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**SOCIAL ACCOUNTS OF THE MONETARY SECTOR
OF THE
TERRITORY OF PAPUA AND NEW GUINEA,
1956/57 TO 1960/61**

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FOREWORD

This study was carried out under an honorary Fellowship in the Research School of Pacific Studies at the Australian National University in Canberra from August, 1961 to October, 1962. Much of the work was done in Canberra although short periods were spent at the Reserve Bank of Australia in Sydney where the writer is employed and where library and other facilities were most useful. Two visits were made to the Territory for direct observation and collection of material. I am indebted to members of the Administration and the Territory business community for the co-operation and assistance received during these visits.

The co-operation of the Minister for Territories in allowing me to inspect Departmental files and in providing the services of officers of his Department has been of tremendous assistance in this work and I would like to place on record my appreciation of the efforts in this direction of the officers of the Economics Branch of the Department of Territories who provided much of this assistance. I am also indebted to officers of the Commonwealth Bureau of Census and Statistics, the Commonwealth Public Service Commissioner's Department, Defence Department and other Commonwealth departments who supplied information willingly and promptly. Last but not least, I offer my appreciation to the Director and members of the Research School of Pacific Studies at the Australian National University for their guidance and assistance, and to Professor T. W. Swan whose original work in this field has been the basis of estimates presented here.

Unfortunately, mainly due to health reasons, the completion and presentation of this final report has been somewhat delayed; however, it is hoped that this may be the forerunner of additional work in this field. Any opinions expressed in the text of the report are those of the writer and any misinterpretations or errors of fact or figures should not be attributed to those people or institutions who were so helpful in supplying the data used.

CHAPTER 1

INTRODUCTION

The total area of the Territory of Papua and New Guinea (henceforth referred to also as the Territory) is approximately 183,500 square miles, carrying a population at June, 1961 of nearly 2 million people, of which only 25,330 (or 1.3 per cent) were non-indigenous to the Territory. This area comprises the separate Territories of Papua and New Guinea; the Territory of Papua, comprising the southern portion of the eastern half of the island of New Guinea, together with a number of islands including the D'Entrecasteaux Islands and the Louisiade Archipelago, is an Australian territory; the Territory of New Guinea, comprising the northern portion of the mainland and the islands of New Britain, New Ireland, New Hanover, Manus, Buka, Bougainville and numerous small islands, is administered by Australia in trust from the United Nations Organisation.

Under the provisions of the Papua and New Guinea Act 1949/60 and by agreement with the United Nations, the two territories are administered as an administrative union; the headquarters of the large administration are in Port Moresby and serve both territories through a network of district offices.

The Japanese occupation during World War II from 1942/44 and subsequent occupation by allied military forces played havoc with the economic and social structure of the Territory; during this time, prior to the re-establishment of Civil Government in 1946, almost all European commercial, industrial and primary enterprises and most of the administrative, mission and residential establishments were brought to a point of near destruction. However, rehabilitation of the Territory was very rapid and with the aid of a War Damage Compensation Fund of some £12 million, extremely favourable export prices and substantial grants by the Commonwealth of Australia, the Administration was reformed and commercial agricultural enterprises were restored and extended, firstly in copra and rubber plantations and, as development proceeded, in other crops such as cocoa, coffee, peanuts and passionfruit. Except in the processing of primary products, which has kept pace with production, in-

dustrialisation has been relatively unimportant even to the present day, although in recent years manufacturing has increased and some development has taken place in various service industries including building and construction, commerce, transport and financial services.

The economy of the Territory relies strongly on its primary industries and although the indigenous population is predominantly engaged in subsistence agriculture, indigenous production of cash crops for the export and local markets has expanded significantly in recent years and there has been extensive growth in indigenous participation in many other phases of economic activity.

The indigenous male labour force was estimated in 1961⁽¹⁾ to be around 600,000 (approximately 30 per cent of total indigenous population) of which some 250,000 were thought to be self employed (either part-time or full-time) in commercial activities which are connected to the market economy. At June, 1961, there were approximately 73,000 indigenes in paid employment in the Administration and private industry. Of the total non-indigenous population of 25,330 at June, 1961,⁽²⁾ there were 13,868 persons in the work force, of which almost 40 per cent were employed by the Administration.

Some Concepts

The term "social accounting" has been derived from the practice which has arisen of preparing estimates, via a system of double entry accounts, for significant sub-divisions or sectors of an economy. Keynesian theory of income formation and the proposition that the level of expenditure on goods and services determines levels of production, employment and income have been largely responsible for the increasing interest displayed in national income analysis and the realisation of the need (especially for governments) for reliable statistical information in a form which will effectively display the characteristics of these levels.

(1) "The economic development of Papua and New Guinea". An address by the Minister of State for Territories, the Honorable Paul Hasluck, M.A., M.P. to the Economic Society of Australia and New Zealand, New South Wales Branch, Sydney, October, 1961.

(2) Commonwealth of Australia, Census, 29th June, 1961.

The activity involved in the production of goods and services in an economy during a particular period gives rise to income; national income may be defined as the sum of incomes received by factors of production in the period in return for their contribution to productive activity. It has become customary to consider this productive activity from two viewpoints. On the one hand, consideration may be given to the product (or income) available to the normal residents of a given territory or economy. On the other hand, attention may be focussed on the productive activity within the geographical borders of a given territory. In international terminology, it is usual to refer to the products of these two aspects of economic activity as the "national" product and the "domestic" product respectively. In each of these cases, of course, the product may be "gross" or "net" depending on whether provision has been made for the consumption of fixed capital and they may be at "factor cost" or "market prices" depending on whether allowance has been made for indirect taxes and subsidies. The concept of national product (or income) which accrues to normal residents regardless of the territory of origin, differs from the concept of domestic product (or income) by the inclusion of net factor income from abroad in the form of net receipts of interest, dividends and other forms of profit, of earnings by residents working abroad and other factor incomes of normal residents. In highly developed economies, there is little likelihood of large flows of this kind resulting in disparity between national and domestic product. However, considerable differences may arise where foreign owned companies play an important role in the economy being studied.

In the discussion of the economic development of the Territory, it has become customary (and convenient) to divide the economy into three sectors; firstly, a monetary sector still small in relation to the Territory as a whole, growing rapidly and about which most is known; secondly, a very large subsistence sector embracing the larger share of the indigenous population and about which little is known in terms of the volume and value of production; and thirdly, a transitional sector embracing some aspects of both the monetary and subsistence sectors.

Estimates presented here relate to the monetary sector and to that part of the transitional sector which can be measured in terms of monetary transactions. This involves the analysis of all non-indigenous economic activities together with associated indigenous transactions. Thus, pure subsistence has been excluded but an

attempt has been made to estimate the value of indigenous production in primary industry and in other fields in which the indigenous population is in contact with the market.

While it is admitted that this procedure runs counter to generally accepted opinion that economic activity in the subsistence sector should be valued and included in any estimates of domestic production, this does not mean that the writer disagrees with this opinion. On the contrary, it is readily agreed that for purposes of international comparison of welfare etc. estimates of gross income (or product) which exclude the income (or product) from the subsistence sector are well nigh meaningless since such comparisons cover a percentage only (usually small) of the population in question. However, two criteria have been observed in its exclusion. On the one hand, at the present stage of development of the Territory economy, international comparisons do not seem as important as the necessity for more complete knowledge of the structure and growth of the monetary economy since the development of the Territory as a whole is to a very large extent mirrored in the growth of the monetary economy.

On the other hand, lack of data relating to the subsistence sector and the necessity of developing methods of arbitrary valuation for the varied phases of economic activity in the sector (to say nothing of the problems of definition involved) make the value of such estimates extremely questionable. This may appear to be the "coward's way out" but it is felt that at this point much more will be gained by acquiring some worthwhile indicators of the direction in which the monetary economy is moving and when the data are available, imputation of the value of the subsistence product can be made with greater confidence.

It is important to realise that these are partial accounts only and are therefore not comparable with the various national income studies that have been made of other underdeveloped countries (e.g. those of British African Colonial territories). While the task of making separate estimates of subsistence activities has not been attempted here, the writer has no wish to suggest that it would not be worthwhile.

Nevertheless, it is hoped that the present estimates will prove of value in recording a systematic quantitative description over a period of years of the most dynamic part of the Territory's developing economic system.

CHAPTER 2

SUMMARY OF CONSTRUCTION OF ACCOUNTS

In the present exercise, social accounts have been constructed which result in estimates of the gross product (at market prices) of the monetary sector of the Territory of Papua and New Guinea. This gross product is similar in content to the Gross National Product⁽¹⁾ in the Australian national income estimates and in fact constitutes the gross domestic product in what is regarded as international terminology.⁽²⁾ It is, therefore, the market value of the aggregate product attributable to the factors of production located in the Territory of Papua and New Guinea as opposed to the market value of the aggregate product attributable to factors of production supplied of the normal residents of the Territory. In international terminology, this latter aggregate is referred to as the gross national product.

Estimates made in the course of this study cover a period of five years from 1956/57 to 1960/61 (July-June) and are based on a division of the economy into sectors as is usual in the study of expenditure in relation to production, consumption and the formation of capital.

The pioneer work in the construction and presentation of social accounts for the Territory of Papua and New Guinea was carried out in the early 1950's by Professor T.W. Swan of the Australian National University. These original, unpublished estimates and other related work sheets and tables which have been available to me, have been of invaluable assistance and are the source of comparative estimates for the year 1950/51 included in tables in Chapter 9.

(1) See Australian National Accounts, National Income and Expenditure, 1948/49 to 1961/62: Commonwealth Bureau of Census and Statistics, Canberra, Australia. In this publication, which incorporates some changes in the structure and presentation of Australian national accounts, these aggregates are known as the national turnover of goods and services.

(2) See Studies in Methods, Series F No 2, rev.1. A System of National Accounts and Supporting Tables: United Nations Statistical Office, 1960.

Although the availability of additional data has permitted changes in the methods of estimating some components in the accounts presented here, the estimation procedure used is basically similar to Professor Swan's, in that a series of double entry accounts is the foundation of the system. In addition, the same accounts and classification have been used thus enabling comparisons over time and the establishment of trends in the growth of economic activity in the Territory.

The sector accounts are listed below with the final accounts which together comprise the social accounts for the Territory; these are followed by a brief description of each in the order in which they appear. A detailed description of the actual construction of each account and of the methods used in each case is contained in subsequent chapters.

Sector Accounts

- A. Primary Enterprises Account (Chapter 4)
- B. Public Authorities Account (Chapter 5)
- C. Missions Account (Chapter 6)
- D. External Transactions Account (Chapter 7)
- E. Commercial Enterprises Account (Chapter 8)

Final Accounts

- F. Private Income and Outlay (Chapter 9)
- G. Private Capital Account (Chapter 9)
- H. Income and Expenditure Account (Chapter 9)

A. Primary Enterprises Account

Primary production plays a dominant role in the economy of the Territory and all activities in this sphere (including some borderline cases) have been grouped under the heading of Primary Enterprises which cover the following types of industry: -

- (i) Plantation Products - Copra, Cocoa, Coffee and Rubber (including processing).

- (ii) Other Agriculture, Fishing etc. - Passionfruit, Peanuts, Shell, Pastoral and other small groups.
- (iii) Mining.
- (iv) Forestry and Sawmilling (including plywood manufacture).
- (v) Oil prospecting.

In each of these subsectors, production accounts have been constructed based on information available in trade statistics, official production bulletins and other official publications and numerous other sources. In each case, the account has been credited with the gross income accruing to the operators from the sale of the product, both on the local market and on the overseas market, and debited with the estimated cost of production, administration and marketing expenses. Labour costs, both indigenous and non-indigenous, have been estimated on the basis of numbers employed in each industry and rates of payment. In all industries, non-indigenous⁽¹⁾ labour costs include the imputed drawings of working proprietors and, of course, the indigenous⁽²⁾ labour costs include, in addition to cash wages, the value of rations, issues etc. supplied in accordance with labour ordinances.

Estimates of indigenous production by the Department of Agriculture, Stock and Fisheries and the Department of Lands, Surveys and Mines, combined with estimates of the costs to indigenous operators, permit an apportionment of the resultant surplus arising from primary production between indigenous and non-indigenous operators.

In this sector, as in other sectors, only two basic categories of income are distinguished, 'labour income' which includes the imputed drawings of working proprietors and 'surplus' which in addition to net profit, includes rent, interest and depreciation. Income produced in the form of labour income and surplus, both indigenous

(1) In this report, although there is often an Asian or mixed race component, the term 'European' is synonymous with the term 'non-indigenous'.

(2) In this report the term 'native' is synonymous with the term 'indigenous'.

and non-indigenous, is reflected in the account for Private Income and Outlay in Chapter 9.

B. Public Authorities Account

Because of the comparative wealth of information available in the Administration Public Accounts and Annual Reports, coverage (and accuracy) in this sector is likely to be much better than in other sectors. Revenue and expenditure of the Territory Administration are in readily accessible form; direct expenditure by Commonwealth departments and instrumentalities active in the Territory have been made available by the Department of Territories and other Commonwealth departments; and receipts and expenditure of Native Local Government Councils have also been included. Information from these sources has been amalgamated to produce the Public Authorities Account from which the income produced in this sector has been derived.

C. Missions

The activities of religious missions, although largely associated with the Territory Administration, are nevertheless separated from the Administration and from other enterprises. Thus, the transactions of these missions, to the extent that they are known, are included in a separate account. However, details of the financial transactions of missions are somewhat scarce and the coverage in this account will be almost solely related to their activities in the fields of medical welfare and education although some account has been taken of their profits from copra production. Most other activity in the form of mission co-operative societies, trade store business etc., should be caught up in the account which covers commercial enterprises to be described presently; some activity in mission operated sawmills will also be included in the Primary Enterprises Account under Forestry and Sawmilling.

D. External Transactions Account

This account, which is the basis for a balance of payments account for the Territory, summarises all overseas trade transactions and external financial transactions including the movement of bank funds and, of course, the external finance received by the Administration and by missions. After taking accounts of net external

personal and business expenses in the form of travel and tourist expenditure, maintenance of dependants, external management costs etc., the account results in a residual which purports to disclose the volume of private non-bank capital flowing between the Territory and the rest of the world, presumably largely between the Territory and Australia. This capital movement is reflected in the Private Capital Account as External Private Finance.

E. Commercial Enterprises Account

This account, by the nature of its construction and by the definition attributed to commercial enterprises, is in fact a residual account and covers such activities as wholesale and retail trade, transport, building, processing (except those included in primary enterprises) and manufacturing and a number of service industries. The accounts as a whole have been constructed on the double entry principle normally used in social accounting procedure so that transactions contained in accounts so far described can be used to construct the account for commercial enterprises. These transactions supply entries for purchases and sales by these enterprises; indigenous and non-indigenous labour costs (including the estimate of the drawings of working proprietors) are estimated as residuals from labour cost estimates covering the total work force. The account is then completed by assuming a gross profit margin on consolidated turnover (i. e. before net rent and interest charges and depreciation) giving a balancing item which should account for the purchases from these enterprises by other sectors and which comprises in total both purchases for personal consumption and for private investment.

Due to the lack of complete data relating to the volume and direction of private investment expenditure in the Territory, the subdivision of these total purchases between consumption and investment must be based on rather broad lines. Some indication is given by the size of imports of fixed capital and transport equipment (and producers' materials) which are essential for the economic development of the Territory. In later years, further indicators may be derived from production bulletins, motor vehicle registrations, census data relating to housing, etc.

Having made these subdivisions, then, all entries for the last three accounts, which are assembled in Chapter 9, may be de-

rived from the sector accounts with the exception of Gross Savings which emerges as a residual in the account for Private Income and Outlay.

As the reader will quickly discover, a great many of the individual figures used are extremely uncertain and many of the main aggregates are consequently uncertain also. Considerable care must therefore be taken to examine the classifications and observations surrounding them before detailed conclusions can be drawn. Nevertheless, it may be of use to end this brief description with a brief summary of some of the main figures.

Estimates of the major components of income and expenditure are shown in the following table.

Income and Expenditure
Years ended 30th June

£ Million

	<u>1950/51</u>	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
<u>Income Payments & Other Charges</u>						
Labour Income	10	21	22	25	28	31
Surplus	5	8	7	10	12	9
<u>Gross Income</u>	14	29	29	35	40	40
Indirect Taxes less subsidies	1	2	2	3	2	3
<u>Gross Product (market prices)</u>	15	31	32	38	42	43
Imports and other payments for goods and services	12	23	24	24	25	31
<u>Total Market Supplies</u>	27	54	56	61	68	74
<u>Net Expenditure on Goods and Services</u>						
Public Authorities	7	14	16	17	20	24
Missions	..	1	1	1	1	2
Gross private investment	3	10	9	8	8	9
Personal consumption	10	17	19	20	21	25
<u>Gross Domestic Expenditure</u>	20	42	45	47	51	60
Exports and other receipts for goods and services	7	12	11	14	17	14
<u>Total Market Expenditure</u>	27	54	56	61	68	74

(Note: Totals may not add due to rounding)

The growth in the aggregates for total market supplies and expenditure provides a general indication of the expansion of the monetary sector of the Territory in the past decade, although the large excesses of expenditure over domestic product and of payments for imports over export receipts reflect the dependence of the Territory on overseas funds, in particular, on the annual grant by the Commonwealth of Australia, which has been an important feature of post-war economic activity in the Territory.

The components of gross domestic expenditure give some indication of the special character of the Territory economy at its present state of development. Personal consumption expenditure has continued to expand as a result of the continued growth in gross income. The apparent slackening in the rate of private investment since 1957/58 is largely due to the decline in expenditure on oil search, other private investment having increased steadily over this period. While in all years only about 30 per cent of the total expenditure by public authorities is for capital purposes, a large proportion of current expenditures by these authorities, e.g. education, health, agricultural extension etc., is devoted to development and can be regarded as investment in an economic sense in that it lays the foundation for improved production efficiency in later years.

