120.0	303.8	353.9	428.8	554.3
	(b) Roads and Bridges	24.2	29.7	59.8	26.4	20.6	21.5
	Total Expenditure on Repair Work:	124.8	149.7	363.6	380.3	449.4	575.8

Sources: Unpublished actual accounts supplied to writer by the Directorate of Local Administration of the Ministry of Interior in Baghdad.

Appendix V

TABLE 10

SECTORAL DISTRIBUTION OF THE

LOCAL ADMINISTRATIONS'S CAPITAL EXPENDITURE, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
I Non-Residential Buildings:						
1 Public Administrations	393.4	407.3	584.9	787.2	988.7	2591.8
2 Services	932.0	1100.3	1283.2	752.1	790.1	541.0
Total I:	1325.4	1507.6	1868.1	1539.3	1778.8	3132.8
II Other Construction and Works:						
1 Transportation, Storage and Communications	241.6	174.9	579.4	362.5	178.5	62.4
2 Public Administrations	41.1	16.9	48.5	72.1	85.5	80.0
Total II:	282.7	191.8	627.9	434.6	264.0	142.4
III Machinery and Other Equipment:						
(i) Machinery and Equipment:						
1 Public Administration	58.7	57.8	134.4	123.3	75.7	93.4
(ii) Furniture and Fixtures:						
1 Public Administrations	14.5	8.8	44.1	48.4	48.0	73.6
2 Services	98.6	97.7	235.2	379.7	286.6	258.6
Sub-total (III-ii)	113.1	106.5	279.3	428.1	334.6	332.2
Total III:	171.8	164.3	413.7	551.4	410.3	425.6

(Continued)

Appendix V

TABLE 10 (continued)

IV	Transport Equipment						
	1 Public Administration	3.4	1.0	-	-	-	6.0
	2 Services	57.8	24.6	99.7	138.7	80.7	48.7
	Total IV:	61.2	25.6	99.7	138.7	80.7	54.7
V	Total I - IV :	1841.1	1889.3	3009.4	2664.0	2533.8	3755.5
VI	Expenditure on Repairs and Maintenance of:						
	(a) Buildings:						
	1 Public Administration	28.8	32.0	31.8	40.8	43.3	96.9
	2 Services	71.8	88.0	272.0	313.1	385.5	457.4
	Sub-total (VI-a)	100.6	120.0	303.8	353.9	428.8	554.3
	(b) Roads and Bridges: Transportation, Storage and Communications	24.2	29.7	59.8	26.4	20.6	21.5
	Total VI :	124.8	149.7	363.6	380.3	449.4	575.8

Sources: Ibid.

Appendix V

TABLE 11

MUNICIPALITIES' CAPITAL EXPENDITURE, 1957 - 1962

(Summary Table)

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings	220.3	217.8	598.5	260.6	194.6	141.5
2 Other Construction and Works:						
(i) Roads and Bridges	1096.1	923.1	3071.9	2243.5	1765.7	1275.2
(ii) Parks, Swimming Pools and the like	306.5	238.0	555.6	943.9	603.1	872.0
(iii) Extension of Electricity and Water projects	-	-	-	-	279.0	210.0
Total 2:	1402.6	1161.1	3627.5	3187.4	2647.8	2357.2
3 Machinery and other Equipment:						
(i) Machinery and Equipment:						
a Construction Machinery	31.8	30.9	234.3	444.0	256.5	284.9
b Agricultural Machinery	93.0	120.7	81.0	73.3	43.8	39.8
c Electricity and Water Supply meters	-	-	-	-	20.0	20.0
d Other	21.4	29.8	34.5	17.7	18.5	13.3
Sub-total (3-i)	146.2	181.4	349.8	535.0	338.8	358.0
(ii) Furniture and Fixtures	14.0	13.8	19.3	14.7	17.6	19.8
Total 3:	160.2	195.2	369.1	549.7	356.4	377.8

(Continued)

Appendix V

TABLE 11 (continued)

4 Transport Equipment	-	-	-	-	-	-
Total Capital Expenditure :	1783.1	1574.1	4595.1	3997.7	3198.8	2876.5
Expenditure on Repairs and Maintenance of:						
(i) Buildings	36.5	23.0	25.5	12.2	15.8	21.1
(ii) Roads and Bridges	293.9	286.0	383.5	170.3	143.7	143.4
(iii) Electricity Transmission Lines	-	-	-	-	7.0	7.0
(iv) Water Supply pipes	-	-	-	-	9.0	8.0
Total Expenditure on Repair Work:	330.4	309.0	409.0	182.5	175.5	179.5

Sources: Municipalities Accounts (unpublished) supplied to the writer by the Ministry Municipal and Rural Affairs and Amanet Al-Asima (Baghdad City Municipality).

Appendix V

TABLE 12

SECTORAL DISTRIBUTION OF THE

MUNICIPALITIES' CAPITAL EXPENDITURE, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1 Non-Residential Buildings (Services Sector)	220.3	217.8	598.5	260.6	194.6	141.5
2 Other Construction and Works:						
a Electricity and Water	-	-	-	-	279.0	210.0
b Transportation, Storage and Communications	1096.1	923.1	3071.9	2243.5	1765.7	1275.2
c Services	306.5	238.0	555.6	943.9	603.1	872.0
Total 2:	1402.6	1161.1	3627.5	3187.4	2647.8	2357.2
3 Machinery and other Equipment:						
(i) Machinery and Equipment:						
a Electricity and Water	-	-	-	-	20.0	20.0
b Services	146.2	181.4	349.8	535.0	318.8	338.0
Sub-total (3-i):	146.2	181.4	349.8	535.0	338.8	358.0
(ii) Furniture and Fixtures:						
a Electricity and Water	-	-	-	-	2.2	2.2
b Services	14.0	13.8	19.3	14.7	15.4	17.6
Sub-total (3-ii):	14.0	13.8	19.3	14.7	17.6	19.8
Total 3:	160.2	195.2	369.1	549.7	356.4	377.8

(Continued)

Appendix V

TABLE 12 (continued)

4 Transport Equipment	-	-	-	-	-	-
Total	1783.1	1574.1	4595.1	3997.7	3198.8	2876.5
Expenditure on Repairs and Maintenance						
a Electricity and Water	-	-	-	-	16.0	15.0
b Transportation, Storage and Communications	293.9	286.0	383.5	170.3	143.7	143.4
c Services	36.5	23.0	25.5	12.2	15.8	21.1
Total Expenditure on Repair Work:	330.4	309.0	409.0	182.5	175.5	179.5

Sources: Ibid.

