

NATIONAL INCOME ESTIMATION IN JORDAN

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THIS paper contains estimates of the national income of Jordan in 1959 and 1960 based on studies carried out by the Statistics Department. The estimates are at current prices. It has not yet been possible to construct suitable price index numbers to convert the present estimates to constant prices. The estimates of the gross domestic product are inclusive of depreciation as the available information does not justify an attempt to calculate depreciation allowances in the various sectors. As far as possible, the treatment of various items is in conformity with the recommendations of the United Nations as given in 'A System of National Accounts and Supporting Tables'.

The calculation of national income involves bringing together a wide variety of statistical data some of which, inevitably, are subject to considerable margins of error. Moreover some components of the national income cannot be measured directly and have to be estimated by roundabout means. So it would be wrong to suppose that it will be possible to arrive at precise estimates of the national income which will not later be modified as more and better statistical data become available. It is important that these considerations be kept in mind when the results of the current investigation are discussed, for otherwise there is a danger that standards of accuracy will be demanded which will be inapplicable to this type of calculation. This should not be regarded as the final word on the subjects it covers. As the enquiry develops it may well be found that more accurate or more simple ways of obtaining various types of data can be used.

Concepts and Definitions

The national income is a measure of the money value of the goods and services becoming available to the nation from economic activity. It can be regarded from three points of view and measured in three ways. It can be regarded as a total of incomes derived from economic activity, as the value of goods and services produced by the country and as the total value of expenditure on goods and services produced by the country.

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These three ways of looking at national income lead to three methods of computing it, by the aggregation of incomes, the aggregation of products and the aggregation of expenditures. We will consider briefly each of these concepts in turn.

The Income Approach

The value of the national output of goods and services is clearly identical with the incomes of the factors of production which produce them. These can be divided broadly into incomes arising from employment, wages and salaries, and incomes arising from the ownership of property which can be called profit. Traditionally, property income has been divided into income arising from the ownership of land and buildings, called rent, and income arising from the ownerships of other forms of productive assets. These two forms of income are not the only ones which accrue to the residents of a country. Retirement pensions, family allowances and private gifts, for example, are not included in the national income because they can be regarded as being paid from the incomes of factors of production. This may take place through taxation, contributions to national insurance schemes or simply by means of private gifts. Incomes of this type are called *transfer incomes* and they may be defined as all incomes which cannot be regarded as payments for current services to production. These incomes are excluded from the national income because they are paid out of factor incomes so that if they were included an element of double counting would be introduced.

The Product Approach

The sum of incomes arising from the production of goods and services within the country is called the *domestic product*. This is, as we have seen, identical with the value of the output of goods and services produced by the various industries within the country. It is important to realize, however, that this means simply the value added at each stage of the productive process. In order to obtain the value added, the value of commodities used up in the process of production must be deducted from the final sales value of the goods, otherwise double counting will occur.

The domestic product includes only the factor incomes arising within the nation. It does not include the value of the imported

goods and services which are, of course, part of the domestic products of other nations.

In some cases, however, factor incomes accrue through the ownership of the property abroad and through economic activity abroad, similarly foreigners may earn factor incomes through economic activity or the ownership of property in Jordan. The national income comprises domestic income or product plus net income from abroad.

The Expenditure Approach

The national income is the value of the goods and services becoming available to the nation, and it can, therefore, be measured by adding together expenditures on those goods and services. It is usual to divide expenditure into the broad groups of consumption and adding to wealth or investments. Consumption comprises all kinds of current expenditure on goods and services, whether made by consumers or collective bodies, including the Government. Adding to wealth comprises expenditure increasing the stock of capital assets, both physical assets in the form of factories, buildings, etc., and net additions to the foreign assets of the country which are, in effect, claims upon the production of the other countries.

In measuring the national income by means of the expenditure method we must be careful to include only final purchases of goods and services, that is to say we must not include the value of purchase of goods used to produce other goods. We must, therefore, distinguish between intermediate and final purchases of goods and services. While this distinction is clear enough in principle, difficult problems arise in practice with respect to government expenditure and capital formation.