Estimates of non-indigenous and indigenous labour income are dealt with in detail in Chapter 3 and the methods of estimation and construction of sector accounts are described more fully in Chapters 4 to 8. The final accounts are described in Chapter 9 where some additional interpretations are made and some conclusions drawn by the writer.

CHAPTER 3

THE WORK FORCE AND THE COST OF LABOUR

1. Non-Indigenous Work Force

The non-indigenous population of the Territory and the numbers in the related work force at census dates in 1954 and 1961 are shown below:-

	<u>June, 1954⁽¹⁾</u>	<u>June, 1961⁽²⁾</u>
Non-Indigenous Population	17,755	25,330
Non-Indigenous Work Force	10,281	13,868

The work force is distributed in relation to the various industries active in the Territory. However, while estimates of the total non-indigenous population are available for intercensal years, statistics relating to numbers in the work force and to an industrial classification of such numbers, are restricted to census years only. Even then, census data relate to those persons who actually spent the night (at the date of the census) at some place in the Territory. This means that census totals include some persons who are non-resident in the Territory and who do not contribute to gross product and exclude some persons (absent on leave, business, etc.) who are normally resident in the Territory and who do contribute to gross product. Adjustments are necessary to take account of these factors. In addition, adjustment is necessary to account for those persons included in the totals who are not at work or who are acting in the capacity of unpaid helpers.

For the analysis which it is intended to make here, it is convenient to divide the work force into three parts, namely:

- (a) Public Authorities (including Commonwealth Departments and Instrumentalities and Defence Forces).
- (b) Missions.
- (c) Private work force.

(1) Commonwealth of Australia, Census, 30th June, 1954.

(2) Commonwealth of Australia, Census, 29th June, 1961.

Estimates relating to Public Authorities⁽¹⁾ and Missions⁽²⁾ will be described in subsequent chapters so that the description which follows is intended to cover estimates of the "private work force" for the years 1956/57 to 1960/61.

The total work force is classified by industry groups and by sex at census dates in 1954 and 1961. Estimates of the total non-indigenous work force for intercensal years have been made by assuming a growth rate over the period similar to that of the Administration non-indigenous work force. The total private work force for each year is then estimated as follows:

<u>Estimated Private Work Force (Non-indigenous)</u>						
<u>Years ended 30th June</u>						
	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>
Estimated Total Work Force (Non-Indig.)	<u>11,019</u>	<u>11,679</u>	<u>12,046</u>	<u>12,363</u>	<u>12,920</u>	<u>13,868</u>
less Administration	2,316	2,830	3,119	3,366	3,798	4,536
C/wth. Depts. (Incl. Defence)	(1,313)	(1,242)	(1,265)	(1,236)	(1,191)	(1,243)
Missionaries	1,561	(1,665)	1,770	1,865	1,905	2,113
Not at work and unpaid helpers	(250)	(296)	(318)	(335)	(376)	419
Non-residents (tourists, short term visitors etc.)	<u>(250)</u>	<u>(300)</u>	<u>(300)</u>	<u>(300)</u>	<u>(400)</u>	<u>(425)</u>
	<u>5,690</u>	<u>6,333</u>	<u>6,772</u>	<u>7,102</u>	<u>7,670</u>	<u>8,736</u>
	5,329	5,346	5,274	5,261	5,250	5,132
Add Est. Numbers on leave	<u>(1,102)</u>	<u>(1,170)</u>	<u>(1,205)</u>	<u>(1,235)</u>	<u>(1,293)</u>	<u>(1,387)</u>
Private Work Force	<u>6,431</u>	<u>6,516</u>	<u>6,479</u>	<u>6,496</u>	<u>6,543</u>	<u>6,519</u>

Estimated Total Non-Indigenous Work Force

less

Administration and Commonwealth Departmental employees
 Defence Forces (estimated)
 Missionaries
 Persons not at work and unpaid helpers (estimated)
 Non-residents temporarily visiting the Territory (estimated)

plus

Territory residents absent on leave, business, etc. (estimated).

(1) Chapter 5.

(2) Chapter 6.

The residual thus produced purports to represent the total private work force at 30th June each year. To obtain a more representative total applicable to the year as a whole, averages of two years' consecutive totals have been attributed to financial years. These totals, of course, include employers and self-employed persons, the numbers of which have been estimated (by industry and sex) from census data by assuming a uniform rate of growth in the numbers in each industry over the period between censuses. Subtraction of an average of two years' consecutive totals of these employers and self-employed persons from the total private work force gives the following results:

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Total Private Work Force	6,474	6,498	6,487	6,520	6,532
Less Employers and Self-Employed	1,277	1,297	1,323	1,347	1,371
Private Employees	5,197	5,201	5,164	5,173	5,161

The task remains to classify these totals by industry, race and sex. From the percentage distribution of the total work force by industry at census dates and by assuming a uniform rate of growth in the numbers employed in each industry between censuses, it is possible to derive estimates of the total work force by industry and by sex for intercensal years. A classification, by industry and sex, of the numbers employed by the Administration and by Commonwealth departments has been made from Annual Reports, (1) reports of the Public Service Commission⁽²⁾ and from information received from Commonwealth departments. Estimates of the numbers in defence forces, the number of missionaries and the number of employers and self-employed persons by industry and sex have been made from available data.

(1) Commonwealth of Australia: Annual Reports of the Territory of Papua 1955/56 to 1960/61. Government Printer. Commonwealth of Australia: Annual Reports from the Trust Territory of New Guinea to the General Assembly of the United Nations 1955/56 to 1960/61. Government Printer.

(2) (a) Commonwealth of Australia: Annual Report of Public Service Commissioner 1955/6 to 1960/61. Government Printer.

(b) Territory of Papua & New Guinea: Annual Report of the Minister of State for Territories from the Public Service Commissioner 1955/56 to 1960/61. Government Printer.

The total work force, classified by industry and sex, has been reduced by:

- (a) Administration and Commonwealth Departmental employees
- (b) Defence forces
- (c) Missionaries
- (d) Employers and self-employed

each classified by industry and sex, to give a residual private work force classified by industry and sex at 30th June each year.

These totals have not been adjusted to take account of persons not at work and unpaid helpers, non-residents in the Territory and residents absent from the Territory. However, the percentage distribution by industry and sex is considered to be reasonably representative of the work force and has been applied to the totals derived above for financial years.

Territory of Papua and New Guinea

Employment of Indigenous Workers⁽¹⁾

at 31st March

Employment as at	31. 3. 56	31. 3. 57	31. 3. 58	31. 3. 59	31. 3. 60	31. 3. 61
Employed by Govt. (incl. C'wlth.)						
Police Force	2, 634	2, 803	2, 682	2, 768	2, 942	2, 850
Other (a)	14, 044	13, 575	13, 462	13, 770	13, 941	16, 373
Total Government	16, 678	16, 378	16, 144	16, 538	16, 883	19, 223
Employed by Private Industry						
Agreement	30, 683	32, 701	29, 354	28, 935	31, 192	29, 901
Casual	24, 111	22, 850	19, 225	23, 514	24, 863	26, 751
Total Private Ind.	54, 794	55, 551	48, 579	52, 449	56, 055	56, 652
Grand Total	71, 472	71, 929	64, 723	68, 987	72, 938	75, 875

(a) Includes Administration servants and employees of Commonwealth Departments but ex-

ment, the maximum period of employment is fixed by the ordinance depending on sex, marital status and on whether a married worker is accompanied by his family, with a maximum, under certain conditions, of four years employment with the same employer. The ordinance further provides that agreement workers (and their wives and children if they accompany them with the employer's consent) are provided with free transport and sustenance from the place of engagement to the place of employment and repatriation on termination of the agreement. Conditions under which an agreement may be terminated are also laid down in the ordinance.

In contrast to agreement workers who may be employed (subject to labour policy) anywhere within the Territory, casual workers may be employed only within their own home sub-district or within 25 miles of their homes. The employment of a casual worker, who is engaged without written agreement, can be terminated by either party at any time without notice.

The remuneration of both agreement and casual workers is also governed largely by the Native Labour Ordinance which provides for the deferment of portion of the monthly cash wages of an agreement worker to become payable upon termination of the agreement. No such conditions apply to casual workers who must be paid in full at regular (at least lunar monthly) intervals.

The minimum cash wage, payable to an agreement worker, prescribed at 25/- per lunar month from 6th October, 1960, was increased, as from 2nd January, 1961, to 30/- per lunar month in the first year of employment and 35/- per lunar month thereafter. Prior to October, 1960, the minimum wage was prescribed at 25/- per (calendar) month, having been increased from a minimum of 15/- per (calendar) month in July, 1956. An employer is also required to supply free of charge the necessary accommodation, medical attention, food, clothing, cooking and eating utensils and other articles as are prescribed for employees and their accompanying dependants.

The amendment to the Native Employment Ordinance in 1961 enabled approval of agreements for payment of a cash wage to certain unskilled workers in the urban areas of Port Moresby, Rabaul, Lae and Madang under which employers, including the Administration, are required to pay to these unskilled workers, at

least fortnightly, a minimum cash wage of £3 per week, with provision for deductions for accommodation, food, clothing, etc. where these are supplied to an employee by the employer. These agreements became effective as from 2nd January, 1961.

Minimum hourly rates, with provisions for the supply of accommodation, food, etc. and methods of payment are also laid down in respect of casual workers.

It can be seen that, especially in recent years, the varied methods of employment and remuneration make it difficult to calculate average rates payable in various occupations. While some information is available through official channels regarding rates payable, they do not always differentiate between different types of employment. For this reason, the attempts made here to calculate average cash wages payable for employment in various industries and the average value of food, clothing, etc. apply to all employees regardless of the method of employment or the method of payment. Although there is provision in certain circumstances for payment to an employee of a cash allowance in lieu of the issue of rations, clothing, etc. these estimates of the average value of rations, etc. have been applied to all employees as if no such cash payments were made. Similarly, it is implicitly assumed that payment of cash wages are made in the years in which they accrue thus disregarding the effect of the provision for deferment of cash wages of agreement workers.

A description follows of the methods used in estimating, for the period under review, average numbers engaged by private employers in various industries in the Territory and average rates applicable to these industries, resulting in estimates of the total indigenous labour cost to private industry, exclusive of the cost of recruitment and repatriation which is treated as a separate production cost rather than a labour cost and is described elsewhere. Estimates of the indigenous labour costs of the Public Authorities and Missions are described in Chapters 5 and 6 relating to those sectors.

Statistics of the number of indigenous workers, classified by industry, are collected each year as at 31st March by the Administration⁽¹⁾ showing numbers employed by Governments (including Commonwealth departments) and by private industry. The average

(1) Annual Reports - Appendix XVII.

numbers employed over financial years in each industry have been estimated firstly by interpolation of these statistics from 31st March to 30th June each year for each industry and secondly by calculating a two yearly average for each industry of consecutive yearly totals.

The Administration also collects and publishes in Annual Reports each year, statistics of the actual cash wage paid to indigenous workers in various occupations. Unfortunately, the form in which this information is collected and presented is not always consistent; in some years separate details are collected for agreement and casual workers; in some years all workers are included in a single frequency distribution. It has been found convenient to estimate average cash wages payable by industry rather than by occupation since more reliable information is available of the numbers employed by industry than by occupation. Estimates of the average cash wages payable by industry have been made on the basis of the information collected by the Administration and from some small collections of additional information carried out by the writer.

Estimates of the average value of rations, issues, etc. are made by the Administration each year as a basis for payment of cash allowances and overtime. These estimates are based on prescribed issues and retail values and probably overstate the cost of rations which would be applicable to larger plantations where economies are possible by producing a sizeable proportion of food requirements on the holdings. Savings of this kind would probably not be large on small or inefficient holdings. However, these estimates are applicable to an employee only and take no account of the rations and issues required to be made available to wives and children accompanying an employee, resulting in such cases in a substantial increase in cost to the employer. The incidence of this practice of wives and children accompanying the employee is very difficult to determine but discussions in the Territory indicate that perhaps as many as 8-10 per cent of employees are accompanied by a wife and some children. At a rough estimate, this could be responsible for about a $12\frac{1}{2}$ per cent increase in the cost of rations and issues which has been estimated on the basis of single employees only.

It is assumed that on other than rural holdings, this increase in cost is offset by economies possible in reducing the cost as estimated by the Administration so that in fact, the Administration estimate is accepted as an average applicable to all non-rural

holdings including the cost of wives and children. On rural holdings, although there would be some larger individual savings, it is estimated that due to economies practiced on these holdings, the increase of $12\frac{1}{2}$ per cent applicable to wives and children, is offset by a saving of 20 per cent over all holdings.

The results of the estimates of average numbers employed and average wage rates and value of rations, etc. are shown in Tables 3.7 and 3.8 which give the total costs to private employers by industry for the period 1956/57 to 1960/61.

TABLE 3.1

TERRITORY OF PAPUA AND NEW GUINEA

Income of Non-indigenous Private Employees By Industry, Race and Sex
Year ended 30th June 1957

Industry	European								Asian and Mixed Race								Total	
	Males			Females			Total		Males			Females			Total			
	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Amount (£'000)
Primary Production	441	1,350	595.4	11	940	10.3	452	605.7	110	690	75.9	1	520	.5	111	76.4	563	682.1
Mining and Quarrying	626	1,490	932.7	37	1,040	38.5	663	971.2	89	775	69.0	5	580	2.9	94	71.9	757	1,043.1
Manufacturing	540	1,250	804.6	60	860	51.6	600	856.2	108	630	68.0	12	475	5.7	120	73.7	720	929.9
Electricity, Gas, Water & Sanitary Services	16	1,250	20.0	4	860	3.4	20	23.4	2	630	1.3	-	-	-	2	1.3	22	24.7
Building & Construction	522	1,215	634.2	1	835	.8	523	635.0	75	610	45.8	-	-	-	75	45.8	598	680.8
Transport & Storage) Communications)	1,081	1,380	1,491.8	133	960	127.7	1,214	1,619.5	155	710	110.0	19	530	10.1	174	120.1	1,388	1,739.6
Finance & Property) Commerce) Community & Bus. Services)	539	1,185	638.7	227	815	185.0	766	823.7	77	590	45.4	32	440	14.1	109	59.5	875	883.2
Amusement, Hotels & Other Accommodation, Cafes, Personal Service	85	1,035	88.0	89	700	62.3	174	150.3	12	500	6.0	13	375	4.9	25	10.9	199	161.2
Other & Not Stated	35	1,165	40.8	31	800	24.8	66	65.6	5	580	2.9	4	485	1.7	9	4.6	75	70.2
TOTAL	3,885		5,246.2	593		504.4	4,478	5,750.6	633		424.3	86		39.9	719	464.2	5,197	6,214.8

TABLE 3.2

TERRITORY OF PAPUA AND NEW GUINEA

Income of Non-indigenous Private Employees by Industry, Race and Sex
Year ended 30th June 1958

Industry	European							Asian and Mixed Race							Total			
	Males			Females			Total		Males			Females					Total	
	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Amount (£'000)
Primary Production	458	1,400	641.2	10	980	9.8	468	651.0	115	750	86.3	1	560	.6	116	86.9	584	737.9
Mining and Quarrying	494	1,535	758.3	36	1,075	38.7	530	797.0	71	835	59.3	5	625	3.1	76	62.4	606	859.4
Manufacturing	553	1,290	713.4	68	890	60.5	621	773.9	111	675	74.9	14	505	7.1	125	82.0	746	855.9
Electricity, Gas, Water & Sanitary Services	26	1,290	33.5	5	890	4.5	31	38.0	4	675	2.7	1	505	.5	5	3.2	36	41.2
Building & Construction	534	1,250	667.5				534	667.5	76	650	49.4				76	49.4	610	716.9
Transport & Storage) Communications)	1,062	1,420	1,508.0	140	990	138.6	1,202	1,646.6	152	760	115.5	20	570	11.4	172	126.9	1,374	1,773.5
Finance & Property) Commerce)	482	1,220	588.0	353	840	296.5	835	884.5	69	630	43.5	50	470	23.5	119	67.0	954	951.5
Community & Bus. Services) Amusement, Hotels & Other Accommodation, Cafes, Personal Service	92	1,065	98.0	94	725	68.2	186	166.2	13	530	6.9	13	400	5.2	26	12.1	212	178.3
Other & Not Stated	35	1,200	42.0	34	825	28.1	69	70.1	5	615	3.1	5	460	2.3	10	5.4	79	75.5
TOTAL	3,736		5,049.9	740		644.9	4,476	5,694.8	616		441.6	109		53.7	725	495.3	5,201	6,190.1

TABLE 3.3

TERRITORY OF PAPUA AND NEW GUINEA

Income of Non-indigenous Private Employees by Industry, Race and Sex
Year ended 30th June 1959