* * * * *

APPENDIX VI

INDEX NUMBERS

This appendix contains five tables showing the cross-valuation of imported capital items, in addition to the cross-valuation of cement used in domestic construction. The importance of these tables lies in the fact that they provide the statistics for the construction of various types of index numbers.

Table 1 shows the cross-valuation of cement used in domestic construction. Table 2 contains the cross-valuation of imported machinery and equipment. Table 3 shows the cross-valuation of imported furniture and fix fixtures. Tables 4 and 5 show the cross-valuation of imported transport equipment; the second one shows the cross c.i.f. value matrix, while the first one (i.e. Table 4) shows the cross-valuation after adjusting the c.i.f. value for changes in import duties on imported transport equipment.

Appendix VI

TABLE 1

CROSS VALUE MATRIX OF CEMENT USED IN DOMESTIC CONSTRUCTION

(ID 000)

Year (i)	$\sum P_{57}Q_i$	$\sum P_{58}Q_i$	$\sum P_{59}Q_i$	$\sum P_{60}Q_i$	$\sum P_{61}Q_i$	$\sum P_{62}Q_i$
1957	4020.3	3406.5	3727.9	4003.2	3892.5	4060.7
1958	4173.4	3536.3	3869.9	4155.7	4040.8	4215.4
1959	3513.7	2977.3	3258.2	3498.8	3402.0	3549.1
1960	5001.5	4238.0	4637.7	4980.3	4842.6	5051.8
1961	5527.8	4683.9	5125.7	5504.3	5352.1	5583.4
1962	5084.2	4308.0	4714.4	5062.6	4922.6	5135.4

Note: Data on the value and quantity of cement domestically manufactured, imported and exported from 1950 until 1963 were supplied to the writer by the Economic Section of The Ministry of Planning, Baghdad.

Appendix VI

TABLE 2

CROSS VALUE MATRIX OF IMPORTED MACHINERY AND EQUIPMENT*

(c.i.f. value)

(ID 000)

Year (i)	$\sum P_{57}Q_i$	$\sum P_{58}Q_i$	$\sum P_{59}Q_i$	$\sum P_{60}Q_i$	$\sum P_{61}Q_i$	$\sum P_{62}Q_i$
1957	15917.8	17019.7	18514.5	17365.2	18081.1	18609.3
1958	11237.7	11541.4	12376.0	11749.3	12036.7	12136.1
1959	9263.5	9106.7	9938.1	9319.3	9505.4	10109.4
1960	11327.8	11545.8	12267.5	11628.9	11935.0	12255.0
1961	13063.3	13021.2	13741.0	13089.2	13505.1	13928.8
1962	15189.4	14889.1	15897.0	14707.9	15369.4	15524.6

* Values here are of 81 items included in the Price Index of Machinery and Equipment compiled by the writer.

Appendix VI

TABLE 3

CROSS VALUE MATRIX OF IMPORTED FURNITURE AND FIXTURES*

(c.i.f. value)

(ID 000)

Year (i)	$\sum P_{57}Q_i$	$\sum P_{58}Q_i$	$\sum P_{59}Q_i$	$\sum P_{60}Q_i$	$\sum P_{61}Q_i$	$\sum P_{62}Q_i$
1957	2134.3	2154.6	2142.6	2206.5	2031.3	2137.6
1958	2563.0	2485.6	2489.0	2511.8	2322.4	2385.0
1959	2334.0	2250.1	2140.4	2207.2	2061.1	2056.9
1960	3526.8	3386.2	3335.0	3281.2	3091.1	3073.7
1961	3674.5	3540.0	3358.7	3355.7	3185.5	3180.8
1962	3449.1	3321.2	3040.2	3108.0	2962.0	2909.0

* Values here are of 20 items included in the Price Index of Furniture and Fixtures compiled by the writer.

Appendix VI

TABLE 4

CROSS VALUE MATRIX OF IMPORTED TRANSPORT EQUIPMENT*

(ID 000)

Year (i)	$\sum P_{57}Q_i$	$\sum P_{58}Q_i$	$\sum P_{59}Q_i$	$\sum P_{60}Q_i$	$\sum P_{61}Q_i$	$\sum P_{62}Q_i$
1957	9188.4	8438.6	10676.1	11839.7	12270.3	13097.2
1958	7123.8	7386.4	9359.2	10381.9	10757.0	9881.6
1959	4953.0	5125.5	5611.3	5895.2	5839.8	6067.4
1960	7536.2	8016.2	8441.4	8770.5	8525.3	8842.9
1961	8295.0	8838.7	9347.1	9742.0	9516.1	9730.0
1962	6504.8	6967.4	7352.6	7640.0	7558.2	7700.0

* Values here are of 15 items included in the Price Index of Transport Equipment compiled by the writer. They are adjusted for changes in the rates of import duties on transport equipment throughout the period.

Appendix VI

TABLE 5

CROSS c.i.f. VALUE MATRIX OF IMPORTED TRANSPORT EQUIPMENT*

(ID 000)

Year (i)	$\sum P_{57}Q_i$	$\sum P_{58}Q_i$	$\sum P_{59}Q_i$	$\sum P_{60}Q_i$	$\sum P_{61}Q_i$	$\sum P_{62}Q_i$
1957	7523.5	7857.9	7875.6	8720.0	8778.4	9424.3
1958	6688.5	6962.5	6988.1	7751.0	7769.6	8389.3
1959	4210.1	4448.5	4401.2	4503.9	4479.6	4739.9
1960	6478.0	6954.9	6767.5	6743.6	6654.2	7015.9
1961	7006.0	7486.5	7320.3	7294.4	7266.8	7560.5
1962	5470.4	5869.9	5753.8	5892.5	5824.0	6003.5

* Values here are of 15 items of total imported transport equipment.

APPENDIX VII

EXPENDITURE ON REPAIR WORK AND MILITARY CONSTRUCTION

This appendix is designed for the purpose of showing expenditure on repair work by the private and the public sectors in addition to Government expenditure on construction used for military purposes.

The term "repair work" is used here to include, in the case of the private sector, expenditure on repair and maintenance of buildings only; and in the case of the public sector, expenditure on the repair and maintenance of buildings, roads, bridges, railways, water supply pipes, electricity transmission lines, and similar structures.

