USE OF THESES

This copy is supplied for purposes of private study and research only. Passages from the thesis may not be copied or closely paraphrased without the written consent of the author.
THE ISLAND TRADE
AN ANALYSIS OF THE ENVIRONMENT AND OPERATION OF SEABORNE TRADE AMONG THREE ISLAND GROUPS IN THE PACIFIC.

SUMMARY

Part I considers physical conditions affecting navigation and trade. These are: island types, remoteness from international trade routes, fragmentation of territory, difficulties of access, currents and tides. Environment and population are also considered in relation to exploitable resources. Populations are growing rapidly but the range of marketable resources are limited often due to inadequate transport services, and all agricultural resources are liable to diminish with destructive droughts and hurricanes.

Part II traces the development of the trading systems. Historically the archipelagoes have followed similar lines. First came itinerant traders, then the creation of port bases and the spread of resident agents. The exchange economy was thus established. With colonialism came port of entry restrictions and the rise to power of Anglo-Australasian companies, especially in Suva. The companies competed in various ways but the trend was towards oligopoly. The islanders did not emerge as traders, although they did have indigenous trading systems. The extended family was one factor against participation in the commercial system, but islanders did protest against commercial exploitation, and some attempts were made to usurp the role of alien traders and to operate island shipping. Only with the emergence of co-operatives have islanders had significant successes in trading ventures.

Part III deals with present day trade. Many islands are threatened with economic isolation for freights are expensive, services poor and the risks great. Shipping where cash is received from phosphate workers the position
organisations differ in the three territories but nowhere are they profitable — unless maintenance is neglected and safety factors reduced. In Tonga and the GEIC government supports shipping. Reasons for low profitability are: long hauls for small quantities, rising crew costs and repair costs, intensive competition (in Fiji) and marine accidents. Under these conditions freights must be high if vessels are to operate.

It is possible that standards could be improved and ships made more viable. Before this is considered the study looks in detail at marketing and retailing in the hinterlands, the functions of shipping, and the degree to which communities are dependent on trade. In the GEIC virtually all commercial activities are in the hands of co-operatives. In Tonga the government controls marketing and private enterprises control retailing. In Fiji marketing and retailing is apart from co-operatives, under private enterprise. The GEIC system gives a more equitable distribution of cash returns, but highest returns are received by estates in Fiji and lowest by people in the outer islands of Fiji. In these latter areas there is no central trading place. A more consolidated system of marketing and retailing appears to be desirable.

Patterns of ship movements in the archipelagoes are determined by copra production, and many islands with high potentials for fresh products cannot market these. A certain amount of fresh produce is carried by passengers and passenger traffic to and from the port towns is extensive. On outward voyages cargoes comprise foodstuffs, oils and building materials. Tonnages depend on regional incomes and these in turn generally on copra. But not entirely so, for cash comes from sources external to the islands (from phosphates especially). It is shown that all islands are truly dependent on cargoes and in the GEIC where cash is received from phosphate workers the position
will be serious in the small Ellice Islands and drought-prone southern Gilberts when phosphates are exhausted.

Part IV is the conclusion, this considers trends and future prospects in island trade. In the past development has centred mainly around port towns, planning is required to spread development outwards. All archipelagoes have adopted plans but outer areas do not always figure in these and in the GEIC plans are inadequate to meet the future. Port towns continue to attract people ahead of urban employment, opinion is divided on the value of this. These towns are now part of the archipelago community - not simply alien entrepots. To spread development outwards from the towns there has to be adequate shipping.

Two courses are open, either subsidise ships or rationalise the trades. Already limited rationalisation has taken place in Fiji. The solution appears to be consolidation of trading places to speed turn-around times. This would also facilitate the centralising of commercial activities and minimise the amount of money and time spent on travelling to port towns. In the GEIC rationalisation might involve altering international channels of trade. Links between GEIC and Australia could be altered to links between GEIC and Fiji and the locational disadvantages of the small Ellice Islands and drought islands would be changed.