Industry	European								Asian and Mixed Race								Total	
	Males			Females			Total		Males			Females			Total			
	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Amount (£'000)
Primary Production	490	1,430	700.7	9	1,000	9.0	499	709.7	120	765	91.8	1	575	.6	121	92.4	620	802.1
Mining and Quarrying	297	1,575	467.8	24	1,110	26.6	321	494.4	42	860	36.1	4	645	2.6	46	38.7	367	533.1
Manufacturing	548	1,320	723.4	71	915	65.0	619	788.4	110	695	76.5	14	520	7.3	124	83.8	743	872.2
Electricity, Gas, Water & Sanitary Services	24	1,320	31.7	6	915	5.5	30	37.2	4	695	2.8	1	520	.5	5	3.3	35	40.5
Building & Construction	522	1,280	668.2	-	-	-	522	668.2	75	670	50.2	-	-	-	75	50.2	597	718.4
Transport & Storage) Communications)	1,013	1,455	1,473.9	143	1,020	145.9	1,156	1,619.8	145	785	113.8	21	590	12.4	166	126.2	1,322	1,746.0
Finance & Property) Commerce)	612	1,250	765.0	436	860	375.0	1,048	1,140.0	87	650	56.6	62	485	30.1	149	86.7	1,197	1,226.7
Community & Bus. Services) Amusement, Hotels & Other Accommodation, Cafes, Personal Service	96	1,090	104.6	93	745	69.3	189	173.9	14	545	7.6	13	410	5.3	27	12.9	216	186.8
Other & Not Stated	29	1,230	35.7	30	855	25.7	59	61.4	4	635	2.5	4	475	1.9	8	4.4	67	65.8
TOTAL	3,631		4,971.0	812		722.0	4,443	5,693.0	601		437.9	120		60.7	721	498.6	5,164	6,191.6

TABLE 3.4

TERRITORY OF PAPUA AND NEW GUINEA

Income of Non-indigenous Private Employees by Industry, Race and Sex
Year ended 30th June 1960

Industry	European							Asian and Mixed Race							Total			
	Males			Females			Total		Males			Females					Total	
	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Amount (£'000)
Primary Production	479	1,500	718.5	11	1,050	11.6	490	730.1	130	765	99.5	1	575	.6	131	100.1	621	830.2
Mining and Quarrying	232	1,700	394.4	24	1,200	28.8	256	423.2	33	895	29.5	3	670	2.0	36	31.5	292	454.7
Manufacturing	544	1,425	775.2	75	995	74.6	619	849.8	108	720	77.8	15	540	8.1	123	85.9	742	935.7
Electricity, Gas, Water & Sanitary Services	25	1,425	35.6	8	995	8.0	33	43.6	4	720	2.9	1	540	.5	5	3.4	38	47.0
Building & Construction	538	1,380	742.4	11	960	10.6	549	753.0	77	690	53.1	2	515	1.0	79	54.1	628	807.1
Transport & Storage) Communications)	1,010	1,570	1,585.7	146	1,100	160.6	1,156	1,746.3	144	815	117.4	21	610	12.8	165	130.2	1,321	1,876.5
Finance & Property) Commerce)	650	1,400	910.0	421	975	410.5	1,071	1,320.5	93	700	65.1	60	525	31.5	153	96.6	1,224	1,417.1
Community & Bus. Services) Amusement, Hotels & Other Accommodation, Cafes, Personal Service	106	1,175	148.4	102	805	82.1	208	230.5	15	555	8.3	14	415	5.8	29	14.1	237	244.6
Other & Not Stated	27	1,330	35.9	34	925	31.5	61	67.4	4	655	2.6	5	490	2.5	9	5.1	70	72.5
TOTAL	3,611		5,346.1	832		818.3	4,443	6,164.4	608		456.2	122		64.8	730	521.0	5,173	6,685.4

TABLE 3.5

TERRITORY OF PAPUA AND NEW GUINEA

Income of Non-indigenous Private Employees by Industry, Race and Sex
Year ended 30th June 1961

Industry	European								Asian and Mixed Race								Total	
	Males			Females			Total		Males			Females			Total			
	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Rate (£ pa)	Amount (£'000)	No.	Amount (£'000)	No.	Amount (£'000)
Primary Production	542	1,600	867.2	5	1,110	5.6	547	872.8	145	835	121.1	1	625	.6	146	121.7	693	994.5
Mining and Quarrying	184	1,765	324.8	21	1,235	25.9	205	350.7	26	940	24.4	3	705	2.1	29	26.5	234	377.2
Manufacturing	584	1,480	864.3	84	1,020	85.7	668	950.0	117	755	88.3	17	565	9.6	134	97.9	802	1,047.9
Electricity, Gas, Water & Sanitary Services	12	1,480	17.8	10	1,020	10.2	22	28.0	2	755	1.5	1	565	.6	3	2.1	25	30.1
Building & Construction	505	1,435	724.7	8	985	7.9	513	732.6	72	725	52.2	1	545	.5	73	52.7	586	785.3
Transport & Storage) Communications)	1,047	1,630	1,706.6	172	1,130	194.4	1,219	1,901.0	149	850	126.7	25	635	15.9	174	142.6	1,393	2,043.6
Finance & Property) Commerce)	578	1,455	841.0	385	1,000	385.0	963	1,226.0	83	740	61.4	55	555	30.5	138	91.9	1,101	1,317.9
Community & Bus. Services) Amusement, Hotels & Other Accommodation, Cafes, Personal Service	122	1,220	148.8	114	825	94.1	236	242.9	17	585	9.9	16	440	7.0	33	16.9	269	259.8
Other & Not Stated	23	1,380	31.7	28	945	26.5	51	58.2	3	690	2.1	4	520	2.1	7	4.2	58	62.4
TOTAL	3,597		5,526.9	827		835.3	4,424	6,362.2	614		487.6	123		68.9	737	556.5	5,161	6,918.7

TABLE 3.6

TERRITORY OF PAPUA AND NEW GUINEA

IMPUTED DRAWINGS OF NON-INDIGENOUS WORKING PROPRIETORS

BY INDUSTRY

Years ended 30th June

Industry	Number					Rate (£ p. a.)					Amount (£'000)				
	1956-57	1957-58	1958-59	1959-60	1960-61	1956-57	1957-58	1958-59	1959-60	1960-61	1956-57	1957-58	1958-59	1959-60	1960-61
Primary Production	374	388	402	416	431	1,800	1,900	2,000	2,100	2,100	673.2	737.2	804.0	873.6	905.1
Mining and Quarrying	33	28	23	17	12	1,550	1,590	1,630	1,750	1,800	51.2	44.5	37.5	29.8	21.6
Manufacturing	155	146	139	132	126	1,460	1,500	1,540	1,650	1,700	226.3	219.0	214.1	217.8	214.2
Electricity, Gas, Water and Sanitary Services	2	4	5	5	5	1,460	1,500	1,540	1,650	1,700	2.9	6.0	7.7	8.3	8.5
Building and Construction	128	131	134	137	139	1,430	1,460	1,500	1,600	1,650	183.0	191.3	201.0	219.2	229.4
Transport and Storage) Communications)	64	63	61	60	59	1,460	1,500	1,540	1,650	1,700	93.4	94.5	93.9	99.0	100.3
Finance and Property) Commerce)	457	478	500	521	541	1,430	1,460	1,500	1,600	1,650	653.5	697.9	750.0	833.6	892.7
Community and Business Services) Amusement, Hotels and Other Accommodations, Cafes, Personal Service, etc.	60	56	56	56	56	1,500	1,540	1,580	1,700	1,750	90.0	86.2	88.5	95.2	98.0
Other and Not Stated	4	3	3	3	2	1,340	1,370	1,400	1,500	1,550	5.4	4.1	4.2	4.5	3.1
TOTAL	1277	1297	1323	1347	1371						1978.9	2080.7	2200.9	2381.0	2472.9

VALUE OF CASH WAGES, RATIONS, ISSUES, ETC.

(Paid to Indigenous Employees in Private Industry)

By Industry

Years ended 30th June

Industry	1956-57			1957-58			1958-59			1959-60			1960-61		
	Average Cash Wage (£ p. mth.)	Average Value of Rations, Issues, etc. (£ p. mth.)	Total Value (£ p. mth.)	Average Cash Wage (£ p. mth.)	Average Value of Rations, Issues, etc. (£ p. mth.)	Total Value (£ p. mth.)	Average Cash Wage (£ p. mth.)	Average Value of Rations, Issues, etc. (£ p. mth.)	Total Value (£ p. mth.)	Average Cash Wage (£ p. mth.)	Average Value of Rations, Issues, etc. (£ p. mth.)	Total Value (£ p. mth.)	Average Cash Wage (£ p. mth.)	Average Value of Rations, Issues, etc. (£ p. mth.)	Total Value (£ p. mth.)
Copra & Cocoa	1.55	4.66	6.21	1.58	4.64	6.22	1.60	4.79	6.39	1.75	5.24	6.99	2.16	5.36	7.52
Coffee	1.55	4.66	6.21	1.58	4.64	6.22	1.60	4.79	6.39	1.75	5.24	6.99	2.16	5.36	7.52
Rubber	1.55	4.66	6.21	1.58	4.64	6.22	1.60	4.79	6.39	1.75	5.24	6.99	2.16	5.36	7.52
Other Agriculture (Incl. Pastoral & Forestry)	1.55	4.66	6.21	1.58	4.64	6.22	1.60	4.79	6.39	1.75	5.24	6.99	2.16	5.36	7.52
Gold Mining	1.95	5.18	7.13	2.30	5.16	7.46	2.45	5.32	7.77	2.60	5.82	8.42	2.95	5.96	8.91
Oil Search	1.95	5.18	7.13	2.30	5.16	7.46	2.45	5.32	7.77	2.60	5.82	8.42	2.95	5.96	8.91
Other Mining & Quarrying	1.95	5.18	7.13	2.30	5.16	7.46	2.45	5.32	7.77	2.60	5.82	8.42	2.95	5.96	8.91
Manufacturing	1.95	5.18	7.13	2.30	5.16	7.46	2.45	5.32	7.77	2.60	5.82	8.42	2.95	5.96	8.91
Building & Construction	4.60	5.18	9.78	5.38	5.16	10.54	5.43	5.32	10.75	5.47	5.82	11.29	6.75	5.96	12.71
Transport & Storage	5.15	5.18	10.33	5.55	5.16	10.71	5.65	5.32	10.97	5.90	5.82	11.72	6.80	5.96	12.76
Commerce	2.07	5.18	7.25	2.75	5.16	7.91	2.98	5.32	8.30	3.17	5.82	8.99	3.62	5.96	9.58
Personal Service	2.70	5.18	7.88	2.80	5.16	7.96	2.90	5.32	8.22	2.90	5.82	8.72	3.45	5.96	9.41
Miscellaneous (incl. Communications, Religion & Social Welfare, Health & Hospitals, Education and n. e. i.)	2.44	5.18	7.62	2.55	5.16	7.71	2.70	5.32	8.02	2.80	5.82	8.62	3.20	5.96	9.16

TOTAL COST OF CASH WAGES, RATIONS, ISSUES, ETC. PAID TO INDIGENOUS

EMPLOYEES IN PRIVATE INDUSTRY

BY INDUSTRY

Years ended 30th June

	Average Number Employed					Total Cash Wages (£'000)					Total Rations, Issues, etc. (£'000)					Total Cost (£'000)				
	1956-57	1957-58	1958-59	1959-60	1960-61	1956-57	1957-58	1958-59	1959-60	1960-61	1956-57	1957-58	1958-59	1959-60	1960-61	1956-57	1957-58	1958-59	1959-60	1960-61
Copra and Cocoa	24,242	23,677	24,022	25,625	26,607	450.9	448.9	461.2	538.1	689.6	1,355.6	1,318.3	1,380.8	1,611.3	1,711.4	1,806.5	1,767.2	1,842.0	2,149.4	2,401.0
Coffee	2,584	2,446	2,812	3,238	3,308	48.1	46.4	54.0	67.8	85.7	144.5	136.2	161.6	203.2	212.8	192.6	182.6	215.6	271.0	298.5
Rubber	6,108	6,129	5,982	6,009	6,310	113.6	116.2	114.9	126.2	163.5	341.6	341.3	343.8	377.8	405.9	455.2	457.5	458.7	504.0	569.4
Other Agriculture (incl. Pastoral & Forestry)	1,493	1,705	1,732	1,860	1,957	27.7	32.3	33.2	39.1	50.7	83.5	94.9	99.6	116.9	125.9	111.2	127.2	132.8	156.0	176.6
Gold Mining	1,931	1,284	1,045	1,097	1,016	45.2	35.4	30.7	34.2	36.0	120.0	79.5	66.7	76.6	72.6	165.2	114.9	97.4	110.8	108.6
Oil Search	3,228	2,351	1,536	1,087	456	75.5	64.9	45.1	33.9	16.2	200.7	145.6	98.1	75.9	32.6	276.2	210.5	143.2	109.8	48.8
Other Mining and Quarrying	61	54	54	77	243	1.4	1.5	1.6	2.4	8.6	3.8	3.3	3.4	5.4	17.4	5.2	4.8	5.0	7.8	26.0
Manufacturing	2,019	2,140	2,341	2,720	3,015	47.2	59.1	68.8	84.9	106.7	125.5	132.5	149.5	189.9	215.6	172.7	191.6	218.3	274.8	322.3
Building & Construction	1,733	1,294	1,141	1,423	1,843	95.7	83.5	74.4	93.4	149.3	107.7	80.2	72.8	99.4	131.8	203.4	163.7	147.2	192.8	281.1
Transport & Storage	1,427	1,362	1,525	1,744	1,534	88.2	90.7	103.4	123.5	125.2	88.7	84.3	97.4	121.8	109.7	176.9	175.0	200.8	245.3	234.9
Commerce	3,509	3,587	3,656	3,624	3,552	87.2	118.4	130.7	137.9	154.3	218.1	222.1	233.4	253.1	254.0	305.3	340.5	364.1	391.0	408.3
Personal Service	4,096	3,843	4,045	4,602	4,814	132.7	129.1	140.8	160.2	199.3	254.6	238.0	258.2	321.4	344.3	387.3	367.1	399.0	481.6	543.6
Miscellaneous (incl. Communications, Religion & Social Welfare, Health & Hospitals, Education & n.e.i.)	1,962	1,797	1,540	1,680	2,025	57.4	55.0	49.9	56.4	77.8	122.0	111.3	98.3	117.4	144.8	179.4	166.3	148.2	173.8	222.6
TOTALS	54,393	51,669	51,431	54,779	56,680	1,270.9	1,281.4	1,308.7	1,498.0	1,862.9	3,166.2	2,987.5	3,063.6	3,570.1	3,778.8	4,437.1	4,268.9	4,372.3	5,068.1	5,641.7

CHAPTER 4

PRIMARY ENTERPRISES

A general description of this sector and of the overall method of estimation was given in Chapter 2 where the following grouping of sub-sectors was noted:

- (i) Plantation Products - copra, cocoa, coffee and rubber (including processing).
- (ii) Other Agriculture, Fishing etc. - passionfruit, peanuts, shell, pastoral and other groups.
- (iii) Mining.
- (iv) Forestry and Sawmilling (including plywood manufacture).
- (v) Oil Prospecting.

Although space does not allow a comprehensive reproduction of the methods used, a more detailed description of the estimates for each sub-sector follows.

(i) Plantation Products

Estimates here embrace the production, including processing, of the plantation products of copra (and by-products), cocoa, coffee and rubber. In most industries in the Territory falling into the category of primary enterprises, the product requires some processing before it can be marketed. This applies to the production in this group, particularly copra and coffee production, as well as to products in other groups in the sector, for example, timber and timber products (see Forestry and Sawmilling) and to the processing of passionfruit juice and pulp. In some instances data are available to separate the cost of processing, the more important cases being copra and timber products; in other cases it is very difficult to separate these costs. For this reason, in all cases the cost of processing has been included here with other production costs and hence

the end products are treated as part of the primary enterprise sector. It is known that in official statistics presented by the Bureau of Statistics, ⁽¹⁾ these activities, where information is available, are regarded as manufacturing activities and are included in the statistics as such. Naturally, account has been taken of these facts when using the official data.

While some costs of production can be estimated for individual products within the sector, the nature of some of the costs involved and the information available about them, made it more convenient to assess them for plantation products as a group. Hence a production account for each of the products in this category is not available here; only the account for plantation products as a whole has been reproduced.

The whole of the product in this sub-sector is marketed externally. Marketing arrangements are, however, quite varied. The Copra Marketing Board which came into operation in 1952 is the sole exporter of copra from the Territory and controls the export and sale of copra on overseas markets. In the post-war period, a long term marketing agreement existed between the Governments of the United Kingdom and the Commonwealth of Australia, under which the excess of the copra over the requirements of the Territory and Australian markets was to be purchased by the United Kingdom Government. Following the termination of the agreement on December 31, 1957, the existing Board was reconstituted to continue as a marketing authority for copra. All copra is received by the Board under a system of grade and ownership, tentative purchase prices are declared and final prices and returns to growers are determined in the light of actual trading results. The system applies to all producers of copra including indigenes who are determined as competent to operate their own affairs. Coconut Products Pty. Ltd. in Rabaul is the sole copra crushing firm in the Territory and in addition to copra produced on associated plantations, purchases quantities of copra from the Board. This firm is authorised to export a specified quantity of coconut oil each year.

Australia provides a market for the bulk of the Territory coffee production, which is sold largely through the New Guinea

(1) Territory of Papua and New Guinea: Production Bulletin Nos. 1-3 (1958/59 to 1960/61).
Part II Secondary Industries. Bureau of Statistics, Papua.

Coffee Agents' Association, a voluntary organisation consisting of five Australian agents handling coffee in Australia. Some plantations and local traders who have the necessary facilities act as immediate buyers from both non-indigenous and indigenous growers. A large share of the Territory cocoa exports also goes to Australian markets as well as to the United Kingdom, the United States of America, Germany, the Netherlands and Japan. Most of these exports of cocoa are sold through agents on growers' account in Australia or overseas by direct negotiation with a buyer although some agents may also act as buyers, offering a firm price for cocoa delivered to store at Territory centres.

Almost all of the rubber produced in the Territory is sold through the Papuan Rubber Pool in Sydney which negotiates sales to Australian rubber users.