The appendix contains four tables. Table 1 shows particulars of private expenditure on repair work. Table 2 presents the expenditure of public agencies on the repair and maintenance of the various types of assets indicated above. Table 3 shows public expenditure on military construction. Finally, Table 4 shows the aggregate of the figures shown in Tables 1, 2, and 3.

Appendix VII

TABLE 1

PRIVATE EXPENDITURE ON REPAIR WORK, 1957 - 1962

(ID 000)

Year	Urban Buildings			Rural Buildings (4)	TOTAL (3) + (4) (5)
	Dwellings (1)	Other (2)	TOTAL (3)		
1957	698.7	232.9	931.6	1204.4	2136.0
1958	696.2	232.1	928.3	1219.5	2147.8
1959	527.8	175.9	703.7	1234.7	1938.4
1960	294.7	98.3	393.0	1249.7	1642.7
1961	372.3	124.1	496.4	1264.7	1761.1
1962	346.9	115.6	462.5	1279.7	1742.2

Sources:
1. Figures in Col. (1) and (2) are derived from Table XIII-23, Chapter XIII.
2. Figures in Col. (4) are derived from Table XIII-24, Chapter XIII.

Appendix VII

TABLE 2

PUBLIC EXPENDITURE ON REPAIR WORK, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
Expenditure on the Repair and Maintenance of :						
1. Buildings	288.2	306.2	542.1	527.1	730.8	912.8
2. Roads, Bridges and similar structures	1032.1	947.1	1379.9	1056.5	1194.1	1137.2
3. Water Supply Pipes and Electricity Transmission Lines	99.3	126.1	161.8	284.4	304.1	404.7
4. Railway Lines	596.6	481.4	469.2	375.2	60.4	91.6
5. Rolling Stock	291.7	503.2	500.5	13.0	64.6	7.2
TOTAL Public Expenditure on Repair Work :	2307.9	2364.0	3053.5	2266.2	2354.0	2553.5

Sources: Data were derived from the accounts of various public agencies.

Note: Figures appearing in this table are also shown in footnotes to tables showing public GFCF in various sectors of the economy in the text of this dissertation.

Appendix VII

TABLE 3

GOVERNMENT EXPENDITURE ON

MILITARY CONSTRUCTION, 1957 - 1962

(ID 000)

Year	Expenditure
1957	5200.6
1958	2848.3
1959	7875.3
1960	6923.7
1961	10313.1
1962	10060.2

Sources and Explanatory Note:

These figures represent government expenditure on the construction of barracks, military airports and other types of construction used solely for military purposes. However, they do not include Government expenditure on the construction of dwellings for army officers.

The figures are derived from the Development Budgets for the years 1957/58 - 1962/1963.

Appendix VII

TABLE 4

AGGREGATE EXPENDITURE ON REPAIR WORK AND MILITARY CONSTRUCTION, 1957-1962

(ID 000)

Year	Repair Work			Military Construction	TOTAL (3) + (4)
	Private (1)	Public (2)	TOTAL (3)	(4)	(5)
1957	2136.0	2307.9	4443.9	5200.6	9644.5
1958	2147.8	2364.0	4511.8	2848.3	7360.1
1959	1938.4	3053.5	4991.9	7875.3	12867.2
1960	1642.7	2266.2	3908.9	6923.7	10832.6
1961	1761.1	2354.0	4115.1	10313.1	14428.2
1962	1742.2	2553.5	4295.7	10060.2	14355.9

Sources: Tables 1, 2 and 3 above.

Note: The grand total shown in Col. (5) represents that part of the gross output of Construction which is not included in our estimates of GDFCF on the grounds that neither expenditure on repair work nor military construction constitute new additions to the stock of reproducible physical capital of the country.

APPENDIX VIII

This appendix contains seven tables showing information pertinent to the sector "Transportation, Storage and Communications".

Table 1 shows the number of private cars and taxis during 1957 - 1962, while Table 2 shows the number of motor vehicles for hire during 1956 - 1962. Tables 3, 4, 5, and 6 show the capital expenditure of Public Transport (Bus) Services in Baghdad, Mosul, Basrah, and the rest of Iraq, respectively. Table 7 shows the regional distribution of the number of buses owned and purchases of transport equipment made by the Public Transport (Bus) Services during 1962.

Appendix VIII TABLE 1

NUMBER OF PRIVATE CARS AND TAXIS, 1957 - 1962

(ID 000)

Year	Private Cars Number (1)	Taxis Number (2)	TOTAL Number (3)	(1):(3) % (4)	(2):(3) % (5)
1957	19356	6546	25902	75	25
1958	23012	7059	30071	77	23
1959	24253	7678	31931	76	24
1960	30612	9524	40136	76	24
1961	34306	14242	48548	71	29
1962	35227	14941	50168	70	30

Sources: Statistical Abstract 1958, P.B.S., Ministry of Economics, Baghdad 1959; and Statistical Abstract for 1960 and 1962, C.B.S., Ministry of Planning, Baghdad, 1961 and 1963, respectively.

Appendix VIII TABLE 2

MOTOR VEHICLES FOR HIRE, 1956 - 1962

Year	Taxis	Lorries and Vans	BUSES		
			Government-Owned Public Transport Services	Others	TOTAL
1956	6246	7907	407	3272	3679
1957	6546	8723	445	3318	3763
1958	7059	9160	462	3516	3978
1959	7678	9880	557	3783	4340
1960	9524	11203	641	4834	5475
1961	14242	12622	674	5300	5974
1962	14941	13897	834	5970	6804

Sources: Number of licensed Carriers given in the Statistical Abstract, adjusted to exclude Carriers owned by industrial establishments based on information given in the Transport Census of November 1957 and applying the same ratios of Private to Total carriers for earlier and later years.

Appendix VIII

TABLE 3

PUBLIC TRANSPORT (BUS) SERVICES: BAGHDAD,

Capital Expenditure, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1. Non-Residential Buildings	14.2	46.7	8.0	10.0	6.1	5.5
2. Other Construction and Works (Bus Stops)	-	1.0	0.7	1.0	1.0	3.3
3. Machinery and Other Equipment:						
(i) Machinery and Equipment	0.3	20.6	9.5	3.8	15.3	13.4
(ii) Furniture and Fixtures	2.5	4.2	5.4	2.8	2.9	3.7
4. Transport Equipment	77.3	293.7	490.6	6.6	399.4	714.1
5. TOTAL :	94.3	366.2	514.2	24.2	424.7	740.0

Sources: Unpublished Actual Final Accounts of the Directorate-General of Passenger Transport Services in Baghdad.