Foreign Aid

International transfers either by governments or private individuals increase the supply of goods and services becoming available to the receiving country. These goods and services add to national expenditure by increasing either consumption or national wealth or both at the same time; they might, for example, lead to an increase in consumption expenditure, an increase in domestic assets and an increase in foreign exchange reserves. The identity of national income and expenditure is preserved by the subtraction of imports from national expenditure and the addition of exports. If imports exceed exports the

difference comprises net foreign gifts together with net changes in foreign assets.

Measurement of Jordan's National Income

The estimation of national income in Jordan is greatly handicapped by the fact that there has never been a comprehensive census of population which could provide a basis for estimating the working population and its distribution by occupation.¹ No comprehensive estimates have ever been attempted of the employed labour force, and the only estimates of wages available are those made on the basis of irregular enquiries which were only partially complete. Estimation of other forms of income is also handicapped by the absence of reliable information.

It was evident, therefore, that we were likely to make more progress in calculating national income by adopting the *product approach*. Accordingly, we divided the economy into industrial sectors and estimated the value added in each sector. In some sectors it was possible to do this by estimating the value of the final products and deducting the value of the goods consumed in production, thus arriving at value added; in other sectors it was necessary to obtain information directly on wages and other forms of factor income.

Thus in computing national income for 1959 we proceeded first of all to build up the gross national product and in the course of this we showed the distribution of the various types of factor income.

The types of organization in which income originates are divided into three groups; private enterprises, households and non-profit institutions and general government. Income originating in private enterprises is divided into wages and salaries, operating surpluses of corporations or limited liability companies and the operating surpluses of unincorporated enterprises, farms, professions and sole traders and partnerships.

Income originating in households and non-profit institutions is composed of actual and imputed rents of all dwellings, wages of domestic servants and the wages, salaries and rents paid by such non-profit institutions as schools, hospitals, etc.

Income originating in general government includes all wages, salaries and rents paid by central and local Government.

¹ The first population census was taken in 1961 but the Department of Statistics has not yet completed the tabulation of the data.

As for the gross domestic and gross national income, expenditure is divided into two groups: consumption and investment or capital formation. These are subdivided into consumption expenditure of households, Government current expenditure on goods and services, fixed capital formation of private enterprises and capital formation in the Government.

Agriculture, Forestry and Fishing

This is the most important single sector in the Jordanian economy. The contribution of this sector to gross national product was obtained by deducting from total revenue all expenses connected with the production of crops and livestock. The 1959 estimates were based on a sample survey of sixty-four villages. In 1960, production estimates were obtained from the Ministry of Agriculture. The quantities were valued at 75 per cent of wholesale prices in the harvest season for grains and legumes. In the case of fruits and vegetables, the ratios between farm prices and retail prices of each commodity were based on an intensive survey of the East Ghor area carried out by the Statistics Department in 1960. The revenue item includes the total value of all agricultural and livestock products, the value of sales of fish and the value of forest products. The expenses include wages of labour which included the value of wages paid in kind as well as those paid in cash, machinery expenses, seeds, fertilizers, insecticides and irrigation costs.

Mining and Quarrying and Manufacturing

Income arising in these sectors is equal to the value of sales at market price, plus the value of any increase of stocks, less the market value of all current purchases from other enterprises. The 1959 estimates are based on a complete industrial census. The 1960 estimates are based on a complete estimation of all establishments employing more than five persons and a sample of establishments employing up to five persons.

Construction

Value added in private construction is estimated from building licences issued by municipalities which give a classification of areas constructed by types. Cost estimates were obtained from special enquiries. Maintenance and repair to buildings were assumed to be 5 per cent of the net value of buildings. The value of public construction was obtained from the records of the

Ministry of Finance, of the Development Board and of the municipalities.

Electricity supply

Information relating to this sector was obtained by means of direct enquiries covering all the undertakings. These services are provided either by municipalities or by private establishments. Municipal water and sanitary services are included in Public Administration.