However, statistics of oversea sales of each of these products are only available through the official statistics⁽¹⁾ of Territory oversea trade and are quoted on the basis of f.o.b. Territory ports. Thus the total value of exports of these products (f.o.b. Territory ports) has been accepted as the value of output in these industries each year which, together with capital account charges, has been reduced by total costs of production (to f.o.b. Territory ports), to reveal a surplus which must be apportioned between indigenous and non-indigenous operators. This procedure neglects the movement in stocks in each year (which, although some figures were available, could not be obtained with accuracy).

Capital account charges represent the capitalised cost of development expenditure and are based on costs relating to new plantings etc. including estimated costs of labour and materials.

Averages of total unit costs of production (to f.o.b. Territory ports) for the period covered by this study were estimated for each product from available information and are shown below.

(1) Territory of Papua and New Guinea: Oversea Trade Bulletins Nos. 1-6. 1955/56 to 1960/61. Bureau of Statistics, Papua.

COPRA(1)

(£ per ton)	1956/57	1957/58	1958/59	1959/60	1960/61
Cash Costs	38.3	39.3	39.7	39.7	40.2
Depreciation - Land & Bldgs.	2.7	2.7	2.8	2.8	2.8
Handling Charges and Administration (C. M. Board)	<u>2.2</u>	<u>2.2</u>	<u>2.2</u>	<u>2.2</u>	<u>2.2</u>
	<u>43.2</u>	<u>44.2</u>	<u>44.7</u>	<u>44.7</u>	<u>45.2</u>

COCOA(2)

(£ per ton)					
Cash Costs	86.7	89.1	91.2	93.0	93.9
Depreciation - Land & Bldgs.	10.3	10.5	10.8	11.0	11.1
Handling Charges	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>	<u>2.5</u>
	<u>99.5</u>	<u>102.1</u>	<u>104.5</u>	<u>106.5</u>	<u>107.5</u>

Commission 2½% of Gross Return

COFFEE(3)

(£ per ton)					
Cash Costs	253.7	258.3	258.3	261.4	269.1
Depreciation - Land & Bldgs.	26.3	26.7	26.7	27.1	27.9
Marketing					
Freight to f. o. b.	9.3	9.3	9.3	9.3	9.3
Handling Charges	2.0	2.0	2.0	2.0	2.0
Commission (3%)	<u>20.0</u>	<u>17.5</u>	<u>14.0</u>	<u>14.5</u>	<u>14.5</u>
	<u>311.3</u>	<u>313.8</u>	<u>310.3</u>	<u>314.2</u>	<u>322.8</u>

RUBBER(4)

Pence per lb.					
Cash Costs	16.13	16.83	17.30	18.23	19.17
Depreciation - Land & Bldgs.	<u>1.12</u>	<u>1.17</u>	<u>1.20</u>	<u>1.27</u>	<u>1.33</u>
	<u>17.25</u>	<u>18.0</u>	<u>18.50</u>	<u>19.50</u>	<u>20.50</u>
Handling Charges	£2.5 per ton				
Commission	3% of Gross Return				

(1) (a) Commonwealth of Australia: "An economic and cost survey of the copra industry in the Territory of Papua and New Guinea." Bureau of Agricultural Economics, Canberra, 1953.

(b) Commonwealth of Australia: "An economic study of the cocoa growing industry in Papua and New Guinea". Department of Territories, Canberra, 1958.

(c) Information supplied by some producers and by public accountants in the Territory.

(2) (a) Commonwealth of Australia: "An economic study of the cocoa growing industry in Papua and New Guinea". Department of Territories, Canberra, 1958.

(b) Information supplied by public accountants in the Territory.

(3) (a) Commonwealth of Australia: "The coffee industry in Papua-New Guinea". An economic survey. Bureau of Agricultural Economics, Canberra, February 1961.

(b) Information supplied by public accountants in the Territory.

(4) Information supplied by Department of Territories, the Administration and by public accountants in the Territory.

With the exception of costs of recruitment and repatriation and native cash costs, all purchases were estimated using unit cost components based on economic surveys carried out by the Bureau of Agricultural Economics, the Department of Territories, the Territory Administration, and on additional information collected by direct observation. Native cash costs were estimated by making assumptions about the likely costs to indigenous operators, in relation to non-indigenous costs, and include the cost of getting the product to market and additional handling charges. The items of income produced (and recruitment and repatriation expenses) were estimated for all products as a group.

European Labour Income and Native Wages and Keep have been estimated by industry and after some adjustments can be obtained from Tables 3.1-3.6 and 3.8 respectively as follows:

(a) European Labour Income - Plantation Products (£'000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Employees - European	605.7	651.0	709.7	730.1	872.8
Other	76.4	86.9	92.4	100.1	121.7
Working Proprietors	<u>673.2</u>	<u>737.2</u>	<u>804.0</u>	<u>873.6</u>	<u>905.1</u>
	1,355.3	1,475.1	1,606.1	1,703.8	1,899.6
Copra processing included in Manufacturing	<u>26.0</u>	<u>27.0</u>	<u>35.0</u>	<u>35.0</u>	<u>36.3</u>
	1,381.3	1,502.1	1,641.1	1,738.8	1,935.9
Deduct Other Agriculture, etc.	<u>80.0</u>	<u>81.0</u>	<u>94.0</u>	<u>100.0</u>	<u>102.0</u>
	<u>1,301.3</u>	<u>1,421.1</u>	<u>1,547.1</u>	<u>1,638.8</u>	<u>1,833.9</u>

(b) Native Wages and Keep - Plantation Products (£'000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Copra and Cocoa	1,806.5	1,767.3	1,842.0	2,149.4	2,401.0
Coffee	192.6	182.6	215.6	271.0	298.5
Rubber	<u>455.2</u>	<u>457.5</u>	<u>458.7</u>	<u>504.0</u>	<u>569.4</u>
	<u>2,454.3</u>	<u>2,407.4</u>	<u>2,516.3</u>	<u>2,924.4</u>	<u>3,268.9</u>

Government Royalties and Rent represents the amount attributable to these products by apportioning the total income from leases of land by the Administration between agricultural leases and other leases on the basis of information published about lease rentals in the Government Gazette.

Export Duties are the total of these duties levied on Territory exports and coincide with amounts shown in the receipts of Public Authorities. (1)

Marketing Funds represents the contribution by growers to the Papua and New Guinea Copra Fund which was established in 1946, (as the Copra Stabilisation Reserve Fund) for the purpose of assisting to maintain the industry on a sound basis. Contributions were made in conjunction with the payment of export duty and ceased with the elimination of export duties from 1st July, 1959. Some small overlapping occurred in 1959/60 in both export duties and Copra Fund contributions.

Government Plantation Surplus is an attempt to estimate the surplus obtained by the Administration in the operation of experimental stations in plantation products. The estimates have been made on the basis of information supplied by the Administration regarding production and employment and some broad assumptions regarding costs, etc. The results are not regarded as extremely accurate, but in view of the relative size of the resulting surpluses, errors should be small.

Estimates of the volume of copra delivered to the Copra Marketing Board by missions have been made from information supplied by the Board and, by making estimates of the costs of production and marketing involved, a figure of Mission Plantation Surplus has been derived for each year. Here again, the assumptions necessary regarding operating costs etc. may be responsible for some errors but it is hoped that these will also be relatively small.

The total receipts from the sale of copra and copra products

(1) Table 5.1.

include the export proceeds from the copra by products of coconut oil and copra oil cake and meal produced and exported by Coconut Products Pty. Ltd. The costs involved in the processing of these by products must therefore be included in the total cost of production. This was done by piecing together whatever information could be obtained in relation to this processing in the form of a separate production account which was then consolidated with other data relating to the production of copra.

The resulting surplus in this account for plantation products had then to be apportioned between indigenous and non-indigenous operators and this was done by estimating the surplus accruing to indigenous operators and attributing the remainder to non-indigenous growers. Native cash costs, including production and marketing costs, have already been estimated. From estimates of production of each crop made by the Department of Agriculture, Stock and Fisheries, (1) the gross income from indigenous production was estimated on the basis of export prices from which the total cash costs were subtracted, resulting in the produce surplus accruing to indigenous growers. The product of the indigenous grower in plantation industries is marketed in many different ways; copra may be delivered by the grower to the Copra Marketing Board or it may be sold at various stages of processing before this point to non-indigenous growers; coffee, because of the additional processing required before sale, is usually sold to non-indigenous growers in the parchment stage; cocoa may be sold individually to producers, to private fermentaries, or as in the case of the Tolai Cocoa Project in New Britain, to centrally operated fermentaries for sale on the growers' behalf; or, in the final instance, products may be sold to the Administration for further processing and sale. However, the method used in assessing gross income from total production and export prices assumes that the whole of the product of native growers is marketed directly on the growers' behalf. This assumption is overcome in the estimation of native cash costs by including costs of processing and marketing which are in fact borne in many instances by growers or associations who have purchased the product from the indigenous operator.

The production account for plantation products is presented

(1) Annual Reports - Appendix VIII.

in Table 4.1 in which the surplus accruing to non-indigenous operators appears as Private European Surplus.

(ii) Other Agriculture, Fishing etc.

In addition to the major plantation products produced in the Territory which were accounted for in (i) above, a variety of other agricultural products are produced by non-indigenous and indigenous operators, some of which are directed towards the export market and some sold locally. The production of passionfruit for the export of passionfruit juice and pulp is entirely in the hands of native growers; edible nuts (peanuts) are produced for both local and export markets; shell fishing for trochus and green snail shell for export for use in the button trade has been seriously affected by the introduction of plastics and other substitutes; crocodile skins are also finding a ready market outside the Territory. Many other crops are grown for the supply of the local market including fruit and vegetable growing (largely in the hands of natives), some grain crops (including rice) and industrial crops (kenaf, sisal, manila hemp, etc.). Also included in this category are the supply of fresh fish for the local market and cattle and sheep raising and dairying which provide fresh meat and milk for local consumption.

With the exception of those products which reach the export market and consequently are covered in oversea trade statistics, the full extent of agricultural pursuits carried on by both indigenous and non-indigenous population in the Territory is not well known. The bulk of native production is of course for subsistence purposes and attempts have been made here to include only that part of this production which enters the market. Some statistics of production by both indigenous and non-indigenous operators have been produced by the Administration⁽¹⁾ and have been a valuable guide. However, the final estimates produced here have relied on a variety of other factors including population growth and movements in prices. The components of total receipts in the production account for Other Agriculture, Fishing etc. are as follows:

(1) Annual Reports - Appendix VIII.

Other Agriculture, Fishing, etc.

	<u>Total Receipts</u>				
	<u>£'000</u>				
<u>Years ended 30th June</u>	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
<u>Export Sales (f. o. b. Territory Ports)</u>					
Peanuts	51	141	297	284	280
Passionfruit juice and pulp	29	72	86	94	57
Crocodile skins	64	70	43	65	128
Shell	322	112	95	110	54
Other	33	28	59	60	49
	499	423	580	613	568
<u>Home Sales</u>	1,100	1,250	1,300	1,400	1,500
	-----	-----	-----	-----	-----
<u>Total Receipts</u>	1,599	1,673	1,880	2,013	2,068
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On the information available regarding native participation in each of the activities covered in this heading, obtained both from published production statistics and from direct enquiry in the Territory, it was decided that the shares of non-indigenous and indigenous operators in total receipts were respectively 45 per cent and 55 per cent for all years covered in this analysis. Estimates of costs of production are rather less exact and rely on some rather extensive guesswork involving cost relationships and expected returns and on the assumption that production costs attributed to indigenous output are considerably lower than non-indigenous costs. The results appear in Table 4.2.

(iii) Mining

Gold, silver and small quantities of platinum, osmiridium and manganese are the only mineral products won from the Territory. Exploration and investigation of other minerals including copper, iron, lead, zinc, sulphur and coal have been carried out but have not resulted in commercial production. Gold production predominates,

most of which comes from the Morobe district in New Guinea, and is obtained by alluvial mining methods as well as by open cut and underground mining. Small groups of native miners also produce sizeable quantities of alluvial gold.

Statistics relating to production and costs in this category are somewhat better than others. In addition to overseas trade statistics of the export proceeds from the sale of gold, the value of production of these mineral products is calculated each year by the Administration, (1) giving the shares attributable to both indigenous and non-indigenous miners. These production statistics are shown below:

Years ended 30th June	<u>Value of Mineral Production</u>				
	<u>£'000</u>				
	<u>1956-57</u>	<u>1957-58</u>	<u>1958-59</u>	<u>1959-60</u>	<u>1960-61</u>
Gold	1,238.3	787.0	713.9	707.1	669.5
Silver	16.2	11.7) 11.4	14.3	12.7
Other	1.1	3.2		1.4	2.5
Total (a)	<u>1,255.6</u>	<u>801.9</u>	<u>725.3</u>	<u>722.8</u>	<u>684.7</u>
(a) Includes indigenous gold (and associated silver) production valued at	34.1	45.0	57.1	58.0	80.9

Proceeds from export sales have been obtained from Overseas Trade Bulletins and are shown in the production account (Table 4.3). Home sales in this account represent the difference between the value of production and the export proceeds and in fact constitute the nearest approach possible to the change in stocks of mineral products, hence the negative entries in some years. Commonwealth Government Gold Subsidy is the total of gold mining industry assistance payments made by the Commonwealth of Australia to small producers of gold in the Territory and was obtained from Common-

(1) Annual Reports - Appendix XII.

wealth Budget Papers⁽¹⁾ and from files in the Department of Territories. A subsidy is payable to indigenous producers under the same conditions as to non-indigenous producers; the amounts paid to these producers are estimated each year by the Administration and are as follows:⁽²⁾

	<u>(£ '000)</u>
1956-57	3.3
1957-58	5.7
1958-59	7.3
1959-60	8.9
1960-61	12.4

No official statistics are available of the costs incurred in this industry in the form of materials, fuel, etc. (including refining costs) and other expenses (miscellaneous costs of administration, insurance, freight, etc.). Some ideas of the magnitude of these costs were obtained from inspection and analysis of accounts of mining companies in the Territory and in Australia and it was estimated that the costs of materials, fuel, etc. were between 30 per cent and 40 per cent of the gross returns from production and other expenses were about 5 per cent of gross returns. For the purpose of these estimates, these costs (to non-indigenous operators) have been regarded as averaging out at 35 per cent and 5 per cent respectively of the gross value of production in all years. Native cash costs, of course, are considerably lower than non-indigenous costs and have been arbitrarily placed at about 10 per cent of the value of native production in all years.

The costs of non-indigenous and indigenous labour, including the cost of recruitment and repatriation, were estimated by applying an average rate of remuneration (including the value of keep for indigenous employees) to the estimated average numbers employed in the industry obtained from returns made available by the Department of Territories.

Government Royalties and Rent represents amounts paid to the Administration under the Mining Ordinance and is largely the

(1) Commonwealth of Australia: The Budget. Government Printer.

(2) Annual Reports.

payment of royalty but also includes lease payments, fees for miners' rights and other fees. Indigenous producers are not required to pay royalty.

The surplus accruing to indigenous producers (Native Produce Surplus) was assessed by reducing the estimated gross returns to these producers by the estimated cash costs involved. The surplus accruing to non-indigenous producers (Private European Surplus) thus appears as a residual in the production account (Table 4.3).

(iv) Forestry and Sawmilling

Extensive post-war development has occurred in the forestry and sawmilling industry in the Territory, strengthened by the demands for timber generated by the destruction of World War II and by the possibilities of expanding markets which have been developed outside the Territory for timber and timber products. The rights of the indigenous population and of non-indigenous operators in this field are protected by the Forestry Ordinance which provides for the protection and management of forests, timber reserves and forest produce, and acquisition of land and control of timber rights, the issue of permits and licences and related matters.

In addition to extensive sawmilling operations providing large quantities of sawn timber for the local market and for export, considerable quantities of veneer sheets and plywood are produced at factories at Lae and Bulolo. The bulk of the production of veneer sheets at the factory at Lae, operated by Bulolo Gold Dredging Ltd., is sold to the plywood factory at Bulolo, which is owned and operated (on a 49:51 basis) by Bulolo Gold Dredging Ltd. and the Commonwealth of Australia under the name of Commonwealth New Guinea Timbers Ltd. Most of the plywood produced at this factory is exported to overseas countries and to Australia.

The production account presented for this sub-sector has been constructed largely on the basis of production statistics and oversea trade statistics published in Annual Reports and Oversea Trade Bulletins, employment statistics obtained from quarterly returns filed in the Department of Territories and from statistics of the value of output and costs of production revealed in production

bulletins⁽¹⁾ produced by the Bureau of Statistics.

The values of export sales have been taken from oversea trade statistics and are made up as follows:

<u>Export Sales - £'000</u>					
Years ended 30th June	<u>1956-57</u>	<u>1957-58</u>	<u>1958-59</u>	<u>1959-60</u>	<u>1960-61</u>
Sawn timber	138	167	236	324	225
Logs	67	24	46	44	45
Veneer sheets	53	50	37	41	38
Plywood	920	1,023	1,028	1,255	866
Other forest products	<u>3</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>n. a.</u>
Total Exports	<u>1,181</u>	<u>1,267</u>	<u>1,351</u>	<u>1,669</u>	<u>1,174</u>

Estimates of home sales of timber and timber products are shown below and rely largely on official statistics of sawn timber production supplied by the Department of Territories (including production in Administration mills) and statistics of the production of veneer sheets and plywood, together with estimates of the average Territory prices for sawn timber and plywood for the period under review.