Appendix VIII

TABLE 4

PUBLIC TRANSPORT (BUS) SERVICES: MOSUL

Capital Expenditure, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1. Non-Residential Buildings	10.0	7.0	2.0	2.8	0.1	-
2. Other Construction and Works (Bus Stops)	-	-	0.4	0.6	0.5	0.7
3. Machinery and other Equipment:						
(i) Machinery and Equipment	0.1	0.3	24.7	2.1	1.2	0.4
(ii) Furniture and Fixtures	0.7	0.4	0.2	0.4	0.2	0.4
4. Transport Equipment	51.1	79.1	36.0	112.7	1.0	65.1
5. TOTAL :	61.9	86.8	63.3	118.6	3.0	66.6

Sources: Unpublished Actual Final Accounts of the Directorate-of Passenger Transport Services in Mosul.

Appendix VIII

TABLE 5

PUBLIC TRANSPORT (BUS) SERVICES: BASRAH

Capital Expenditure, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1. Non-Residential Buildings	-	-	1.8	22.1	1.8	0.7
2. Other Construction and Works (Bus Stops)	-	-	-	-	-	-
3. Machinery and Other Equipment:						
(i) Machinery and Equipment	-	-	0.2	7.8	2.0	-
(ii) Furniture and Fixtures	-	-	0.2	2.3	0.3	0.3
4. Transport Equipment	-	-	252.8	-	27.1	35.1
5. TOTAL :	-	-	255.0	32.2	31.2	36.1

Sources: Unpublished Actual Final Accounts of the Directorate of Passenger Transport Services in Basrah.

Appendix VIII

TABLE 6

PUBLIC TRANSPORT (BUS) SERVICES: OTHER PROVINCES

Capital Expenditure, 1957 - 1962

(ID 000)

	1957	1958	1959	1960	1961	1962
1. Non-Residential Buildings	0.1	6.0	3.1	20.4	16.3	16.0
2. Other Construction and Works (Bus Stops)	-	-	-	-	-	-
3. Machinery and Other Equipment:						
(i) Machinery and Equipment	2.0	0.3	-	4.6	7.6	1.0
(ii) Furniture and Fixtures	0.2	0.2	0.5	2.0	1.0	1.0
4. Transport Equipment	57.0	60.5	95.7	181.9	308.0	350.4
TOTAL :	59.3	67.0	99.3	208.9	332.9	368.4

SOURCES: Revenue and Expenditure of the Directorates of Passenger Transport Services, supplied to the writer by the Ministry of the Interior, Baghdad.

Appendix VIII

TABLE 7

REGIONAL DISTRIBUTION OF NUMBER OF BUSES OWNED BY PUBLIC TRANSPORT SERVICES AS AT THE END OF 1962 AND THEIR PURCHASES OF TRANSPORT EQUIPMENT DURING 1962

Province	Number of Buses as at the end of 1962	Purchases of Transport Equipment during 1962 (ID 000)	Number of Buses in each Province as % of Total	Purchases of Transport Equipment by each Province as % of Total
1. Mosul	55	65.1	6.7	5.6
2. Arbil	8	3.2	1.0	0.3
3. Sulaimaniya	9	13.8	1.1	1.2
4. Kirkuk	40	13.5	4.8	1.1
5. Diala	23	69.6	2.6	6.0
6. Baghdad	502	714.1	60.2	61.3
7. Ramadi	6	9.2	0.7	0.8
8. Hilla	46	99.0	5.5	8.5
9. Kerbela	69	107.9	8.3	9.3
10. Diwaniya	5	2.2	0.6	0.2
11. Nasiriya	14	19.7	1.7	1.7
12. Kut	-	-	-	-
13. Amara	12	12.3	1.4	1.0
14. Basrah	45	35.1	5.4	3.0
TOTAL :	834	1164.7	100.0	100.0

Sources: Report on Government Transport Services during 1962, C.B.S., Ministry of Planning, (Undated Mimeograph) Baghdad.

APPENDIX IX

NATIONAL ACCOUNTS OF IRAQ

This appendix contains fifteen tables showing the National Income of Iraq for the period 1950 - 1963.

Table 1 shows Fenelon's estimates of the National Expenditure for the period 1950 - 1956. Tables 2 to 10 show Haseeb's estimates of the GDP, GNP for the period 1953 - 1963. Table 11 contains Kanaan's estimates of the National Expenditure for the period 1960 - 1963.

The capital formation estimates, which were made by Abu El-Haj for the period 1922 - 1957, are shown in Tables 12, 13 and 14.

Finally, Table 15 contains our estimate of indirect taxes and subsidies for the period 1957 - 1962.

Appendix IX

TABLE 1

NATIONAL EXPENDITURE OF IRAQ, 1950-1956, at Current Prices

(ID Millions)

	1950	1951	1952	1953	1954	1955	1956
1. Private Consumption Expenditure	137	157	162	167	178	189	199
2. General Government Consumption Expenditure	28	30	38	51	57	62	68
3. Gross Domestic Capital Formation	17	21	34	46	43	67	89
4. Increase in Stocks	1	1	1	2	- 1	4	5
5. Export minus Imports	14	12	54	79	96	80	46
6. Expenditure on GDP :	197	221	289	345	373	402	407
7. Net Factor Income from Abroad	- 15	- 11	-42	- 53	- 67	- 71	- 58
8. Expenditure on GNP :	182	210	247	292	306	331	349
9. Provision for the Consumption of Fixed Capital	- 9	- 10	- 13	- 15	- 16	- 17	- 18
10. Indirect Taxes Less Subsidies	- 15	- 16	- 17	- 18	- 22	- 25	- 28
11. TOTAL = NATIONAL INCOME :	158	184	217	259	268	289	303

Sources: Fenelon, K.G., Iraq's National Income and Expenditure, 1950-1956 (Al-Rabita Press, Baghdad, 1958).