Part V is a postscript emphasising that islanders are not simply becoming 'economic men'. There is a non-commercial trading system still operating. Nowadays this relies on inter-island and inter-territorial commercial shipping. It is unprofitable by commercial standards but must be taken into account when planning island transport.
THE ISLAND TRADE

AN ANALYSIS OF THE ENVIRONMENT AND OPERATION OF SEABORNE TRADE AMONG THREE ISLAND GROUPS IN THE PACIFIC

Alastair Dougal Couper

Thesis Submitted for the Degree of Doctor of Philosophy in the Australian National University April, 1967
DECLARATION

This thesis is my own work based on field and documentary research. It has not been accepted in any previous application for a higher degree. All quotations are distinguished by quotation marks, or by single spacing, and sources of information are fully acknowledged in the text.

ALASTAIR DOUGAL COUPER
March, 1967
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GLOSSARY AND ABBREVIATIONS

Island words and names have been defined in the text, but some of the more common are listed here along with a few technical terms and abbreviations.

**Island words**

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<td>Api (Tongan)</td>
<td>An allotment of land.</td>
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<td>Bobos (Gilbertese)</td>
<td>A Co-operative.</td>
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<td>Boboti (G)</td>
<td>The soliciting of goods, usually between kinsmen.</td>
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<td>Buli (Fijian)</td>
<td>A government appointed official (salaried) on an island.</td>
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<td>Dalo (F)</td>
<td>Taro.</td>
</tr>
<tr>
<td>Fusi (Ellice)</td>
<td>A Co-operative.</td>
</tr>
<tr>
<td>Kape (T)</td>
<td>Giant taro.</td>
</tr>
<tr>
<td>Kautaha (T)</td>
<td>An association or work party.</td>
</tr>
<tr>
<td>Kava (T)</td>
<td><em>Piper methysticum</em>, and the beverage made from the roots.</td>
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<tr>
<td>Kumala (F/T)</td>
<td>Sweet potato.</td>
</tr>
<tr>
<td>Kerekere (F)</td>
<td>The soliciting of goods (as in boboti).</td>
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<tr>
<td>Masi (F)</td>
<td>Cloth made from paper mulberry bark (<em>Broussouetia papyrifera</em>).</td>
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<td>Mataqali (F)</td>
<td>The 'clan' or land owning group.</td>
</tr>
<tr>
<td>Mronron (G)</td>
<td>An association or work group.</td>
</tr>
<tr>
<td>Solevu (F)</td>
<td>The formal exchange of goods between different groups.</td>
</tr>
<tr>
<td>Tabua (F)</td>
<td>Whale's tooth for ceremonial presentation.</td>
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<tr>
<td>Tangitang (G)</td>
<td>A 'cry' or protest movement.</td>
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<tr>
<td>Tapa (T)</td>
<td>Bark cloth (see Masi).</td>
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<tr>
<td>Vatas (F)</td>
<td>Copra drying trays</td>
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<tr>
<td>Waqì (F)</td>
<td>Boat.</td>
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Yaqona (F)  
See Kava.

**Definitions**

- **Dollars**  
  Dollars Australian ($200 = £75 Sterling)
- **Miles**  
  Statute miles unless otherwise stated.
- **Missed stays**  
  Failing to come about when changing from one tack to another.
- **Standing off and on**  
  Sailing in close to the reef and coming about and sailing away from the reef.
- **Tons**  
  Tons measurement (40 cub. ft.) unless otherwise stated.

**Abbreviations**

Many references in the text have the appendages F (for Fijian), G (for Gilbert and Ellice) and T (for Tonga). These indicate the regional subsection of the bibliography under which the full reference may be found. The following abbreviations have also been used in referencing and in other parts of the text:

- CLB  Consular Letter Books.
- FDFB  Fiji Development Fund Board.
- FRG  Fiji Royal Gazette.
- fOB  Free on Board.
- GEIC  Gilbert and Ellice Islands Colony.
- ML  Mitchell Library, Sydney.
- NZPP  New Zealand Parliamentary Papers.
- PIM  Pacific Islands Monthly.
- PIP  Pacific Islands Pilot.
- PIYB  "  " Year Book.
- SPC  South Pacific Commission.
- TCB  Tonga Copra Board.
- TSA  "  " Shipping Agency.
- WPHC  Western Pacific High Commission.
- WS  Wholesale Society.