<u>Value of Home Sales of Timber and Timber Products</u>					
Years ended 30th June	<u>1956-57</u>	<u>1957-58</u>	<u>1958-59</u>	<u>1959-60</u>	<u>1960-61</u>
<u>Sawn Timber Production</u>	('000s. ft)	('000s. ft)	('000s. ft)	('000s. ft)	('000s. ft)
Hardwood	11,121	12,543	13,094	14,461	18,333
<u>less Exports</u>	<u>805</u>	<u>644</u>	<u>1,848</u>	<u>2,046</u>	<u>1,102</u>
	10,316	11,899	11,246	12,415	17,231
<u>less Admin. Mills</u>	<u>2,543</u>	<u>2,775</u>	<u>2,746</u>	<u>1,773</u>	<u>1,593</u>
Home Sales (including Stocks)	<u>7,773</u>	<u>9,124</u>	<u>8,500</u>	<u>10,642</u>	<u>15,638</u>
Softwood	5,963	4,833	3,730	3,489	5,537
<u>less Exports</u>	<u>1,545</u>	<u>1,640</u>	<u>1,820</u>	<u>2,790</u>	<u>2,310</u>
Home Sales (including Stocks)	<u>4,418</u>	<u>3,193</u>	<u>1,910</u>	<u>699</u>	<u>3,227</u>
Value of Home Sales of Sawn Timber - (£'000)	1,064	1,049	845	864	1,479
	('000sq. ft)	('000sq. ft)	('000sq. ft)	('000sq. ft)	('000sq. ft)
<u>Plywood Production</u>	28,000	27,000	28,000	33,546	30,632
<u>less Exports</u>	<u>24,006</u>	<u>26,492</u>	<u>25,494</u>	<u>30,504</u>	<u>21,862</u>
Home Sales (including Stocks)	<u>3,994</u>	<u>508</u>	<u>2,506</u>	<u>3,042</u>	<u>8,770</u>
Value of Home Sales of Plywood - (£'000)	152	19	95	116	333
<u>Veneer Production</u>					
Value of Home Sales (£'000)	-	11	11	211	193
Total Value of Home Sales - (£'000)	1,216	1,079	951	1,191	2,005

(1) Territory of Papua and New Guinea: Production Bulletins Nos 1-3 (1958/9 to 1960/1).
Part II Secondary Industries, Bureau of Statistics, Papua.

The estimated production of sawn timber from logs harvested under authorisation of the Forestry Ordinance is published in the Administration Annual Reports each year. This is the volume of commercial production only and excludes the sawn equivalent of logs used in the production of plywood and veneers and logs harvested from private freehold land. The volume of sawn timber exported from the Territory can be obtained from Oversea Trade Bulletins each year; the amount of sawn timber produced by Administration mills at Lae and Keravat was supplied by the Department of Territories. The residuals in the table represent the volume of sawn timber which is consumed locally (including any movement in stocks). An average price for sawn timber, estimated on the basis of information obtained from some producers and from discussions with officers in the Department of Territories, was applied to these local sales to give the value of locally consumed sawn timber each year.

The value of locally consumed veneer sheets, being the sales from the factory at Lae to Commonwealth New Guinea Timbers Ltd. plywood factory at Bulolo, was obtained from files in the Department of Territories while the value of locally consumed plywood (including stock movements) was obtained in much the same manner as for sawn timber; total production was supplied by the Department of Territories and exports were obtained from Oversea Trade Bulletins; the estimated average price of plywood (at Lae) was estimated after discussions with the Sydney office of Commonwealth New Guinea Timbers Ltd.

Each year since 1958/59 the value of output, production and certain other items of costs have been given by class of industry in the Production Bulletin, Secondary Industries, compiled by the Bureau of Statistics. The industry classification of "sawmills, joinery, etc." in this collection relates to sawmilling, plywood manufacture and joinery works and statistics relating to the value of power, fuel, light, etc. and the value of materials used have been used as the basis for estimates of the expenditure in this sub-sector on Materials, Fuel, etc. Outlay on Delivery for Export represents the estimated cost of transport and delivery charges from the factory door to f. o. b. or to the point of sale in the Territory. These costs are based on information obtained from local sources. The Bureau's Production Bulletin points out that, in addition to the outlays indicated in the Bulletin, many other expenses are incurred including insurance, advertising, interest and other sundry charges. The item

Other Expenses in the production account for this sub-sector is an attempt to value the cost of such expenses; it has been placed very arbitrarily at about 5 per cent of the value of output at the factory door.

The average numbers employed in this industry, excluding Administration staff, have been derived from quarterly employment returns made available by the Department of Territories and, by applying average rates of remuneration for both non-indigenous and indigenous employees (including the cost of rations, etc.), the estimates of income produced shown in the production account as European Labour Income and Native Wages and Keep were obtained.

Government Royalties and Rent is the amount paid to the Administration in the form of timber leases, permits and royalties each year. This information was obtained from the public accounts of the Administration. ⁽¹⁾

Private European Surplus is the residual in the account and represents the surplus accruing to operators in this industry. It excludes the surplus accruing from Administration activities in this field but includes some profits (probably small) accruing to missions which are very difficult to separate. The final production account for Forestry and Sawmilling is presented in Table 4.4.

(v) Oil Prospecting

The search for oil has continued since early in the century and although indications of oil have been reported and activity in this field has been carried out on a large scale, especially since the end of World War II, no flows of commercial value have been discovered and most of the larger companies have withdrawn from the Territory in recent years.

The total expenditure on oil exploration in Papua and New Guinea is at the time of writing in excess of £35 million. However, little published information is available regarding the amounts expended each year and the author is most appreciative of the assistance of companies (including the two largest operators) who supplied details of their annual expenditure, both current and capital. From

(1) Territory of Papua and New Guinea: A Bill for an Ordinance. (Estimates of Expenditure).

this information, it was possible to make estimates which represent the total expenditure on oil search in the Territory for each year of the present analysis. The components of this expenditure shown in the production account are also based on classifications of total expenditure supplied by these companies.

It will be noted that total expenditure in this field has been entered in the account under the heading of Capital Account Charges, described elsewhere as capitalised developmental expenditure. This is equivalent to treating such expenditure as productive capital formation (see Private Capital A/c - Table 9.2) which could, in the event of there being no oil to be found in the Territory, prove to be a decided overstatement of private investment expenditure. In view of the withdrawal from the search in recent years and the consequent reduction in annual expenditures, this appears as a distinct possibility at the moment; however, it is hoped that renewed interest in the future may result in discoveries which will recoup what at present appear to be speculative losses. While it seems that this treatment conforms with accepted conventions in this area of activity, it should be noted that the association of this expenditure with other capital expenditures may result in misleading conclusions.

The results of the calculations of estimates for this sub-sector are shown in Table 4.5.

The accounts for all sub-sectors in this group were then aggregated to obtain the production account for the sector as a whole. This account, known as the Primary Enterprises Account (Table 4.6), is the source of (contra) entries in other accounts within the double entry system characteristic of the method of social accounting adopted here.

TABLE 4.1

PLANTATION PRODUCTSYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Export Proceeds	8,899	8,349	11,794	14,187	11,834
Home Sales					
Capital A/c Charges	296	289	411	442	547
<u>Total Receipts</u>	9,195	8,638	12,205	14,629	12,381
<u>Outlay</u>					
<u>Purchases</u>					
Materials, Fuel, etc.	871	782	984	1,318	1,360
Recruitment & Repatriation	613	601	629	732	817
Delivery for Export	467	488	553	686	645
Other Expenses	253	266	268	310	350
Native Cash Costs	241	251	374	457	525
<u>Total Purchases</u>	2,445	2,388	2,808	3,503	3,697
<u>Income Produced</u>					
European Labour Income	1,301	1,421	1,547	1,639	1,834
Native Wages & Keep	2,454	2,407	2,516	2,925	3,269
Gov. Royalties & Rent	35	36	36	38	39
Export Duties	569	535	1,142	313	-
Marketing Funds	200	160	100	27	-
Gov. Plantation Surplus	9	10	11	25	16
Mission Plantation Surplus	195	149	283	366	218
Private European Surplus	785	409	1,645	3,244	1,236
Native Produce Surplus	1,202	1,123	2,117	2,549	2,072
<u>Total Income Produced</u>	6,750	6,250	9,397	11,126	8,684
<u>Total Outlay</u>	9,195	8,638	12,205	14,629	12,381

TABLE 4.2

OTHER AGRICULTURE, FISHING ETC.

Years ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Export Sales	499	423	580	613	568
Home Sales	1,100	1,250	1,300	1,400	1,500
<u>Total Receipts</u>	1,599	1,673	1,880	2,013	2,068
<u>Outlay</u>					
<u>Purchases</u>					
Materials, Fuel, etc.	161	165	188	201	205
Recruitment & Repatriation	26	27	31	33	34
Native Cash Costs	131	135	154	165	167
<u>Total Purchases</u>	318	327	373	399	406
<u>Income Produced</u>					
European Labour Income	80	81	94	100	102
Native Wages & Keep	132	136	155	166	169
Private European Surplus	321	344	378	406	421
Native Produce Surplus	748	785	880	942	970
<u>Total Income Produced</u>	1,281	1,346	1,507	1,614	1,662
<u>Total Outlay</u>	1,599	1,673	1,880	2,013	2,068

MININGYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Export Sales	1,231	859	742	635	681
Home Sales	25	-57	-17	88	4
Cwlth. Govt. Gold Subsidy	33	38	30	56	50
<u>Total Receipts</u>	1,289	840	755	779	735
<u>Outlay</u>					
<u>Purchases</u>					
Materials, fuel, etc.	428	265	234	233	211
Recruitment Costs	34	24	20	24	27
Native Cash Costs	4	5	6	6	8
Other Expenses	61	38	33	33	30
<u>Total Purchases</u>	527	332	293	296	276
<u>Income Produced</u>					
European Labour Income	161	130	104	103	102
Native Wages and Keep	170	120	102	119	135
Govt. Royalties and Rent	69	26	16	18	17
Private European Surplus	328	186	181	182	120
Native Produce Surplus	34	46	59	61	85
<u>Total Income Produced</u>	762	508	462	483	459
<u>Total Outlay</u>	1,289	840	755	779	735

TABLE 4.4

FORESTRY AND SAWMILLINGYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Export Sales	1,181	1,267	1,351	1,669	1,174
Home Sales	1,216	1,079	951	1,191	2,005
<u>Total Receipts</u>	2,397	2,346	2,302	2,860	3,179
<u>Outlay</u>					
<u>Purchases</u>					
Materials, fuel, etc.	911	891	873	1,136	1,326
Recruitment Costs	44	39	36	40	43
Delivery for export	173	176	180	216	206
Other Expenses	111	109	106	132	149
<u>Total Purchases</u>	1,239	1,215	1,195	1,524	1,724
<u>Income Produced</u>					
European Labour Income	504	487	422	430	451
Native Wages and Keep	220	193	179	203	219
Govt. Royalties & Rent	82	82	82	101	121
Private European Surplus	352	369	424	602	664
<u>Total Income Produced</u>	1,158	1,131	1,107	1,336	1,455
<u>Total Outlay</u>	2,397	2,346	2,302	2,860	3,179

OIL PROSPECTINGYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Capital Account Charges	5,012	3,654	2,282	1,948	848
<u>Total Receipts</u>	5,012	3,654	2,282	1,948	848
<u>Outlay</u>					
<u>Purchases</u>					
Materials, fuel, etc.	2,977	1,744	952	1,048	363
Other Expenses	790	825	540	275	85
<u>Total Purchases</u>	3,767	2,569	1,492	1,323	448
<u>Income Produced</u>					
European Labour Income	945	840	615	480	325
Native Wages and Keep	300	245	175	145	75
<u>Total Income Produced</u>	1,245	1,085	790	625	400
<u>Total Outlay</u>	5,012	3,654	2,282	1,948	848

TABLE 4.6

PRIMARY ENTERPRISESYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Export Sales	11,810	10,898	14,467	17,104	14,257
Home Sales	2,341	2,272	2,234	2,679	3,509
C'wlth Subsidy	33	38	30	56	50
Capital A/c Charges	5,308	3,943	2,693	2,390	1,395
<u>Total Receipts</u>	19,492	17,151	19,424	22,229	19,211
<u>Outlay</u>					
<u>Total Purchases</u>	8,296	6,831	6,161	7,045	6,551
<u>Income Produced</u>					
European Labour Income	2,991	2,959	2,782	2,752	2,814
Native Wages & Keep	3,276	3,101	3,127	3,558	3,867
Govt. Royalties & Rent	186	144	134	157	177
Export Duties	569	535	1,142	313	-
Marketing Funds	200	160	100	27	-
Govt. Plantation Surplus	9	10	11	25	16
Mission Plantation Surplus	195	149	283	366	218
Private European Surplus	1,786	1,308	2,628	4,434	2,441
Native Produce Surplus	1,984	1,954	3,056	3,552	3,127
<u>Total Income Produced</u>	11,196	10,320	13,263	15,184	12,660
<u>Total Outlay</u>	19,492	17,151	19,424	22,229	19,211

CHAPTER 5

PUBLIC AUTHORITIES

This chapter deals with the economic activities of all public authorities operating in the Territory and in addition to the public service of the Territory of Papua and New Guinea (usually referred to as the Administration) covers the transactions of departments and instrumentalities of the Commonwealth of Australia which are active in the Territory and the activities of Native Local Government Councils.

Until World War II, the two Territories of Papua and New Guinea had separate administrations and legislation. However, since the end of hostilities they have been administered as a single entity with one public service and with identical policies for the development of the people and resources; (it was noted earlier that the two Territories constitute an administrative union but that this arrangement had only been approved by legislation in 1949). The functions of government are discharged by the various normal departments under the direction of an Administrator who is appointed under the Papua and New Guinea Act 1949-1960 to act on behalf of the Government of the Commonwealth of Australia and who is responsible to the Minister for Territories in Australia. Although it is the responsibility of the Minister to decide matters of policy relating to development and administration, the authority for day to day administration rests with the Administrator who presides over the Legislative Council.

In accordance with the basic objectives of the trusteeship system described in the United Nations Charter⁽¹⁾ viz. "to promote the social and educational advancement of the inhabitants of the trust territories . . . and their progressive development towards self-government or independence as may be appropriate to the particular circumstances of each territory and its peoples and the freely expressed wishes of the peoples concerned . . .", there have been extensive increases in economic activity in the Territory in postwar

(1) United Nations Charter: Article 76(b).

years and expenditures on education and health facilities and on administration and public utilities have been expanded significantly.

However, the revenues obtained by the Administration through the normal processes of government have not been sufficient to meet the expenditures required to maintain this expansion and a direct, interest-free, non-repayable grant has been made each year since World War II by the Commonwealth of Australia. The initial amount received in 1945/46 was £252,740 compared with the grant made for the year 1961/62 of £17.3 million. In addition to these grants which supplement the revenue of the Administration, considerable direct expenditure on essential works and services in Papua and New Guinea is incurred each year by Commonwealth Departments and instrumentalities such as the Department of Civil Aviation, Department of Works, Department of the Interior, Department of National Development, and the Australian Broadcasting Commission.

Native Local Government Councils, which were introduced into the Territory as early as 1950, provide another source for the collection of revenue and its expenditure; these Councils, whose powers are defined by law, have the power to levy taxes and to charge for services rendered and in return provide medical facilities, other public and social services and undertake the responsibility for the development of local community works such as water supply and road maintenance and other economic enterprises.

Estimates of Expenditure⁽¹⁾ and Budget Papers⁽²⁾ for the Territory are prepared each year by the Treasurer for submission to the Minister for Territories for consideration and determination by the Commonwealth Government of the amount of the grant that will be made available to the Territory. These publications were the major source of information covering the transactions of the Administration but were supplemented by additional direct information obtained from the Department of Territories and from the Administration in Port Moresby. Some details of the expenditure in Papua

(1) Territory of Papua and New Guinea: A Bill for an Ordinance. (Estimates of Expenditure).

(2) The Legislative Council for the Territory of Papua and New Guinea: Budget Papers.

and New Guinea by Commonwealth Departments are published each year in the Annual Reports of the two Territories; here again, this information had to be supplemented by additional data obtained from other sources. The receipts and expenditure of Native Local Government Councils are collected each year by the Administration and are published in Annual Reports. Estimated revenue and expenditure by these Councils for years ended 30th June are based on this published information.

Up to 1958/59, the revenues of the Territory were derived chiefly from the levying of import and export tariffs, however, following the introduction of income tax from the 1st July 1959, all export duties were abolished as from that date and income tax now provides the largest share of revenue receipts with import and other excise duties next in importance.

Personal tax, which was introduced on 1st January 1958, is levied (under the Personal Tax Ordinance) on all male persons 18 years or over with a maximum payment of £2, based on ability to pay. This tax is not levied on indigenous personnel in areas where cash incomes are not readily obtainable. Exemptions from payment of personal tax are allowed to those persons who pay either income tax or Native Local Government Council tax of an amount equal to or greater than their liability for personal tax and for other specified reasons. Native Local Government Council taxes are levied by councils under the Native Local Government Council Ordinance and are retained by these councils for their own use. These taxes (and other receipts by these councils) do not constitute part of the revenue of the Administration.

The total receipts of the Administration and estimated receipts of Native Local Government Councils (largely interpolation of the estimated revenue for years ended 31st December published by the Administration) are shown below.

Total Receipts of Administration and Native
Local Government Councils
Years ended 30th June

(£'000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
<u>Administration</u>					
Commonwealth Grant	9,645	10,797	11,479	12,808	14,797
Internal Revenue					
Import Duties	1,868	2,144	2,143	1,956	2,258
Export Duties	569	535	1,142	313	-
Taxation					
Income Tax	-	-	-	1,813	2,348
Personal Tax	-	104	154	176	147
Other Revenue	1,717	1,942	2,166	2,336	2,699
<u>Total</u>	<u>13,799</u>	<u>15,522</u>	<u>17,084</u>	<u>19,402</u>	<u>22,249</u>
<u>Native Local Government Councils</u>					
Council Tax	51	74	99	116	138
Other Revenue	16	20	20	23	33
<u>Total</u>	<u>67</u>	<u>94</u>	<u>119</u>	<u>139</u>	<u>171</u>
 Total Receipts	 <u>13,866</u>	 <u>15,616</u>	 <u>17,203</u>	 <u>19,541</u>	 <u>22,420</u>

Total expenditure by public authorities in the Territory is given in the table below. This table includes not only expenditure by the Administration and Native Local Government Councils but also direct expenditure by Commonwealth Departments and instrumentalities described earlier in this chapter.