Appendix IX

TABLE 2

GDP, GNP and NNP at CURRENT FACTOR COST PRICES, 1953-1963

(ID Millions)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
1. Agriculture, Forestry and Fishing	71.50	84.72	65.33	89.23	111.57	92.76	82.01	97.84	116.98	140.38	107.62
2. Mining and Quarrying:											
a. Crude Oil Extraction	128.91	149.53	161.16	152.45	113.10	175.43	190.00	208.07	209.03	210.23	238.84
b. Other Mining and Quarrying	0.89	0.93	1.56	1.64	1.74	1.85	1.81	1.68	2.15	1.86	1.84
Total 2 :	129.80	150.46	162.72	154.09	114.84	177.28	191.81	209.75	211.18	212.09	240.68
3. Manufacturing:											
a. Oil Refining	1.91	2.46	3.45	4.19	4.99	5.74	6.45	7.79	9.39	9.67	9.92
b. Other Manufacturing	17.83	19.42	23.47	27.88	30.26	31.05	38.38	46.61	50.12	55.41	53.30
Total 3 :	19.74	21.88	26.92	32.07	35.25	36.79	44.83	54.40	59.51	65.08	63.22
4. Construction	11.27	17.21	21.29	24.83	27.68	29.83	28.73	23.08	23.88	19.64	19.96
5. Electricity and Water	1.46	1.78	2.17	2.53	2.68	2.78	2.97	3.62	4.96	5.54	5.69
6. Transportation, Storage and Communications	21.37	22.06	24.56	27.55	29.92	30.61	34.29	39.72	45.95	47.02	48.09
7. Wholesale and Retail Trade	17.85	20.67	21.48	26.90	29.67	27.52	26.23	32.55	36.58	38.56	35.34
8. Banking, Insurance and Real Estate	3.23	3.63	4.49	6.28	6.60	7.40	8.20	8.69	11.06	11.38	12.57
9. Ownership of Dwellings	11.61	11.91	12.20	12.47	12.80	12.51	11.58	11.89	12.13	12.45	11.96
10. Public Administration and Defence	18.27	20.80	24.34	28.12	32.06	37.57	45.65	45.71	51.46	59.76	66.38

(Continued)

TABLE 2 (continued)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
11. Services	16.83	19.25	21.26	24.83	26.99	29.65	33.33	38.11	41.37	46.52	49.20
12. GDP at Factor Cost:	322.95	374.37	386.76	428.90	430.06	484.70	509.62	565.36	615.06	658.42	660.71
13. Less Income to Abroad	57.63	67.66	71.24	65.49	46.40	78.45	85.73	95.33	94.20	93.87	108.12
14. GNP at Factor Cost:	265.32	306.71	315.52	363.41	383.66	406.25	423.89	470.03	520.86	564.55	552.59
15. Less Provision for the Consumption of Fixed Capital	21.37	22.69	26.24	28.65	30.94	32.21	32.27	32.90	36.62	38.06	37.22
16. NNP at Factor Cost:	243.95	284.02	289.28	334.76	352.72	374.04	391.62	437.13	484.24	526.49	515.37

Sources: Haseeb, Dr. K., The National Income of Iraq, 1953-1963, Lecture delivered to a Seminar arranged by the Economic Research Institute of the American University of Beirut on 29th May 1964, The Central Bank of Iraq, Mimeographed, 1964.

Appendix IX

TABLE 3

GDP, GNP and NNP at CONSTANT (1956) FACTOR COST PRICES, 1953-1963

(ID Millions)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
1. Agriculture, Forestry and Fishing	86.59	114.80	69.43	89.23	117.76	90.47	67.76	77.58	98.37	115.16	81.49
2. Mining and Quarrying:											
a. Crude Oil Extraction	128.91	149.53	161.16	152.45	107.34	175.47	203.90	235.50	244.10	246.08	280.93
b. Other Mining and Quarrying	0.89	0.93	1.56	1.64	1.74	1.85	1.81	1.68	2.15	1.86	1.84
Total 2 :	129.80	150.46	162.72	154.09	109.08	177.32	205.71	237.18	246.25	247.94	282.77
3. Manufacturing:											
a. Oil Refining	1.91	2.46	3.45	4.19	4.99	6.00	6.72	8.08	9.60	9.89	10.15
b. Other Manufacturing	18.08	20.26	23.73	27.88	28.91	30.54	36.83	45.06	48.19	52.98	51.78
Total 3 :	19.99	22.72	27.18	32.07	33.90	36.54	43.55	53.14	57.79	62.87	61.93
4. Construction	13.63	18.87	23.09	24.83	27.68	27.41	24.41	19.63	20.34	16.63	17.066
5. Electricity and Water	1.33	1.43	2.13	2.53	2.99	3.18	3.45	4.12	5.43	6.44	6.64
6. Transportation, Storage and Communications	22.46	23.05	24.92	27.55	28.48	28.60	30.91	36.11	41.40	43.19	42.06
7. Wholesale and Retail Trade	19.16	23.73	22.60	26.90	29.02	26.69	24.59	30.08	36.00	38.15	33.43
8. Banking, Insurance and Real Estate	3.87	5.15	5.89	6.28	7.84	8.82	8.59	9.20	9.33	9.73	9.61
9. Ownership of Dwellings	11.58	11.85	12.15	12.47	12.75	13.06	13.44	13.80	14.19	14.56	14.95
10. Public Administration and Defence	22.68	23.93	27.68	28.12	29.70	34.48	40.69	40.03	47.75	55.45	61.60

(Continued)

Appendix IX

TABLE 3 (Continued)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
11. Services	20.58	22.12	23.31	24.83	25.57	27.45	30.87	35.03	41.99	43.56	45.15
12. GDP at Factor Cost:	351.67	418.11	401.10	428.90	424.77	474.02	493.97	555.90	618.84	653.68	656.69
13. Less Income to Abroad	66.80	71.94	75.01	65.49	44.66	78.56	93.26	109.80	112.40	112.44	128.89
14. GNP at Factor Cost:	284.87	346.17	326.09	363.41	380.11	395.46	400.71	446.10	506.44	541.24	527.80
15. Less Provision for the Consumption of Fixed Capital	22.05	23.54	27.12	28.65	31.71	32.29	32.11	33.42	37.81	38.11	38.34
16 NNP at Factor Cost:	262.82	322.63	298.97	334.76	348.40	363.17	368.60	412.68	468.63	503.13	489.46

Sources: Haseeb, Ibid.