Transport

Transport includes rail, road and air transport undertakings together with establishments which provide services ancillary to transport such as travel agents, brokers, etc. The estimates are based on enquiries carried out among operators of road transport.

Wholesale and Retail Trade

Special sample surveys of wholesale and retail trade were carried out in 1959 and 1960 to obtain information on income arising in this sector. Import statistics were used as a check on the sales figures wherever possible. Gross profit margins were estimated on the basis of data on imports, wholesale and retail prices where these were available. In other cases, margins were established on the basis of enquiries among shopkeepers and merchants.

Banking

Information is based on returns sent to the Statistics Department by the various banks. Net interest received by the banking system is a cost to all the other sectors of the economy and to private households and should, in principle, be deducted from each sector. As there is no satisfactory method of allocating net interest between the sectors it has been deducted from this sector.

Ownership of Dwellings

Income arising in this sector consists of the net rent of all dwellings including an imputed element for the rent of owner-occupied dwellings. The estimates are based on the Ministry of Finance assessments of rental values for the urban property tax adjusted to take account of under-assessment in some areas. For the rural areas it has been assumed that rent per head is one-half that of the urban areas. The distribution of population

between urban and rural areas was obtained from the population census returns.

Services

The income arising in this sector was provided by a sample survey of establishments rendering personal services such as hotels, cafés and restaurants, barber shops etc. Information was also obtained in respect of all private educational institutions and from private hospitals. Expenditure by the Government on wages, salaries and rents for education and health has been included. All wages, salaries and rents paid by U.N.R.W.A. are included in this sector. Income of professional services, lawyers, doctors, midwives, etc., was estimated on the basis of the number of persons registered with the respective professional organizations or with the Government.

Public Administration and Defence

The income arising in Government services comprises the wages and salaries paid to all Government employees together with the rent paid for buildings rented by the Government. The figures are based on the records of actual expenditure of the Government.

The estimates of Jordan's gross domestic product and other related totals are reproduced in tables below.

TABLE I
Expenditure on Gross National Product at Market Prices
(J.D. million)

	1959	1960
1. Private consumption	78.6	84.5
2. General government consumption expenditure	27.7	27.7
3. Gross private fixed capital formation	9.8	9.8
4. Gross fixed capital formation of general government	3.9	3.5
5. Change in stocks	- 3.1	0.5
	116.9	126.0
6. Exports of goods and services	11.5	12.4
Expenditure on gross domestic product and imports	128.4	138.4
7. Less imports of goods and services	42.6	45.7
Expenditure on gross domestic product	85.8	92.7
8. Net factor income from abroad	1.0	1.1
Expenditure on gross national product	86.8	93.8

TABLE II
Industrial Origin of Gross Domestic Product

	1959	1960
1. Agriculture, forestry, fishing	11.4	13.0
Crops, forestry	10.3	9.3
Livestock	1.1	3.7
2. Manufacturing and mining	7.3	7.6
3. Construction	3.7	3.0
4. Electricity supply	0.7	0.8
5. Transport	9.7	10.1
6. Wholesale and retail trade	15.7	17.5
7. Banking	0.4	0.5
8. Ownership of dwellings	5.4	6.1
9. Public administration and defence	16.1	17.6
10. Services	7.5	8.1
	77.9	84.3

TABLE III
Finance of Gross Capital Formation

	1959	1960
1. Saving of general government	3.0	3.7
2. Saving of households and non-profit institutions	2.6	4.3
3. Deficit of nation on current account	4.6	5.7
4. Net errors and omissions	0.1	0.1
Gross domestic capital formation	10.6	13.8

TABLE IV
Composition of Gross Domestic Capital Formation

	1959	1960
1. Fixed capital formation	13.7	13.3
(a) Dwellings	3.4	3.8
(b) Non-residential buildings	1.1	1.2
(c) Other construction and works	3.2	2.8
(d) Transport equipment	2.4	1.2
(e) Machinery and other equipment	3.6	4.3
2. Change in stocks	-3.1	0.5
(a) Livestock	-3.2	-0.7
(b) Other	0.1	1.2
Gross domestic capital formation	10.6	13.8