Total Expenditure by Public Authorities

Years ended 30th June

(£'000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
<u>Administration</u>					
Expenditure from Revenue	13,736	15,516	17,078	19,332	22,331
Expenditure from Loan Funds	-	-	-	-	552
Suspense Account Stores	75	-	-	-	-
<u>Native Local Government Councils</u>					
Expenditure from Revenue	57	78	112	135	168
<u>Commonwealth Departments and Instrumentalities</u>					
Direct Expenditure (including Defence Expenditure)	<u>2,078</u>	<u>2,243</u>	<u>2,429</u>	<u>2,787</u>	<u>4,040</u>
<u>Total Expenditure</u>	<u>15,946</u>	<u>17,837</u>	<u>19,619</u>	<u>22,254</u>	<u>27,091</u>

The classification of total receipts and expenditure in the account presented for Public Authorities in this chapter is largely dependent on an analysis of the totals in the foregoing tables which relies mainly on information in official publications; however, in some instances additional data were provided by the Department of Territories and by the Department of the Treasury in Port Moresby and by other Commonwealth Departments. A description follows of the entries which are contained in this account; for this purpose, it is convenient to describe the items of expenditure first.

Expenditure

Entries under the heading of Transfer Payments are confined to capital transfers, gold subsidies and mission subsidies. However, other payments which might normally be regarded as transfer payments in the form of social service benefits (e. g. educational bursaries and scholarships, maintenance of students, aid to destitute persons etc.) have, because they cannot be easily identified in other accounts within the system, been regarded as indirect

purchases by the Administration on behalf of the recipients and have thus been included in this account under the heading of Other Purchases (see below).

Although payments for War Damage Compensation and Land Restoration resulting from damage during World War II have been made in postwar years, no payments were made in the period under review and the entry for Capital Transfers consists solely of expenditure on the purchase and lease of land net of the proceeds from sales of allotments. Mission Subsidies comprise grants-in-aid made by the Administration to missions for medical and educational purposes and for the construction of hospitals and pre-school play centres. This information is given in the Annual Reports each year. The payment of Gold Subsidies is the payment to small producers of gold in the Territory made by the Commonwealth of Australia. These amounts appear as a receipt by the Administration under the heading of External Finance to be described shortly.

Purchases by public authorities comprise government merchandise imports and freight thereon and other purchases net of sales. A sub-division of total imports into the Territory between government and private imports has not been available since 1954/55 and, for this exercise, it was necessary to resort to an analysis of the imports classified in official publications of imports cleared for home consumption.⁽¹⁾ These estimates were made by classifying imports in terms of the Schedule to the Customs Tariff Ordinance for each of the years under review. The estimates for the last three years are considered more reliable than the earlier years because of amendments which were made to the methods of classification and publication. The recorded value of Territory imports is the "Transactions Value (f.o.b.)" or the "Domestic Value (f.o.b.)" whichever is the higher. This represents the amount on which duty is payable (or would be payable if duty were ad valorem) and to all intents and purposes constitutes the f.o.b. value at the port of export. Little information is collected regarding the charges involved between port of export and Territory ports and after discussions with the Commonwealth Bureau of Census and Statistics and some inspection of freight rates charged by certain transporting companies between Australian ports and Territory ports, charges for freight were estimated to amount to $7\frac{1}{2}$ per cent of the recorded value of imports in all years.

(1) Territory of Papua and New Guinea: Imports cleared for Home Consumption 1957/8 to 1960/61. Bureau of Statistics, Papua.

The item Other Purchases (less Sales) is made up as follows:

<u>Public Authorities - Other Purchases (less Sales)</u>					
<u>Years ended 30th June</u>					
<u>(£'000)</u>					
	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Purchases by Public Authorities					
from Territory					
Enterprises	6,227	7,268	7,605	8,699	10,177
<u>less Sales</u>	<u>1,193</u>	<u>1,285</u>	<u>1,486</u>	<u>1,556</u>	<u>1,805</u>
	5,034	5,983	6,119	7,143	8,372
<u>less Admin. Plantation</u>					
Materials	- 5	- 19	- 18	- 22	- 18
Missions Subsidies	- 375	- 500	- 699	- 683	- 827
Government Royalties and Rent					
other than Private Enterprise,					
Mining and Forestry	<u>- 16</u>	<u>- 32</u>	<u>- 45</u>	<u>- 44</u>	<u>- 42</u>
Other Purchases (less Sales)	<u>4,638</u>	<u>5,432</u>	<u>5,357</u>	<u>6,394</u>	<u>7,485</u>

The total of purchases by public authorities from other Territory enterprises was derived by reducing total expenditure by public authorities in each year by the sum of capital transfer payments, expenditure on merchandise imports (including freight) and total expenditure on salaries and wages (including keep) paid to non-indigenous and indigenous employees. The sales proceeds deducted from this total comprise mainly receipts by public utilities from posts and telegraphs, electricity, transport and water supply, hospital and sanitation services and other miscellaneous receipts. The estimated cost of purchases of materials in the operations of Administration plantations were accounted for in the estimated plantation surplus shown under Transfer Receipts and must be excluded here as also must expenditure in the form of mission subsidies. The final adjustment reflects the treatment as sales proceeds afforded to receipts of lease rentals other than from agriculture, mining and forestry. This split between agriculture and other lease rents was necessary for purposes of the separate table for plantation agricul-

ture. The method here of treating receipts from non-agriculture lease rents as sales proceeds was necessitated by the method adopted in treating the commercial enterprises account as a residual sector.

The income produced in this sector consists of the value of salaries and wages paid to non-indigenous personnel employed by the Administration and by Commonwealth Departments and instrumentalities in the Territory, together with the pay and allowances of members of the Defence Forces stationed in the Territory and the value of cash wages, rations, issues etc. paid to indigenous employees and members of the Defence Forces.

Details of the actual expenditure each year by the Administration on salaries and payments in the nature of salaries are given with estimates of expenditure prepared by the Treasurer and were the major source for the entries under this heading. Salaries and Allowances paid to non-indigenous personnel employed by the Administration are shown below:

Salaries and Allowances paid to Non-indigenous Administration Employees

Years ended 30th June

(£'000)

1956/57 1957/58 1958/59 1959/60 1960/61

keep, etc., presented something more of a problem. While information relating to payments to indigenous personnel employed by the Administration are contained in the Treasurer's estimates, this information is not readily obtainable in all years due to the practice which has arisen covering the treatment of the cost of prescribed rations and issues.

Marketing Funds which also includes the receipt of interest on investments in respect of the Fund. Contributions to the Fund by growers ceased with the abolition of export duties and the receipts of the Fund are now wholly receipts of interest on the invested balance of the Fund. No attempt has yet been made to distribute this balance which is now in excess of £3.5 million and earns interest at the rate of about £150,000 per annum. The surplus from the operations of the Administration in plantation products was also described in Chapter 4, while Direct Taxation is the sum of taxation revenue received by the Administration and by Native Local Government Councils described earlier in this chapter.

CHAPTER 6

MISSIONS

Christian missions have played a very important role in the Territory of Papua and New Guinea for a long period and have been associated with the Administration in bringing large numbers of the indigenous population under European influence and control. In addition to the very valuable assistance given to the Administration in the fields of health and education, these missions are also engaged in the production of sizeable quantities of copra; they operate several sawmills in the Territory; and they engage in various other commercial activities about which, however, very little reliable information is available.

The estimates of total income and outlay by missions in the Territory have been collected to form the Missions Account which is presented in Table 6.1 in this chapter.

Missionary organisations receive financial assistance from the Administration in the form of substantial grants-in-aid and grants of supplies and equipment in respect of their work in the fields of education and health. The amounts of these grants-in-aid and the costs of the grants of supplies of equipment etc. are given each year in the Treasurer's estimates of expenditure.⁽¹⁾

Further information relating to grants by the Administration for the construction of mission hospitals and pre-school play centres and of expenditure by missions from their own funds are given in the Annual Reports of the two Territories each year. Total receipts and expenditure by missions in the account appearing in Table 6.1 were estimated on the basis of this information.

The item Government Subsidies in Table 6.1 is the total amount received each year from the Administration in the form of financial assistance and is made up as follows:

(1) Territory of Papua and New Guinea: A Bill for an Ordinance. (Estimates of Expenditure).

Grants-in-Aid by Administration

Years ended 30th June
(£ '000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Medical	274	232	267	286	305
Educational	101	181	197	261	405
Hospitals and Pre-Schools	<u>-</u>	<u>87</u>	<u>235</u>	<u>136</u>	<u>117</u>
Total	<u>375</u>	<u>500</u>	<u>699</u>	<u>683</u>	<u>827</u>

In addition to information relating to grants to missions, the Administration collects data each year which enable estimates of the additional expenditure incurred by missions from their own funds. Coverage in relation to the collection of these data is not complete and it is believed that substantial sums may be omitted from the totals published in the Annual Reports in this regard. For this reason the total expenditure described in Annual Reports as expenditure ascertainable from own funds has been arbitrarily increased each year by about 20 per cent in an attempt to overcome this defect in the official data. The results of these adjustments appear below:

Ascertainable Expenditure from Own Funds

Years ended 30th June
(£ '000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Medical	109	127	124	127	195
Educational	464	455	521	546	590
	<u>573</u>	<u>582</u>	<u>645</u>	<u>673</u>	<u>785</u>
Not included in Official Coverage	118	118	129	137	156
	<u>691</u>	<u>700</u>	<u>774</u>	<u>810</u>	<u>941</u>

The sum of grants by the Administration and expenditure from missions' own funds comprise the total of expenditure (and receipts) of all missions appearing in Table 6.1. Total receipts have been subdivided under the heads of Government Subsidies, representing total grants-in-aid by the Administration, Plantation Surplus, being the surplus obtained in the activities of copra production described in Chapter 4 and External Finance, a residual in the account representing funds received by missions in the Territory from sources external to the Territory.

Total expenditure is subdivided to show purchases by missions from Territory enterprises and income produced in the form of remuneration to mission staff, both non-indigenous and indigenous. The numbers of missionaries located in the Territory and the numbers engaged in activities relating to education and medical welfare are contained in the statistical data published by the Administration in Annual Reports each year. Numbers of indigenous personnel engaged in these fields are also ascertainable from this source. It remained to estimate the levels of remuneration paid to missionary staff to enable estimates of the total income payments for inclusion in the Missions Account. It is known that annual payments to non-indigenous personnel are considerably below the levels paid to non-indigenous employees in the Administration and in private industry. No definite information was available in this regard but some ideas as to the levels of incomes paid were ascertained, both from the levels of financial assistance to missions in this regard indicated in Annual Reports and from discussions with officers of the Administration and the Department of Territories. The estimates of income payments, which result from applying estimated rates payable to numbers employed, are shown in Table 6.1 as Income Produced.

TABLE 6.1

MISSIONSYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
Government Subsidies	375	500	699	683	827
Plantation Surplus	195	149	283	366	218
External Finance	496	551	491	444	723
<u>Total Receipts</u>	1,066	1,200	1,473	1,493	1,768
<u>Outlay</u>					
<u>Purchases</u>	184	146	361	325	296
<u>Income Produced</u>					
European Medical Staff	87	139	146	134	174
European Educational Staff	251	283	249	252	331
Other Missionaries	296	396	465	503	587
Native Medical Staff	15	17	33	44	64
Native Educational Staff	233	219	219	235	316
<u>Total Income Produced</u>	882	1,054	1,112	1,168	1,472
<u>Total Outlay</u>	1,066	1,200	1,473	1,493	1,768

The balance of total expenditure, which includes outlays in the construction of mission hospitals, pre-school centres etc. appears in the account under the heading of Purchases.

The activities of missions in fields other than education and medical welfare and copra production have been omitted here as have the contributions to mission funds by Papua and New Guinea residents; it was pointed out in Chapter 2 that these activities are included in accounts dealing with commercial economic activities. However, the receipts and expenditure from these sources is off-setting to a large extent and the income produced which is omitted as a result of this treatment should be relatively small. Consequently, the effect on estimates elsewhere in this study can probably be overlooked. Until more reliable information is available about the financial transactions of missions in these fields, this state of affairs is a difficult one to overcome.

CHAPTER 7

EXTERNAL TRANSACTIONS ACCOUNT

The economy of the Territory is primarily dependant on the very large annual grant by the Commonwealth Government and on the maintenance and extension of its primary industries. It relies for the largest share of total income (other than through direct Commonwealth financial aid) on the production of primary products and their sale on overseas markets. On the other hand, the development of industrialisation has been slow and there is consequently the necessity for extensive importation of manufactured goods including food-stuffs. The External Transactions Account described here (Table 7.1) summarises all overseas trade transactions and in addition records the receipt of funds from other sources (including financial grants to the Administration and external funds received by missions) and the expenditures incurred outside the Territory by public authorities and commercial and private interests on travel, insurance, maintenance and administration.

Overseas Trade Bulletins⁽¹⁾ published by the Administration each year show details of exports and imports by quantity, value and country, classified in accordance with the Standard International Trade Classification. In all cases, the values of exports and imports are on an f.o.b. port of shipment basis. The following table shows the trend in the value of trade over the period under review:

Overseas Trade - 1956/57 to 1960/61

Years ended 30th June
£'000 (f.o.b. port of shipment)

<u>Year</u>	<u>Total Trade</u>	<u>Imports</u>	<u>Exports</u>
1956/57	32,834	19,755	13,079
1957/58	32,800	20,396	12,404
1958/59	36,560	20,263	16,297
1959/60	39,852	21,032	18,820
1960/61	43,344	26,738	16,606

(1) Territory of Papua and New Guinea: Overseas Trade Bulletins Nos. 1-6. 1955/56 to 1960/61. Bureau of Statistics, Papua.

Total imports shown under the heading of Merchandise Imports in Table 7.1 have been subdivided to show government imports and private imports and have been adjusted to include charges for freight which are excluded from the table above and to exclude re-exports of goods not of Territory origin which are included above. The estimates of government imports and the charges thereon for freight to Territory ports were described in Chapter 5. Similar charges have been assumed for private imports which include imports into bonded warehouse as well as imports cleared directly for home consumption. The charge for freight of $7\frac{1}{2}\%$ of the recorded f. o. b. value was based to some extent on the movement of goods from the Territory to Australian markets. The fact that a large proportion of total imports into the Territory are not of Australian origin, thus involving additional freight charges, might indicate that this level of charges is too low; however, it should be noted that a significant proportion of these goods will have been received through Australian distributors of oversea suppliers and will attract freight charges between Australia and the Territory only.

Total merchandise imports recorded in Table 7.1 were derived as follows:

<u>Merchandise Imports</u>					
<u>Years ended 30th June</u>					
(£'000)					
	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
<u>Government Imports</u>					
Recorded value (f. o. b.) (Est.)	3,360	3,465	3,519	3,426	5,019
Freight - $7\frac{1}{2}\%$	<u>252</u>	<u>260</u>	<u>264</u>	<u>257</u>	<u>382</u>
	<u>3,612</u>	<u>3,725</u>	<u>3,783</u>	<u>3,683</u>	<u>5,401</u>
<u>Private Imports</u>					
Total Imports (f. o. b.)	19,755	20,396	20,263	21,032	26,738
<u>less</u> Govt. Imports (f. o. b.)	<u>3,360</u>	<u>3,465</u>	<u>3,519</u>	<u>3,426</u>	<u>5,019</u>
Private Imports (f. o. b.)	16,395	16,931	16,744	17,606	21,719
Freight - $7\frac{1}{2}\%$	<u>1,230</u>	<u>1,270</u>	<u>1,256</u>	<u>1,320</u>	<u>1,629</u>
	17,625	18,201	18,000	18,926	23,348
<u>less</u> Re-exports	<u>1,268</u>	<u>1,506</u>	<u>1,830</u>	<u>1,716</u>	<u>2,349</u>
	<u>16,357</u>	<u>16,695</u>	<u>16,170</u>	<u>17,210</u>	<u>20,999</u>

Estimates of net external business travel and transport expenses; external costs of management and insurance, personal travel, etc. and the upkeep of dependants and life assurance are somewhat suspect owing to the foundations on which they must be based. They are built up from available information about population movements, shipping and air transport movements and fares and estimates of per capita expenditures likely to be involved. External Business Expenses represents an attempt to estimate the costs to the Territory of oversea business travel and of the recruitment of employees and their repatriation together with external costs incurred by Territory enterprises for management and insurance. It is net of similar expenses incurred in the Territory by foreign interests including expenditures in Territory ports by oversea ships and aircraft. External Personal Expenses, on the other hand, relates to expenditure from private income on personal travel and related costs and the external costs to Territory residents of the upkeep of absentee wives and children and of life assurance premiums paid externally. Because of the lack of information in this regard and the nature of conditions existing in the Territory, it is difficult to make worthwhile comparisons of these types of expenditure with Australian experience. However, it is interesting to note that the resulting estimates of total external business and personal expenditure have remained in fairly close relationship (at around 8%) to Gross Domestic Expenditure in the Territory.

Changes in the relative importance of Territory products can be seen in Table 7.1. Copra and copra products still remain the major source of export income, however, the classification by major products presented here highlights the significant increase in the importance of cocoa and coffee production and the decline in gold production which has occurred in recent years. The entry in this account for Total Exports is a (double entry) contra to the entry for receipts from Export Sales in the Primary Enterprises Account in Table 4.6.