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ACKNOWLEDGEMENTS

Research work on which this thesis is based was made possible by an Australian National University Scholarship. I am grateful to the university for the award, for the facilities they provided in Canberra, and for the generous assistance which enabled me to range widely in the Pacific on this research project.

I am particularly grateful to Dr. H. C. Brookfield who supervised the thesis and made valuable and constructive criticisms, and to Professor O. H. K. Spate who read and commented on parts of the study, and who assisted in many other ways. The work also benefitted greatly from discussions with Mr. H. E. Maude, of the Department of Pacific History, Australian National University, who was always willing to make his knowledge of the Pacific islands and of historical manuscripts available to me. Mr. Hans Gunther of the Cartographic Department at A.N.U gave assistance and advice and Mr. Keith Mitchell produced some of the figures.

It would be impossible to acknowledge all the people in villages, estates, and on island vessels who directly assisted in my work and who gave so much help and hospitality to me and my family, but I am deeply indebted to them.

I am also indebted to the editorial staff of Pacific Islands Monthly, to the South Pacific Commission, and to Government Officers in the Gilbert and Ellice Islands, Fiji and Tonga. In this latter respect I would make special acknowledgement of assistance during 1964-65 from the following - Mr. R. Angiloni, Acting...
Resident Commissioner of the GEIC; Mr. S. Roberts, Registrar of Co-operatives, GEIC; Mr. A. C. Reid, Secretary for Fijian Affairs; the staff of the Department of Co-operatives in Fiji and in particular Mr. H.R.R.L. Cooper, Mr. D. Malcolm and Mr. Takosi Rotan; Mr. Ian Diamond, Archivist, Central Archives of Fiji and the WPHC; and Mr. Shew Nath of the Government Printing Office, Suva. Also the staff of the Central Planning Office, Suva, particularly Mr. E. Knoblock, and the staff of the Harbour Master’s Office, Suva, especially Captain P. Hough and Mr. W. Kilroy.

I am grateful for valuable discussions with His Majesty King Taufa‘ahau Tupou IV of Tonga, the Hon. M. Uli‘uli Tupouniua, and with the staff of the Tonga Shipping Agency and Copra Board.

The managers and staff of commercial firms assisted me in many ways, especially Mr. W. G. Johnson of W. R. Carpenter & Co., the late Mr. Snell and Captain B. Visser of Morris Hedstrom & Co., Mr. Arthur Evans of the Princess Shipping Co., the managers of K. W. March and Joong Hing Loong of Suva, and Punja Bros. of Lautoka.

My field work was made easier by the company of Korabara in the Gilbert Islands and by the valuable help of John Taka who worked with me in Fiji and Tonga. Also by the kind hospitality of Pepi Latu and Funau Ilain, and not least by the forbearance of my wife and three children who endured some rough passages on island vessels.

This thesis was completed at the University of Aberdeen and I am grateful to Professor K. Walton for the facilities which he provided. Finally, I would make
special mention of Captain G. H. Heyen who despite ill health talked with me and answered my letters in detail on the subject of trade in the Gilbert Islands.
INTRODUCTION

This is a comparative study of trade between Pacific port towns and their island hinterlands, with particular emphasis on the significance of regional trade for the economic development of the islands.

The territories chosen for study were Fiji, Tonga, and the Gilbert and Ellice Islands Colony (GEIC). These places have a number of qualitatively similar characteristics. They lie at great distances from the principal world markets, their territorial units are scattered, they are subject to destructive droughts and or hurricanes, their range of marketable resources are limited, and their populations are growing at a rate of about three per cent per annum. Quantitatively Fiji stands out in population and production, but the outer islands of Fiji share all the basic disabilities that have been mentioned.