Appendix IX

TABLE 4

GDP and GNP at CONSTANT (1957) FACTOR COST

(ID Million)

	Index Number	1957	1958	1959	1960	1961	1962
1. Agriculture, Forestry and Fishing	94.7	111.57	85.68	64.17	73.47	93.16	109.10
2. Mining and Quarrying							
a. Crude Oil Extraction	105.4	113.10	184.90	214.90	248.20	257.30	259.40
b. Other Mining	100.0	1.74	1.85	1.81	1.68	2.15	1.86
Total 2 :		114.84	186.75	216.71	249.88	259.45	261.26
3. Manufacturing	104.0	35.25	38.00	45.29	55.27	60.10	65.38
4. Construction	100.0	27.68	27.41	24.41	19.63	20.34	16.63
5. Electricity and Water	89.6	2.68	2.85	3.09	3.69	4.87	5.77
6. Transportation, Storage and Communications	105.0	29.92	30.03	32.46	37.92	43.47	45.35
7. Wholesale and Retail Trade	102.2	29.67	27.28	25.13	30.74	36.79	39.00
8. Banking, Insurance and Real Estate	84.2	6.60	7.43	7.23	7.75	7.86	8.19
9. Ownership of Dwellings	100.4	12.80	13.11	13.49	13.86	14.25	14.62
10. Public Administration and Defence	107.9	32.06	37.20	43.90	43.19	51.52	59.83
11. Services	105.6	26.99	28.99	32.60	37.00	44.34	46.00

(Continued)

Appendix IX

TABLE 4 (continued)

TOTAL GDP at 1957 Factor Cost:		430.06	484.73	508.48	572.40	636.15	671.13
Less Incomes to Abroad	103.9	46.40	81.62	96.90	114.08	116.78	116.83
TOTAL GNP at 1957 Factor Cost :		383.66	403.11	411.58	458.32	519.37	554.30

Explanatory Note: Estimates of GDP and GNP at 1957 Factor Cost are derived by adjusting the figures of GVA at Constant 1956 Factor by the index numbers shown in the first column of the above table. These indices were derived by the division of GVA of each sector at Current Factor Cost in 1957 (shown in Table 2 above) by their counterpart at Constant 1956 prices; that is

$$\frac{\sum P_{il} Q_{il}}{\sum P_{io} Q_{il}}$$, where i = 1, 2, 3, ..., 11 (refers to the relevant sector) and o = 1956, 1 = 1957.

Appendix IX

TABLE 5

GROWTH OF NATIONAL PRODUCT AT CONSTANT (1956) PRICES

1953 = 100

Sector	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Compound Rate of Growth 1953-63
												%
1. Agriculture, Forestry and Fishing												
a. Field Crops	100	145	67	91	138	91	62	69	89	111	53	- 6.2
b. Vegetables	100	136	54	93	124	66	28	59	93	106	117	1.6
c. Fruit and Dates	100	125	95	87	119	106	52	70	102	123	78	- 2.5
d. Livestock	100	123	99	120	144	132	119	124	147	168	123	2.1
e. Forestry	100	106	110	117	123	132	134	124	126	97	104	0.3
f. Fishery	100	111	114	170	174	179	183	187	192	196	203	7.3
Total Agriculture, Forestry and Fishing	100	133	80	103	136	104	78	89	113	132	94	- 0.6
2. Mining and Quarrying												
a. Crude Oil Extraction	100	117	126	118	81	137	161	187	193	201	223	8.4
b. Other Mining and Quarrying	100	104	174	182	194	206	202	187	240	207	206	7.5
Total Mining and Quarrying:	100	117	126	119	81	138	161	187	193	194	223	8.4
3. Manufacturing												
a. Oil Refining	100	128	136	151	176	217	259	316	398	408	418	15.4
b. Other Manufacturing	100	112	131	155	158	164	200	247	261	294	283	11.0
Total Manufacturing	100	114	131	154	159	169	205	254	274	305	296	11.5
4. Construction	100	137	167	182	201	199	180	143	151	125	127	2.4
5. Electricity and Water	100	104	163	195	236	252	275	326	369	458	467	16.7
6. Transport, Communication & Storage	100	103	110	123	126	125	131	159	181	188	179	6.0
7 Wholesale and Retail Trade	100	124	118	140	151	139	128	157	188	199	174	5.7
8. Banking, Insurance and Real Estate	100	157	166	190	215	261	268	258	279	295	292	11.3
9. Ownership of Dwellings	100	102	105	107	109	112	115	118	122	125	128	2.5
10. Public Administration and Defence	100	106	122	124	131	152	179	176	211	244	272	10.5
11. Services	100	108	113	121	125	134	151	172	207	215	222	8.3
12. Net Domestic Product at Factor Cost	100	120	113	121	119	134	140	159	176	187	188	6.5
13. Less Income to Abroad	100	108	112	98	67	118	140	164	168	168	193	6.8
14. Net National Product at Factor Cost	100	123	114	127	133	138	140	157	178	191	186	6.4

Sources: Haseeb, Ibid.

Appendix IX

TABLE 6

PER CAPITA NATIONAL INCOME, 1953 - 1963

Year	National Income (ID m.)		Population* (000)	Per Capita Income			
				At Current Prices		At 1956 Prices	
	At Current Prices	At 1956 Prices		ID	% Increase Over Preceding Year	ID	% Increase Over Preceding Year
1953	244.0	262.8	5832	41.8	-	45.1	-
1954	284.0	322.6	5945	47.8	14.4	54.3	20.4
1955	289.3	299.0	6061	47.7	-0.2	49.3	-9.2
1956	334.8	334.8	6180	54.2	13.6	54.2	9.9
1957	352.7	348.4	6301	56.0	3.3	55.3	2.0
1958	374.0	363.2	6423	58.2	3.9	56.5	2.2
1959	391.6	368.6	6548	59.8	2.7	56.3	-0.4
1960	437.1	412.7	6675	65.5	9.5	61.8	9.8
1961	484.2	468.6	6804	71.2	8.7	68.9	11.5
1962	526.5	503.1	6936	75.9	6.6	72.5	5.2
1963	515.4	489.5	7071	72.9	-4.0	69.2	-4.6

Sources: Haseeb, Ibid.