External Finance represents the receipt of funds in the Territory from oversea sources other than from the sale of Territory products. Public Authority External Finance and Mission External Finance constitute the receipt of external funds by public authorities and missions respectively and were derived directly from the accounts for these two sectors.⁽¹⁾ Copra Fund Interest is re-

(1) Tables 5.1 and 6.1 respectively.

ceived in respect of invested funds by the Papua and New Guinea Copra Fund and was included as a receipt of funds under the heading of Marketing Funds in the Public Authorities Account. ⁽¹⁾

The balances of accounts in Territory branches of Australian banks were regarded as part of the funds of the Australian banking system, hence the excess of increases in deposits with these banks in the Territory (both cheque-paying and savings banks) over increases in advances by them to Territory residents, constituted a transfer of funds from the Territory to Australian banks. This excess each year resulted in the entry for Bank Finance under the heading of External Finance. This information was obtained from publications by the Commonwealth Bureau of Census and Statistics ⁽²⁾ and the Reserve Bank ⁽³⁾ and is contained in the following table.

	<u>Bank Finance</u>					
	<u>£'000</u>					
	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>
<u>Deposits</u>						
Cheque-paying Banks (monthly average of weekly figures for June of each year)	6,274	6,504	6,454	7,440	8,028	7,195
Savings Banks (balance at end June each year)	3,352	3,969	4,332	4,963	5,846	6,129
Total Deposits	9 626	10,473	10,786	12,403	13,874	13,324
<u>Advances</u>						
Cheque-paying Banks (monthly average of weekly figures for June of each year)	1,744	2,070	2,371	2,258	2,432	2,710
Excess of Deposits	7,882	8,403	8,415	10,145	11,442	10,614
Net Movement		+ 521	+ 12	+1,730	+1,297	- 828

(1) Table 5.1.

(2) Commonwealth Bureau of Census and Statistics: Australian Banking Statistics: Monthly Bulletins and Savings Bank Statistics: Monthly Bulletins.

(3) Reserve Bank of Australia: Statistical Bulletin.

There is some likelihood that these movements could be understated since it is possible that there are other amounts which were remitted directly to mainland accounts and are not reflected here. However, this possibility could not be overcome since to do so would have required details not only of the level of mainland accounts of Territorians but also the sources of funds in these accounts.

Discussions with businessmen and public accountants in the Territory created the impression that, in recent years, there has been an increasing tendency to invest excess funds outside the Territory. This impression is largely confirmed by the size of the entry for External Finance - Other, which appears as a residual in the External Transactions Account. This item which includes not only the balancing item on current and capital account but also all errors and omissions in the account, purports to represent the size of the net movement of private non-bank capital from the Territory.

The excess of amounts of net interest, dividends, etc. payable abroad over similar amounts payable to Territory residents have not been separately estimated at this point and are thus still included in ultimate estimates of Gross Private Savings on the basis that these amounts remain unpaid. While some adjustment is necessary to take account of this liability for net external charges, this will not reduce the apparent capital outflow in recent years to levels which cease to warrant concern.

From information contained in the External Transactions Account and by making estimates of the liability each year for net external interest charges mentioned above, a Balance of Payments Account is also presented in Table 7.2. The account is in a form similar to that in the International Monetary Fund Balance of Payments Manual (Third Edition)⁽¹⁾ in which payments in the nature of the Commonwealth grant to the Administration are regarded as international transfer payments. This presentation has the advantage of distinguishing such transfer payments from other current account items without actually including them in the capital account, at the same time highlighting the significance of such payments to the Territory economy. Direct expenditure by Commonwealth departments and instrumentalities operating in the Territory, while not

(1) International Monetary Fund: Balance of Payments Manual (Third Edition) 1961.

taking the same form as the Commonwealth grant, has been regarded as somewhat similar and has therefore also been shown as a transfer payment.

Information relating to the liability for net interest, dividends etc. payable abroad was extremely limited and the entries appearing in Table 7.2 could contain relatively sizeable errors. Nevertheless, they bear a fairly close relationship to the surplus derived from primary and commercial enterprises and discussions with officers of the Commonwealth Bureau of Census and Statistics suggested that net payments of these magnitudes may not be unreasonable. In Table 7.2, this item was treated on the assumption that these amounts remained unpaid (i. e. that they were still included in the combined surpluses of Primary Enterprises and Commercial Enterprises in the form of undistributed profits). This treatment, of course, required that an inflow of a similar amount be shown in the Capital Account.

An alternate presentation of the Capital Account is given in Table 7.3 where the assumption was made that these net payments were actually made. This treatment would necessitate adjustments to the combined surpluses of Primary Enterprises and Commercial Enterprises and to the estimate for Gross Private Savings and would at the same time, destroy the concept of Gross Domestic Product which is used in this study. However, the presentation does accentuate the entry for Private Capital Movements. Information relating to the movement of non-bank capital from the Territory is practically non-existent. Consequently, there is no evidence available to provide details of the movements indicated in Table 7.3, which, apart from direct remittances to mainland bank accounts which were mentioned above as being excluded from the entry for Bank Finance and possibly some small transfers such as superannuation fund investments, constitute the excess of movements of private capital from the Territory over movements to the Territory.

It should be noted that there are no entries in these accounts for foreign exchange transactions. The foreign exchange regulations of the Commonwealth of Australia also apply in the Territory of Papua and New Guinea and there are no restrictions on payments between the Territories of Papua and New Guinea and the Commonwealth; the only restriction on exchange transactions with other countries are those applicable to similar transactions between Australia and those

countries. Territory requirements for foreign exchange are met through the central banking system of the Commonwealth and are made available through branches of the banks operating in the Territory. For this reason, these banks would have some foreign exchange "till money" but in fact the Territory of Papua and New Guinea has no separate reserves of gold and foreign exchange but relies on the reserves of the Commonwealth of which this "till money" is a part.

TABLE 7.1

EXTERNAL TRANSACTIONSYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
<u>Export Sales</u>					
Copra	5,648	4,521	5,754	6,126	5,113
Copra By products	1,457	1,659	2,940	4,173	2,657
Cocoa	462	829	1,492	1,671	1,666
Coffee	184	225	456	717	1,106
Rubber	1,149	1,115	1,152	1,500	1,292
Other Agriculture	498	423	580	613	568
Gold	1,231	859	743	635	681
Timber & Timber Products	1,178	1,265	1,347	1,664	1,174
<u>Total Export Sales</u>	11,810	10,898	14,467	17,104	14,257
<u>External Finance</u>					
Public Authorities	11,474	12,829	13,743	15,414	18,849
Missions	496	551	491	444	723
Bank Finance	- 521	- 12	-1,730	-1,297	828
Copra Fund Interest	91	110	119	128	144
Other (Residual of Account)	- 306	- 446	-3,182	-6,460	-3,491
<u>Total External Finance</u>	11,234	13,032	9,441	8,229	17,053
<u>Total Receipts</u>	23,044	23,930	23,908	25,333	31,310
<u>Outlay</u>					
<u>Merchandise Imports</u>					
Government	3,612	3,725	3,783	3,683	5,401
Private (less Re-exports)	16,357	16,695	16,170	17,210	20,999
<u>Total Merchandise Imports</u>	19,969	20,420	19,953	20,893	26,400
<u>External Business Expenses</u>					
Business Travel & Transport Exp. (less Receipts)	635	750	870	895	925
Ext. Cost of Mang't & Insurance	410	460	510	680	720
<u>Total External Business Expenses</u>	1,045	1,210	1,380	1,575	1,645
<u>External Personal Expenses</u>					
Personal Travel, etc.	620	725	815	950	1,170
Upkeep of Dependants & Life Assc.	1,410	1,575	1,760	1,915	2,095
<u>Total External Personal Expenses</u>	2,030	2,300	2,575	2,865	3,265
<u>Total Outlay</u>	23,044	23,930	23,908	25,333	31,310

BALANCE OF PAYMENTS

TABLE 7.2

Years ended 30th June

	1950-51 (£'000)	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>CURRENT ACCOUNT</u>						
<u>Credits - Goods & Services</u>						
Exports (f.o.b. Territory Ports)						
Territory Produce	7,380	11,810	10,898	14,467	17,104	14,257
Re-exports	670	1,268	1,506	1,830	1,716	2,349
Public Authority Finance	110	- 249	- 211	- 165	- 181	12
Missions Finance	170	496	551	491	444	723
Copra Fund Interest		91	110	119	128	144
<u>Transfer Payments</u>						
Commonwealth Grant	4,360	9,645	10,797	11,479	12,808	14,797
Direct Commonwealth Expenditure						
Defence)	342	338	366	550	732
Other	1,320)	1,736	1,905	2,063	2,237	3,308
Total Credits	14,010	25,139	25,894	30,650	34,806	36,322
<u>Debits - Goods & Services</u>						
Imports (f.o.b. port of shipment)						
Private	8,660 ^a	16,395	16,931	16,744	17,606	21,719
Government	2,500 ^b	3,360	3,465	3,519	3,426	5,019
Freight on Imports						
Private	In (a)	1,230	1,270	1,256	1,320	1,629
	above					
Government	In (b)	252	260	264	257	382
	above					
Net Business Travel and Transport Expenditure	100	635	750	870	895	925
External Cost of Management & Insurance	230	410	460	510	680	720
Personal Travel, etc.	350	620	725	815	950	1,170
Dependants Upkeep & Life Assurance	1,000	1,410	1,575	1,760	1,915	2,095
Net Interest Dividends payable abroad	n. a.	750	700	1,100	1,500	1,200
Total Debits	12,840	25,062	26,136	26,838	28,549	34,859
Balance on Current Account	1,170	77	- 242	3,812	6,257	1,463
<u>CAPITAL ACCOUNT</u>						
<u>Change in Assets</u>						
Private Non-bank Capital Movements	690	306	446	3,182	6,460	3,491
Bank Finance	480	521	12	1,730	1,297	- 828
Total Change in Assets	1,170	827	458	4,912	7,757	2,663
<u>Change in Liabilities</u>						
Net Dividends, Interest payable abroad	n. a.	750	700	1,100	1,500	1,200
Balance on Current Account	1,170	77	- 242	3,812	6,257	1,463
Total Change in Liabilities	1,170	827	458	4,912	7,757	2,663

TABLE 7.3

CAPITAL ACCOUNTALTERNATIVE PRESENTATIONYears ended 30th June

	1950-51 (£'000)	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>CAPITAL ACCOUNT</u>						
<u>Change in Assets</u>						
Private Non-bank Capital Movements	390(a)	- 444	- 254	2,082	4,960	2,291
Bank Finance	480	521	12	1,730	1,297	- 828
<u>Total Change in Assets</u>	870	77	- 242	3,812	6,257	1,463
<u>Change in Liabilities</u>						
Balance on Current A/c	870(a)	77	- 242	3,812	6,257	1,463
<u>Total Change in Liabilities</u>	870	77	- 242	3,812	6,257	1,463

(a) On the assumption that Interest, Dividends, etc.
payments amounted to £300,000.

COMMERCIAL ENTERPRISES

It has already been noted that industrial development in the Territory has been slow, although in recent years the pace at which this development has proceeded has been stepped up. The major forms of secondary industry consist of the processing of the locally produced primary products into marketable form, some production for home consumption including the production of beer, paint and tobacco, furniture and joinery and concrete building materials and in addition there is a steadily increasing number of marine and general engineering workshops and a wide range of service industries.

Because of the impracticability, on the one hand, of separating certain stages of the processing of many primary products from the actual production of the raw materials, and on the other, the desirability of including further stages of processing of some products in the category of primary production, most of the more developed forms of secondary industry have been excluded from this account and are included in the Primary Enterprises Account.⁽¹⁾ These include the processing of the agricultural products of copra, coffee, cocoa and rubber (in particular the production of coconut oil and oil cake and meal at the large factory at Rabaul), the crushing and extraction of passionfruit juice and pulp from indigenous production of passionfruit at Goroka and the production of sawn timber, plywood and veneers for local and overseas markets.

Since this sector is defined as a residual sector, however, it also includes the economic activities of many other commercial groups about which there is virtually no statistical information available. These include all activities in wholesale and retail trade which have been developing steadily in the last decade; the transport industry, in addition to an extensive network of coastal shipping and some road transport activity, now includes a highly developed and competitive system of air lines operating efficient internal and external services; the building construction industry has shown a marked expansion in recent years to meet the growing demand for housing, schools and hospitals; processing and manufacturing industries, with the exception of those industries which are included in the Primary

(1) Table 4.6.

Enterprises Account, are included here as also are the activities of all privately operated service industries, both professional and non-professional and non-profit organisations.

It was pointed out in Chapter 2 that the double entry principle used in the construction of these accounts as a whole is instrumental in providing most of the entries for this account. The Primary Enterprises Account supplied the entry for purchases from these groups. Total private imports, which have all been regarded as passing through the hands of commercial traders, were supplied by the External Transactions Account⁽¹⁾ while the entry for commercial taxes less subsidies was taken directly from the Public Authorities Account.⁽²⁾

Estimates of income produced in the form of payments of salary and wages to non-indigenous and indigenous personnel were derived as residuals from total labour costs for private industry as estimated in Chapter 3. European Labour Income, which represents the earnings (including drawings of working proprietors) of non-indigenous personnel in these industries, was obtained by reducing the sum of total labour costs for all private industries (Tables 3.1-3.5, which exclude employees in public authorities and missions and members of the defence forces) and the imputed drawings of working proprietors (Table 3.6) by the estimated non-indigenous labour cost to primary enterprises given in Chapter 4 (Table 4.6). These entries were obtained as follows:

<u>European Labour Income</u>					
<u>Years ended 30th June</u>					
<u>(£'000)</u>					
<u>Non-Indigenous</u>	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
All Industries					
Working Proprietors (Table 3.6)	1,979	2,081	2,201	2,381	2,473
Employees (Tables 3.1 to 3.5)	<u>6,215</u>	<u>6,190</u>	<u>6,192</u>	<u>6,685</u>	<u>6,919</u>
	8,194	8,271	8,393	9,066	9,392
Less Primary Enterprises (Table 4.6)	<u>2,991</u>	<u>2,959</u>	<u>2,782</u>	<u>2,752</u>	<u>2,814</u>
European Labour Income	<u>5,203</u>	<u>5,312</u>	<u>5,611</u>	<u>6,314</u>	<u>6,578</u>

(1) Table 7.1.

(2) Table 5.1.

Native Wages and Keep, representing the payment of cash wages and the value of prescribed rations, issues, etc., to indigenous employees in this group, was also obtained as a residual as shown in the following table:

	<u>Native Wages and Keep</u>				
	<u>Years ended 30th June</u>				
	<u>(£'000)</u>				
	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
All Industries					
(Table 3.8)	4,437	4,269	4,372	5,068	5,642
less Primary Enterprises					
(Table 4.6)	<u>3,276</u>	<u>3,101</u>	<u>3,127</u>	<u>3,558</u>	<u>3,867</u>
	1,161	1,168	1,245	1,510	1,775
less Missions					
(Table 6.1)	<u>248</u>	<u>236</u>	<u>252</u>	<u>279</u>	<u>380</u>
	913	932	993	1,231	1,395
less Personal Service	<u>387</u>	<u>367</u>	<u>399</u>	<u>481</u>	<u>544</u>
	<u>526</u>	<u>565</u>	<u>594</u>	<u>750</u>	<u>851</u>

The estimates of numbers employed and total wages and keep for all private industries (Table 3.8) include the numbers employed by missions and the numbers employed in personal service. The deductions above for missions were obtained from the Missions Account in Chapter 6. The deductions for personal service, being the value of cash wages, rations, etc. charged to private income, were derived by estimating the numbers employed each year in this category and the average cost per unit of cash wages, rations, etc. applicable to these employees.

European Surplus, representing the return to all operators in this sector, was obtained by assuming a gross profit margin (before net rent and interest charges and depreciation) on consolidated turnover each year. The estimated return used by Professor Swan in 1950/51 was 12 per cent. However, impressions gained from talks with businessmen and public accountants in the Territory suggested a somewhat higher return in later years (in some cases returns were as high as 30 per cent). Consequently, in the years

1958/59 and 1959/60, when favourable export prices would have given a stimulus to business, a return of $17\frac{1}{2}$ per cent was used; in other years a return of 15 per cent was used. It is worth noting that a variation in this average return each year of $2\frac{1}{2}$ per cent in either direction would result in each case in a corresponding variation in the resultant surplus of approximately £1 million and consequently in the total of purchases for consumption and investment.

Having obtained the entries for Sales to Other Sectors from the production accounts for these sectors, the item Other Sales, comprising in total purchases for personal consumption and for private investment, thus emerged as a residual in the account. The task remained to subdivide this total between these two categories. However, due to the lack of complete data relating to both the volume and direction of private investment expenditure in the Territory, this subdivision had to be based on rather broad lines.

Imports of fixed capital, transport equipment and producers' materials are essential for the economic development of the Territory and provided some indications of the magnitude of investment expenditure. From 1958/59, further indicators were derived from production bulletins for rural⁽¹⁾ and secondary industries,⁽²⁾ from statistics of motor vehicle registrations,⁽³⁾ and from census data⁽⁴⁾ relating to housing in the Territory and some estimates of related costs. A rough attempt was also made to relate this information to earlier years. The table below indicates the rather close relationship which was assumed to exist between certain categories of imported equipment and materials obtained from classifications of imports cleared for home consumption⁽⁵⁾ and the final estimates of total purchases for private investment.

(1) Territory of Papua and New Guinea: Production Bulletins Nos. 1-3 (1958/59 to 1960/61) Part I., Rural Industries. Bureau of Statistics, Papua.