There was at least one good reason, apart from the expediency of field work convenience, for comparing these three areas in the 'British' Pacific. This was the fact that while they shared similar forms of trading organisations in the nineteenth and early twentieth centuries they have in recent times evolved systems which are distinctive. The importance of large merchant companies, small entrepreneurs, government agencies and island co-operatives are very different in the three territories. It may be possible therefore to see how the diverse economic institutions of these archipelagoes are coping with some common problems.
One basic problem for development of these territories is their fragmentation into many islands. This can only be adequately overcome by efficient shipping which will knit each archipelago into an economic whole. But sea transport is nowadays costly, and in the marine environments of the archipelagoes can be risky. Hence it is the zones in and around the port towns that have tended to develop at the expense of the outer areas. This was a point noted by O'Loughlin when she wrote in 1956:

The difficulty and cost of sea transport around the Fiji group has been perhaps the chief contributory factor to uneven development of economic activity in Fiji's various islands. Viti Levu, the largest island, had a population of 177,000 or 68 per cent of the total in 1946. It has two main ports of entry and other deep water harbours for ocean going vessels taking sugar and discharging oil fuels; it has about 400 miles of motorable road and 350 miles of light railway and it is estimated that about 77 per cent of Fiji's gross domestic product is attributable to Viti Levu. Vanua Levu which is a little more than half the size of Viti Levu had in 1946 a population of 40,000, only about 100 miles of motorable road, 90 miles of light railway and one port, Labasa, which has grown up as a result of the sugar-growing district nearby. Apart from this sugar belt, copra is the only important source of income from islands outside Viti Levu; and their only source of communication, the irregular and barely profitable small copra ships. The development of this island economy is likely, for communication reasons, to follow this one sided pattern unless centralized action is taken to encourage development in more backward districts. (CF 44/1956, p. 3).

These proportions are unlikely to have altered significantly, and in February, 1966 an irate planter,
S. W. Wilson of Vanua Levu, complained in the *Fiji Times*

...most of the revenue has been too lavishly spent on the island of Viti Levu to the detriment of Vanua Levu and the rest of Fiji... vast sums of tax money have been spent in and around that octopus city of Suva which was for many years the only shipping port of any importance .... The tentacles of this greedy octopus cover the whole of the many islands large and small of all Fiji. (*Fiji Times*, 19 February, 1966, p. 13).

Not only has there been very little 'spread' of development to the outer areas but the people of these zones have been placed at economic disadvantages in many other respects. The Burns Commission into the population and natural resources of Fiji reported:

... We have received from witnesses complaints of the high rate of freight charges for the transport of copra and other goods from the outer islands to Suva. The oil mills to which all copra is brought for processing are situated at Suva, and it is from Suva that bananas and other produce (except sugar) are exported. We are informed that the freight on copra from Vanua Levu, Taveuni /150 miles/ and other islands to Suva is £F4 a ton (the freight to the United Kingdom is about £F10 a ton). We have also been informed of losses caused to banana growers by the failure of vessels to arrive at outer islands on the dates fixed for them to load cargoes for Suva (CPI/1960, para. 642).

Quite evidently a thesis concerned with sea transport is *ipso facto* involved with the whole question of island economic development; the most obvious questions in this respect being why are freight rates so high, and what, if anything can be done about them?

But shipping services in the island areas cannot be treated simply as a means of distributing and collecting
goods and passengers. They fit into a trading complex which is itself interwoven through the social and economic life of the islands. For this reason the approach adopted here takes into account many environmental, economic and social factors. Isard (1962), among others, has recognised the need for such a comprehensive approach to 'trading systems'. He made this point when he stated that location and trade were two sides of the same coin:

The forces determining one simultaneously determine the other. To understand and anticipate the interaction of these forces, a knowledge of resources, position, topography, and other environmental characteristics, and a knowledge of price, exchange control and marketing mechanism, and the cultural institutions and behaviour patterns are each indispensable. (1962, p. 6).

Most of the conclusions arrived at in various parts of this thesis are generalisations derived from what appear to be the main facts of the situations. However, there are a few theoretical concepts which have influenced interpretation of some of the facts. The first of these is the succinct framework developed by Spoehr (1960, pp. 586-92) on the relationships between Pacific port towns, hinterlands and forelands. The second is the Von Thünen (Hall, 1966) model, and the third Myrdal's (1963) concept of 'backwash effects' and of 'circular causation'.

Spoehr's treatise is well-known to Pacific geographers and anthropologists and was the basis of such studies as the 'Harvard Society Islands Project'.
Von Thünen also appears in modern location theory, although in trade theory his model has, until recently, tended to be overlooked (Isard and Peck, 1954, p. 97). Myrdal may have received less attention by geographers in both contexts. Where his theories appear to fit the archipelago situations are now briefly outlined.