Appendix IX

TABLE 7

PERCENTAGE CONTRIBUTION OF EACH SECTOR

TO THE NATIONAL PRODUCT AT CONSTANT PRICES

	1953	1958	1961	1962	1963
1. Agriculture, Forestry and Fishing					
a. Field Crops	11.4	7.5	5.7	6.6	3.2
b. Vegetables	5.7	2.7	3.0	3.1	3.6
c. Fruit and Dates	2.9	2.2	1.7	1.9	1.2
d. Livestock	11.9	11.4	9.8	10.4	7.9
e. Forestry	0.4	0.4	0.3	0.2	0.2
f. Fishery	0.3	0.4	0.3	0.3	0.3
TOTAL Agriculture, Forestry and Fishing:	32.6	24.6	20.8	22.5	16.4
2. Mining and Quarrying					
a. Crude Oil Extraction	46.1	45.8	49.9	46.7	55.3
b. Other Mining and Quarrying	0.3	0.5	0.4	0.3	0.4
TOTAL Mining and Quarrying :	46.4	46.3	50.3	47.0	55.7
3. Manufacturing					
a. Oil Refining	0.7	1.0	1.4	1.4	1.5
b. Other Manufacturing	6.5	7.7	9.5	9.9	9.8
TOTAL Manufacturing :	7.2	8.7	10.9	11.3	11.3
4. Construction	4.5	6.5	3.8	2.9	3.1

(Continued)

TABLE 7 (Continued)

5. Electricity and Water	0.4	0.7	0.8	1.0	1.0
6. Transport, Communications and Storage	7.1	6.4	7.2	7.0	6.8
7. Wholesale and Retail Trade	7.1	7.1	7.5	7.4	6.6
8. Banking, Insurance and Real Estate	1.2	2.3	1.9	1.9	1.9
9. Ownership of Dwellings	2.8	2.2	1.9	1.8	1.9
10. Public Administration and Defence	8.6	9.5	10.2	11.0	12.6
11. Services	7.5	7.3	8.7	8.4	9.0
12. Net Domestic Product at Factor Cost :	125.4	121.6	124.0	122.3	126.3
13. Less Income to Abroad	-25.4	-21.6	-24.0	-22.3	-26.3
14. Net National Product at Factor Cost :	100.0	100.0	100.0	100.0	100.0

Sources: Haseeb, Ibid.

Appendix IX

TABLE 8

PERCENTAGE CONTRIBUTION OF EACH SECTOR TO GDP AT CURRENT FACTOR COST, 1957 - 1962

	1957	1958	1959	1960	1961	1962
1. Agriculture	25.9	19.1	16.1	17.3	19.0	21.3
2. Mining and Quarrying:						
a. Crude Oil Extraction	26.3	36.2	37.3	36.8	34.0	32.0
b. Other Mining and Quarrying	0.4	0.4	0.4	0.3	0.3	0.3
Total 2 :	26.7	36.6	37.7	37.1	34.3	32.3
3. Manufacturing						
a. Oil Refining	1.2	1.2	1.3	1.4	1.5	1.5
b. Other Manufacturing	7.0	6.4	7.5	8.2	8.1	8.4
Total 3 :	8.2	7.6	8.8	9.6	9.6	9.9
4. Construction	6.4	6.2	5.8	4.1	3.9	3.0
5. Electricity and Water	0.6	0.6	0.6	0.6	0.8	0.8
6. Transportation, Storage and Communications	7.0	6.3	6.6	7.0	7.5	7.1
7. Wholesale and Retail Trade	6.9	5.7	5.1	5.8	6.0	5.9
8. Banking, Insurance and Real Estate	1.5	1.5	1.6	1.5	1.8	1.7
9. Ownership of Dwellings	3.0	2.6	2.3	2.1	2.0	1.9
10. Public Administration	7.5	7.7	8.9	8.1	8.4	9.1
11. Services	6.3	6.1	6.5	6.8	6.7	7.0
12. G.D.P. at Current Factor Cost :	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Table 2 above.

Appendix IX

TABLE 9

CONTRIBUTION OF PRIVATE AND PUBLIC SECTORS TO

THE NATIONAL INCOME, 1953, 1956 and 1960, AT CURRENT FACTOR COST

	1953		1956		1960	
	ID. m.	%	ID. m.	%	ID. m.	%
Private Sector	208.3	85	275.1	82	337.4	77
Public Sector	35.7	15	59.7	18	99.7	23
TOTAL :	244.0	100	334.8	100	437.1	100

Sources: Haseeb, Ibid.

Appendix IX

TABLE 10

DETAILS OF THE CONTRIBUTION OF PRIVATE AND PUBLIC SECTORS TO THE NET NATIONAL INCOME, 1956 and 1960

(ID Million)

	1956			1960		
	Public Sector	Private Sector	TOTAL	Public Sector	Private Sector	TOTAL
1. Agriculture, Forestry and Fishing	-	88.07	88.07	-	96.52	96.52
2. Mining and Quarrying						
a. Crude Oil Extraction	-	143.15	143.15	-	199.37	199.37
b. Other Mining and Quarrying	0.05	1.50	1.55	0.04	1.55	1.59
3. Manufacturing						
a. Oil Refining	2.61	-	2.61	5.17	-	5.17
b. Other Manufacturing	0.76	25.56	26.32	2.59	41.02	43.61
4. Construction	-	21.41	21.41	-	19.87	19.87
5. Electricity and Water	2.07	-	2.07	2.66	-	2.66
6. Transport, Communications and Storage	8.20	14.72	22.92	13.55	19.78	33.33

(Continued)

Appendix IX

TABLE 10 (continued)

7. Wholesale and Retail Trade	0.69	25.42	26.11	0.82	30.78	31.60
8. Banking, Insurance and Real Estate	5.14	1.05	6.19	6.61	1.97	8.58
9. Ownership of Dwellings	-	7.78	7.78	-	7.39	7.39
10. Public Administration and Defence	28.12	-	28.12	45.71	-	45.71
11. Services	12.08	11.87	23.95	22.57	14.49	37.06
12. Net Domestic Product at Factor Cost	59.72	340.53	400.25	99.72	432.74	532.46
13. Less Income to Abroad*		-65.49	-65.49		-95.33	-95.33
14. Net National Product at Factor Cost	59.72	275.049	334.76	99.72	337.41	437.13

* Almost all the income to abroad is representing the share of the oil companies in the profits from crude oil.

Sources: Haseeb, Ibid.