(2) Territory of Papua and New Guinea: Production Bulletins Nos. 1-3 (1958/59 to 1960/61) Part II., Secondary Industries. Bureau of Statistics, Papua.

(3) Territory of Papua and New Guinea: Bulletin - Motor Vehicle Registrations. Bureau of Statistics, Papua.

(4) Commonwealth of Australia: Census 29th June, 1961.

(5) Territory of Papua and New Guinea: Imports cleared for Home Consumption 1957/58 to 1960/61. Bureau of Statistics, Papua.

The relationships in 1957/58 were affected by some rather large imports of oil-well drilling equipment and other items which were accounted for in the Primary Enterprises Account⁽¹⁾ under the heading of capital account charges. When these were extracted the resultant percentages were more in line with later years. It was assumed that in 1956/57, although comparable data were not available, relationships similar to later years were in existence.

Purchases for Private Investment

Years ended 30th June
(To nearest £10,000)

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Imports classified as:					
Manufactures of Metal		1,230	1,280	1,250	1,630
Machinery other than electrical		2,250	1,770	1,920	2,210
Electrical Machinery		740	840	890	1,420
Transport Equipment		1,700	1,700	1,500	2,270
Prefabricated buildings, sanitary, plumbing, heating and lighting, fixtures and fittings		300	270	320	480
Furniture and Fittings		<u>190</u>	<u>190</u>	<u>180</u>	<u>290</u>
Total (a)		<u>6,410</u>	<u>6,050</u>	<u>6,060</u>	<u>8,300</u>
Total Imports (b)	19,760	20,400	20,260	21,030	26,740
Estimated Purchases for Private Investment (c)	4,500	5,000	5,500	5,500	7,500
 (c) (a) %	n. a.	78	91	91	90
 (c) (b) %	23	24	27	26	28

While in the account for primary enterprises an attempt was made to show, in addition to earnings in the form of cash wages and keep, the surplus accruing to indigenes operating on their own behalf, no such attempt was made in this account and in fact the item de-

(1) Table 4.6.

scribed here as European Surplus includes amounts accruing to indigenous operators in this field. While it is known that there are a number of indigenes conducting commercial enterprises on their own behalf, statistics are not available to enable an estimate of the returns obtained by these operators. It is probable that the total amount of such returns was relatively small, especially in the earlier years, and the effect of their inclusion in European Surplus is probably close to negligible. Native co-operative societies have been a significant feature of the Territory economy for many years and statistics are available⁽¹⁾ as to numbers and types of societies, turnovers and rebates to members etc. The operations of these societies in primary industries will, by the nature of the estimates for that sector, be included in the Primary Enterprises Account, but it is not possible to show separately the results of their activities in other commercial enterprises. The relative size of the distribution of profits from normal business operations of all co-operative societies is shown in figures below extracted from the Annual Report of the Co-operative Section of the Administration.

	<u>(£ '000)</u>
Year ended 31st March 1957	69
1958	30
1959	17
1960	46
1961	74

The large number of societies classified as producer or dual purpose (consumer and producer) societies suggests that a large share of these profits relates to primary industry thus emphasising the likely small effect of the inclusion in European Surplus in this account of amounts accruing to indigenous operators.

Attempts were also made to obtain information relating to expenditure by indigenous personnel on both consumption goods and investment goods. However, since there is no price differentiation, "a sale is a sale" regardless of the status of the purchaser and no separate records were found of sales of goods in either category to

(1) Territory of Papua and New Guinea: Annual Report of the Co-Operative Section 1960/61. Department of Native Affairs, Papua.

indigenous and non-indigenous purchasers. Thus it should be further noted that the items of purchases for personal consumption and for private investment both contain indigenous purchases which could be of some magnitude. No attempt was made to estimate the size of these purchases. However, some rough estimates of the broad categories of gross private investment are given in Chapter 9.

The resultant estimates for this sector are given in Table 8.1.

TABLE 8.1

COMMERCIAL ENTERPRISESYears ended 30th June

	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Receipts</u>					
<u>Sales to Other Sectors</u>					
Primary Enterprises	8,296	6,831	6,161	7,045	6,551
Public Authorities	4,638	5,432	5,375	6,394	7,485
Missions	184	146	361	325	296
Less External Business Enterprises	-1,045	-1,210	-1,380	-1,575	-1,645
<u>Total Sales to Other Sectors</u>	12,073	11,199	10,499	12,189	12,687
<u>Other Sales</u>					
Personal Consumption	14,630	15,950	16,927	17,956	20,735
Private Investment	4,500	5,000	5,500	5,500	7,500
<u>Total Other Sales</u>	19,130	20,950	22,427	23,456	28,235
<u>Total Receipts</u>	31,203	32,149	32,926	35,645	40,922
<u>Outlay</u>					
<u>Purchases</u>					
Primary Enterprises	2,341	2,272	2,234	2,679	3,509
Imports	16,357	16,695	16,170	17,210	20,999
Comm. Taxes (less Subs.)	2,096	2,485	2,557	2,452	2,845
<u>Total Purchases</u>	20,794	21,452	20,961	22,341	27,353
<u>Income Produced</u>					
European Labour Income	5,203	5,312	5,611	6,314	6,578
Native Wages & Keep	526	565	594	750	851
European Surplus	4,680	4,820	5,760	6,240	6,140
<u>Total Income Produced</u>	10,409	10,697	11,965	13,304	13,569
<u>Total Outlay</u>	31,203	32,149	32,926	35,645	40,922

CHAPTER 9

FINAL ACCOUNTS

Production accounts for each sector of the economy have been presented in earlier chapters. Final accounts presented in this chapter are:

Private Income and Outlay	- Table 9.1
Private Capital Account	- Table 9.2
Income and Expenditure Account	- Table 9.3

and, with the exception of the entry for Gross Private Savings, which was derived as a residual in Table 9.1, were constructed directly from entries contained in these production accounts. Comparable figures for the year 1950/51, taken from earlier estimates by Professor Swan, have been included in each of these tables.

Private income in Australian statistics⁽¹⁾ is recorded under the following sub-headings:

- Wages and salaries, etc.
- Company income
- Income of unincorporated enterprises
- Net rent and interest

Lack of information relating to certain aspects of economic activities in the Territory makes it extremely difficult to make a similar subdivision of income in these estimates. With the introduction of income tax in the Territory from the 1st July, 1959, tabulations of tax data are available which supply interesting and valuable information. However, while tabulations for the income year 1959/60 are available in the Finance Bulletin⁽²⁾ and data for the income year 1960/61 were supplied by the Bureau of Statistics, at the time of writing this latter information was still confidential and could not be used in this exercise. In the estimates presented in Table 9.1 for Private Income and Outlay therefore, there is no subdivision of private income between incorporated and unincorporated

(1) Commonwealth of Australia: National Income and Expenditure.

(2) Territory of Papua and New Guinea: Finance Bulletin No. 1. Income Taxation Assessment Year 1960/61. Bureau of Statistics, Papua.

income, European Labour Income includes the imputed drawings of working proprietors and European Surplus includes net rent and interest charges and depreciation in addition to net profits.

Native Income, comprising the value of cash wages and keep to indigenes in paid employment and the surplus accruing to indigenous operators in primary industry, has increased substantially over the period under review. On one hand, this increase is partly a result of an increase in the numbers employed and in the minimum cash wage prescribed in the Ordinances. On the other hand, the increase reflects the steady growth in activity by indigenous operators on their own behalf, especially in the production of copra, coffee and cocoa. These operators now produce about one quarter of the total output of copra, more than a quarter of the total cocoa output and about half of the total coffee output; and it is expected that these proportions will be substantially increased, especially in coffee and cocoa, when presently immature trees come into full bearing.

The following table indicates that, over the ten year period, total native income has maintained its relationship to Gross Product at just under 30 per cent while the share of native income accruing to the indigenes operating on their own behalf has increased from around 16 per cent in 1950/51 to about 26 per cent in 1960/61 and this after somewhat larger shares in 1958/59 and 1960/61 as a consequence of the effect of record or near record export prices.

NATIVE INCOME

Years ended 30th June

	<u>1950/51</u>	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Total Native Income (£'000)	4,380	7,845	7,806	9,466	11,150	11,955
Percentage of Gross Product	29.0	25.3	24.6	25.2	26.3	28.0
Native Surplus (£'000)	690	1,984	1,954	3,056	3,552	3,127
Percentage of Native Income	15.8	25.3	25.0	32.3	31.9	26.2

European Labour Income has also shown large increases over the period, mainly as a result of increases in the work force and higher rates of remuneration. Between 1950/51 and 1960/61, the numbers employed by the Administration and Commonwealth Departments and instrumentalities more than doubled and liberal increases were granted in salary rates and Territorial allowances. In the private sector, the work force appears to have been reasonably stable over the last five or six years but rates of remuneration were increased somewhat.

While the surplus obtained from the activities of commercial enterprises has grown relatively steadily over the period, fluctuations in the surplus from primary enterprises reflect the dependence of these enterprises on the proceeds of exports of agricultural products and their relationship to international markets. Non-indigenous operators in this field are harder hit by fluctuations in export prices than are indigenous producers, mainly as a result of much higher levels of costs, particularly of fixed costs.

Total Personal Consumption Expenditure comprises expenditure from private income on personal domestic services, estimated on the basis of numbers employed and rates of remuneration, external personal expenses taken directly from the External Transaction Account⁽¹⁾ and consisting of expenditure on personal travel etc., upkeep of dependants and payments of life assurance premiums and commercial purchases for consumption, being the balance of the item Other Sales in Table 8.1 after estimating the value of purchases for private investment as described in Chapter 8.

After making allowances for the outlay on direct taxation derived from the Public Authorities Account,⁽²⁾ the item Gross Private Savings emerged as a residual in the account. Although separate estimates were made of net interest and dividends etc. payable abroad for the purposes of the balance of payments presented in Table 7.2, these amounts are still included (as part of undistributed profits) in European Surplus and are consequently included in the estimate of Gross Private Savings.

All the entries in the Private Capital Account presented in

(1) Table 7.1.

(2) Table 5.1.

Table 9.2 were taken directly from tables already described in earlier chapters. It is evident from this table that, except for small Public Authority capital transfers (mainly net purchases of land by the Administration), the funds to finance Gross Private Investment were provided almost entirely from Gross Private Savings. In most years, this was also the source of the outflow of bank funds and private capital indicated in the account.

Estimates of Gross Private Investment, comprising capitalised developmental expenditure in primary enterprises and commercial purchases for investment, are shown in Table 9.2. The table below indicates the magnitude of gross capital formation. Public investment undertaken by the Administration, by Commonwealth Departments and by Native Local Government Councils was obtained from official sources⁽¹⁾ which set out the categories of this investment.

<u>GROSS CAPITAL FORMATION</u>						
<u>Years ended 30th June</u>						
<u>£m.</u>						
	<u>1950/51</u>	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
<u>Private Investment</u>						
Net Private Investment	(2.3)	(7.7)	(7.0)	(6.5)	6.2	(7.0)
Private Deprec. Allowances	(.6)	(2.1)	(1.9)	(1.7)	(1.7)	(1.9)
Gross Private Investment	2.9	9.8	8.9	8.2	7.9	8.9
<u>Public Investment</u>						
Administration						
New Works	1.1	3.2	3.5	3.7	3.9	5.0
Purchases of						
Capital Assets	.1	.6	.8	.9	.9	.7
Cwth. Departments						
Capital Works Expend.	1.0	.4	.6	.7	.7	1.4
Native Local Govt. Cncls.						
Capital Expenditure				.1	.1	.1
Gross Public Investment	2.2	4.2	4.9	5.4	5.6	7.2
<u>Gross Capital Formation</u>						
	5.1	14.0	13.8	13.6	13.5	16.1

(1) Territory of Papua and New Guinea: A Bill for an Ordinance (Estimates of Expenditure) and Annual Reports.

The paucity of available data makes estimates of depreciation allowances by industry and by type of investment extremely hazardous. However, from tabulations of income tax returns, it was possible to arrive at a figure for total depreciation allowed in the private sector amounting to £1.7 million in 1959/60. As already mentioned, tabulations for the year 1960/61 were not available for publication at the time of writing, however, it is reasonable to assume that the relationship between Gross Private Investment and private depreciation allowances in all years in this study were somewhat similar to those applying in 1959/60. This assumption was used in the estimates of depreciation allowances in all years other than 1959/60 in the previous table, the entries for Net Private Investment then being obtained by subtraction.

Some estimates of broad categories of Gross Private Investment, based on Census data,⁽¹⁾ motor vehicle registrations⁽²⁾ and information contained in official Production Bulletins,⁽³⁾ together with some rather extensive guesswork, are given in the following table. Comparable estimates for 1950/51 were not available.

GROSS PRIVATE INVESTMENT

Years ended 30th June

£m.

	<u>1956/57</u>	<u>1957/58</u>	<u>1958/59</u>	<u>1959/60</u>	<u>1960/61</u>
Pte. Dwelling Construction	1.6	1.3	1.6	1.7	1.7
Other Building & Construction	.8	.8	1.0	1.0	1.3
Motor Vehicles	.8	.7	1.0	1.2	1.3
Other Capital Equipment	1.3	2.2	1.9	1.6	3.2
	<u>4.5</u>	<u>5.0</u>	<u>5.5</u>	<u>5.5</u>	<u>7.5</u>
Capital Account Charges	5.3	3.9	2.7	2.4	1.4
Gross Private Investment	9.8	8.9	8.2	7.9	8.9

(1) Commonwealth of Australia: Census 29th June, 1961.

(2) Territory of Papua and New Guinea: Bulletin - Motor Vehicle Registrations. Bureau of Statistics, Papua.

(3) Territory of Papua and New Guinea: Production Bulletins Nos. 1-3. (1958/59 to 1960/61). Part I. Rural Industries and Production Bulletins Nos. 1-3 (1958/59 to 1960/61). Part II. Secondary Industries. Bureau of Statistics, Papua.

Given the entries in all other accounts, the final account for Income and Expenditure can then be constructed and is presented in Table 9.3. Under the heading of Income Payments and Other Charges, Native Income, European Labour Income and Private European and Mission Surpluses were obtained by summing entries under these headings in all sector accounts. Government Surplus consists of total transfer receipts, excluding direct taxation, taken from the Public Authorities Account.⁽¹⁾ It will be remembered that in Chapter 5 the treatment of these receipts was described and it was decided that they should be regarded as factor income accruing to Public Authorities to be included in the final assessment of Gross Product. The addition of commercial taxes less subsidies in Table 9.3 to the resulting Gross Income (at factor cost) gave the Gross Product at market prices. Total Market Supplies, representing the total value of goods and services available from domestic production and from imports, was then derived by adding to Gross Income (at market prices) the value of imports and other external purchases obtained directly from the External Transaction Account in Table 7.1.

The derivation of entries comprising final expenditure on goods and services requires little explanation. Personal Consumption Expenditure and Gross Private Investment were given in Tables 9.1 and 9.2 respectively; Mission Expenditure was obtained from Table 6.1; Public Authorities Expenditure was obtained by adjusting the total expenditure in the Public Authorities Account by expenditure on mission subsidies and capital transfers and by making allowances for the amount of Copra Fund interest included in the Government Surplus as factor income and received directly as external receipts in the External Transactions Account.⁽²⁾ The resultant total was then subdivided between current expenditure and capital expenditure on the basis of estimates of Gross Public Investment included in the table on page 89. The sum of these items of final expenditure produced estimates of Gross Domestic Expenditure which by the addition of export sales of goods and services resulted in estimates of Total Market Expenditure; by definition, these aggregates must be in balance with aggregates of Total Market Supplies.

(1) Table 5.1.

(2) Table 7.1.

CONCLUSION

In the years between 1950/51 and 1960/61, the growth of the monetary economy of the Territory has been outstanding. Gross Product (at market prices) after a two-fold increase from £15.1 million in 1950/51 to £31 million in 1956/57, showed a further increase to £42.7 million in 1960/61. The annual average (cumulative) rates of growth between 1950/51 and 1956/57 and between 1956/57 and 1960/61 were approximately 12.5 per cent and 8.5 per cent respectively although the tables indicate the unevenness of the growth in the second period occasioned mainly by favourable export prices in some years and by increases in the rates of remuneration to both indigenous and non-indigenous employees. However, since these estimates refer to the monetary economy of the Territory, thus excluding completely production in the subsistence sector by the larger share of the indigenous population, care must be exercised in the interpretation of these increases in Gross Product and any use of these statistics for comparative purposes in relation, for example, to per capita income as a measure of fluctuations in standards of living, must take close account of the numbers of both indigenous and non-indigenous personnel involved.

However, these estimates are made at current prices and no accurate adjustment was possible due to the lack of information about changes in price levels and in the terms of trade. A rough index of retail prices is shown below and was constructed from material collected by the Administration and the Department of Territories. This index enables a rather doubtful adjustment to take account of price changes in the period, suggesting that the rate of growth (at something like constant prices) over the period under review may have been something of the order of 7 to 8 per cent.

RETAIL PRICES

Constructed Index Number Years ended 30th June

(Base 1950 = 100)

1950	100	1958	141
1951	111	1959	140
1956	133	1960	142
1957	135	1961	148

The indigenous sector of the monetary economy has also experienced considerable growth over the period, however, the relative position of this sector remains almost unchanged. This may be the result of, on the one hand, the tremendous growth in the

TABLE 9.1

PRIVATE INCOME AND OUTLAY

TABLE 9.3

INCOME AND EXPENDITURE
Years ended 30th June

	1950-51 (£'000)	1956-57 (£'000)	1957-58 (£'000)	1958-59 (£'000)	1959-60 (£'000)	1960-61 (£'000)
<u>Income Pay'ts & Other</u>						
<u>Chgs.</u>						
Native Income	4,380	7,845	7,806	9,466	11,150	11,955

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