In his chapter entitled 'The Drift Towards Regional Economic Inequalities In A Country' Myrdal stresses that growing communities tend to accelerate their rate of growth and may contribute to the stagnation or even decline of other parts of the country; this he calls the 'backwash effect'. Against this, he says, there may also be a centrifugal 'spread effect'. Outlying areas could be stimulated to technical achievement and could gain from the increasing outlets for agricultural products at the centres.

When we look at the islands from the port town outwards it appears that at different periods some lie in areas of 'backwash' and others in areas of 'spread effects' radiating from the port town centres of economic activities. The 'spread effects' may be said to outweigh the 'backwash effects' in areas where there is regular contact with the towns, where the island's potentials for market production are being fully realised, and where the per capita cash incomes show cumulative increases. The 'backwash effects' predominate where, for example, contact is spasmodic, many marketable resources are idle, and there is a net migration - especially of young people - to the port towns.

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In actual fact the divisions are not so clear-cut, nor does geographical distance alone necessarily place an island within an area of 'backwash'. Of more significance (although again not the only factor) is 'economic distance' which is simply 'the cost of traversing the distance rather than actual mileage' (Balassa, 1961, p. 41). For example, in 1964 the freight rate per ton of copra from Kabara Island in Lau to Suva (200 miles) was $13. In the same year the freight rate per ton of copra from Suva to Japan (4000 miles) was $11.5. Admittedly, the quantities moved per shipment in this example were very different, but this is precisely the point - the small quantities of cargo available (and demanded) in some island regions increase their economic distance from the port towns. To this we may add further 'frictions' to the geographical mileage of the initial Von Thünen model - such as the conditions of sea and coastal navigation, methods of cargo working in the islands, and such factors as monopoly charges in areas where there are no alternative carriers or where a local shipping conference is operating. These various frictions to the traversing of comparatively short geographical distances are considered under 'Navigational and Trading Conditions' (Chapter I) and again in the discussion devoted to 'Regional Shipping' (Chapter 7), for where these frictions are increasing they are pari passu inhibiting development.

Myrdal's theory of 'circular causation' has also some relevance for the dynamics of development and under-development in the territories. Under laissez faire
conditions a small remote island with difficult landing conditions for most of the year will undoubtedly be charged high freight rates, but is unlikely to receive a frequent shipping service. The stores on such an island are consequently likely to run short of supplies, and in any case they would carry only a limited variety of stock. There is thus little incentive to production for the market and a limited amount of cash is earned; this in turn means that trading vessels are even less likely to call. There is in these circumstances a spiral of causation downwards. It may be possible that improved services and trade stores ahead of the level of economic development on the island could give a 'push' to greater economic activities and thus break the trend - but this would require a reassessment of sea transport, at least, as a development factor in the trading systems rather than as merely a response to existing regional supply and demand patterns.

So far the term 'development' has been used with the unqualified assumption that economic gains, in the sense of 'cumulative increases in output or consumption per head of population' (Stace, 1962, p. 9), are a goal of island society. As the overall emphasis in this thesis is on the process of island economic development through transport and trade some of the reasons behind this assumption should be mentioned to begin with.

In the first place one of the most striking features of the Pacific archipelagoes in recent years has been the growth of the port towns. People have come in from the islands in order to obtain wage-labour, to share in the
social and educational facilities that have grown up in the towns, and to free themselves from some of the constraints of traditional village life. It appears clear that greater opportunities in these spheres must now be developed in the outer areas. The argument for economic development is not therefore that increased wealth will bring increased happiness to outer island society, but that the people appear to want a greater range of choice. In short, 'the case for economic growth is that it gives man greater control over his environment, and thereby increases his freedom' (Lewis, 1963, p. 421.) Lewis devotes an Appendix to this argument.

The long-run alternatives to development in the islands would surely be less palatable for Pacific island traditionalists and romantics alike. Take the case of the Phoenix Islands and Tokelau Islands: here the cargo quantities were too small, the distances too great and the agricultural environments too poor to justify expensive shipping services. These frictions could not be overcome and the islands were abandoned by the people in favour of settlement elsewhere.