Appendix IX

TABLE 11

AGGREGATES OF NATIONAL EXPENDITURE

Current Values in ID Millions

	1960		1961		1962		1963	
	ID m.	%	ID m.	%	ID m.	%	ID m.	%
1. Private Consumption	332	63	380	59	403	61	359	54
2. Government Consumption	118	22	148	23	141	21	155	24
3. Gross Capital Formation	83	16	96	15	94	14	75	11
4 Exports minus Imports	102	19	114	18	123	18	170	26
5. Net Changes in Stocks	2	-	1	-	- 2	-	1	-
6. Minus net factor income to the rest of the world	-107	-20	- 95	-15	- 95	-14	- 98	-15
7. National Expenditure at Current Prices :	530	100	643	100	664	100	662	100

Sources: Kanaan, T.H., Input-Output and Social Accounts of Iraq, 1960 - 1963, Ministry of Planning, Baghdad, September 1965, Chapter III, p.6.

Appendix IX

TABLE 12

ANNUAL GROSS CAPITAL INVESTMENT BY MAJOR ECONOMIC SECTORS, 1933-1957

(ID 000)

Year	Agriculture (1)	Transport and Communications (2)	Industry (3)	Building Construction			Miscellaneous (7)	TOTALS	
				Private (4)	Public (5)	TOTAL (6)		Excluding Col. 4	Including Col. 4
1933	288	587	68		139	139	175	1257	
1934	223	743	73		105	105	183	1327	
1935	614	743	75		64	64	298	1794	
1936	633	648	111		131	131	236	1759	
1937	963	2309	162		117	117	334	3885	
1938	502	2309	192		116	116	513	3632	
1939	446	1765	156		119	119	378	2864	
1940	821	1114	45		188	188	192	2360	
1941	408	957	30		118	118	245	1758	
1942	546	967	47		150	150	61	1771	
1943	652	1303	26		245	245	53	2279	
1944	559	1115	75		347	347	197	2293	
1945	706	1323	101		408	408	206	2744	
1946	1678	2975	294	2671	653	3324	1198	6798	9469
1947	2045	5698	692	3233	592	3825	1700	10727	13960
1948	2455	7789	641	3173	503	3676	3482	14870	18043
1949	2058	5672	603	2464	224	2688	3611	12168	14632
1950	1775	5361	631	2283	219	2502	2122	10108	12391
1951	2495	4812	1022	2062	788	2850	1886	11003	13065
1952	4982	8043	1058	2747	2265	5012	* 9608	25956	28703
1953	9294	9387	2045	3498	2451	5949	6953	30130	33628
1954	13762	13109	3300	3644	2735	6379	7230	40186	43830
1955	14107	21593	4773	4333	1830	6163	*17448	59751	64084
1956	17834	27125	10273	6133	4000	10133	*14741	73973	80106
1957	15947	29246	13724	6883	4300	11183	*12617	75834	82717

* Includes items classified by Development Board under "Other Expenditures". The figures for the years given are: 1952 - ID 5,000,000; 1955 - ID 6,564,000; 1956 - ID 4,000,000; and 1957 - ID 800,000.

Sources: Abu, El-Haj, R., Capital Formation in Iraq, 1922-1957 Journal of Economic Development and Cultural Change, Chicago University, July 1961.

Appendix IX

TABLE 13

GROSS CAPITAL INVESTMENT, AGGREGATES, 1922 - 1957

Year	Excluding Private Building Construction			Including Private Building Construction
	ID 000	Index 1939 = 100		ID 000
		Current Prices	Real Terms*	
1922	530	19	-	-
1923	530	19	-	-
1924	630	22	-	-
1925	520	18	-	-
1926	700	24	-	-
1927	1210	42	-	-
1928	1200	42	-	-
1929	1410	49	-	-
1930	920	32	-	-
1931	1170	41	-	-
1932	1240	43	-	-
1933	1260	44	-	-
1934	1330	47	-	-
1935	1790	62	-	-
1936	1760	62	-	-
1937	3890	136	-	-
1938	3630	127	-	-
1939	2860	100	100	-
1940	2360	83	60	-
1941	1760	62	35	-
1962	1770	62	16	-
1943	2280	80	14	-
1944	2290	80	15	-
1945	2740	96	19	-
1946	6800	238	49	9470
1947	10730	375	71	13960
1948	14870	520	93	18040
1949	12170	426	92	14630

(Continued)

Appendix IX

TABLE 13 (Continued)

Year	Excluding Private Building Construction			Including Private Building Construction
	ID 000	Index 1939 = 100		
		Current Prices	Real Terms*	ID 000
1950	10110	353	74	12390
1951	11000	385	74	13070
1952	25960	908	169	28700
1953	30130	1053	236	33630
1954	40190	1405	328	43830
1955	59750	2089	483	64080
1956	73970	2586	558	80110
1957	75830	2651	551	82720

* Wholesale Price Index used as a deflator. Sources: Government of Iraq, Ministry of Finance, Principal Bureau of Statistics, Statistical Abstract, 1952 and 1958.

Sources: As Table 12 above.

Appendix IX

TABLE 14

NET CAPITAL INVESTMENT, AGGREGATES, 1933 - 1957

Year	Excluding Private Building Construction			Including Private Building Construction
	£D 000	Index 1939 = 100		£D 000
		Current Prices	Real Terms*	
1933	1120	47	-	-
1934	1000	42	-	-
1935	1380	58	-	-
1936	1330	56	-	-
1937	3340	141	-	-
1938	3160	133	-	-
1939	2370	100	100	-
1940	1810	76	55	-
1941	1300	55	31	-
1942	1290	54	14	-
1943	1520	64	11	-
1944	1920	81	15	-
1945	2360	100	20	-
1946	5340	225	47	8000
1947	8640	365	69	11880
1948	9330	394	71	12500
1949	9220	389	84	11680
1950	7410	313	66	9700
1951	8160	344	66	10220
1952	23620	997	185	26370
1953	24890	1050	235	28390
1954	34820	1469	343	38460
1955	54730	2309	534	59070
1956	65160	2749	594	71300
1957	64260	2711	563	71150

Sources: As Table 12 above.

Appendix IX TABLE 15

INDIRECT TAXES AND SUBSIDIES

(ID 000)

Year	Indirect Taxes	Subsidies		
		Subsidy of Cement	Subsidy of I'asha *	Total Subsidies
1957	31917.0	-	441.0	441.0
1958	29988.0	-	2430.0	2430.0
1959	29140.0	-	5165.0	5165.0
1960	34931.0	139.0	3815.0	3954.0
1961	37565.0	100.0	206.0	306.0
1962	36273.0	100.0	843.0	943.0

* I'asha is the Government bakery plant.

Sources: Government Accounts.

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