Full-scale emigration may, in fact, be the long-run future of many outer island societies, it might even be economically the most rational policy to adopt in the allocation of scarce capital resources for development; but we cannot be sure about the extent of the alternative economic support in the towns, or the continual availability of suitable unused land in more accessible regions which would absorb the displaced populations. This study would adopt a more optimistic view of outer island development and assume that...
technological and social change may result in a less expensive trading system and the appearance of more marketable resources.

Even for the more accessible islands a further expansion of commercial trade may also mean changes in the traditional way of life ... for traditional modes of land tenure do not facilitate the development of cash cropping' (Barrau, 1962, p. 3). It might mean a rearrangement of population distributions and land holdings, and these could be resisted by the more conservative elements. But Spate points out in the case of Fijian society:

Left to its own devices - or, rather, left unaided to face the devices of the modern world - it will break up of itself, and into a confusion giving no stable foundation to build on. (C.P. 13, 1959, para. 46).

He goes on to say that all that can be done is to guide the process of change so that the transition can be as smooth as possible (loc. cit.).

So far the present and future roles of seaborne trade have been referred to; but the present day trading systems in the Pacific contain many inheritances from the past. Such features as company spheres of influence, regional anomalies in production for the market, variations in the methods of trade, and the distribution of Chinese traders, cannot be fully explained without some reference to the history of the archipelagoes. This historical dimension also allows changes which are currently taking place to be assessed as possible trends in a sequential development of the trading systems.
The historical chapters in this thesis attempt to trace the main developments of interinsular commerce against the economic and political backgrounds of the islands. One impression which might be gained from three of these chapters (3 to 5) is that the native people were merely passive observers of the ebb and flow of the rival trading interests which sought the produce of the archipelagoes. Chapter 6 attempts to rectify this Eurocentric view by considering some of the reactions of island people to the traders and the subsequent developments of the island co-operatives which were to play a vital role in certain areas at a later date.

Finally, for the geographer in this region of small islands a knowledge of the past is particularly relevant, for, apart from the contribution it can make to his analysis of the present, it is a material factor which continually presents itself. It is apparent in the derelict commercial sections of the once thriving port of Levuka in Fiji. In Tonga the pretentious trading houses of Neiafu, each with its own small jetty, tell of a more prosperous era for the merchants. Similarly the old boundary marks and concrete steps remaining on some of the Gilbert islands serve as reminders of more imposing trading-stations. One has cause to consider the past also when interviewing present-day boatbuilders, captains and traders with such names as Whipp, Simpson, Pickering and Smith in Fiji, Murdoch, Redfern and Brechenfeldt in the Gilbert islands, and the many traders with German names throughout Tonga.

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Field Work

Over a period of one year it was possible to visit every island in the Gilbert and Ellice (including Ocean Island for a few days), at least two to three islands in each region of Fiji, and the main regional centres and some outer islands in Tonga.

Most of the field work was carried out by travelling on trading vessels. These varied from 300 ton ships to small sailing cutters and canoes. On board island craft the captains, supercargoes, seamen and passengers proved willing and interested informants. Discussions and observations ranged from methods of cargo handling to weather lore. As a result a mass of detail was recorded relating to Pacific seamen, their social customs and their methods of navigation and trade - most of which has to be reduced to a few short paragraphs.

On some trips the pattern was to stay with the vessel and record each aspect of the trade; on other voyages it was arranged that I would be left at some point on an island and be picked up a few days later. During sojourns in the villages I would visit all the local trade stores and village 'shops', find some older inhabitants who might recall earlier resident traders, and conduct a general survey on copra production, methods of marketing, and sources of cash income.

Quite obviously during stays of only three to five days in villages I could not attempt any systematic household, or even store survey. Nor could I establish the rapport necessary to enquire into certain aspects of human motivation - as workers engaged in micro-
geographical studies in these areas have done (see Brookfield, 1964). It was all I could do not to offend traditional island hospitality to a stranger by judiciously confining my enquiries to general economic matters affecting the village as a whole. My aim was to obtain a synoptic view of interisland trade. I think therefore that detailed recording on board the vessels and short spells of village residence spread over a fairly wide area of the central and south-west Pacific was the best approach in the time allotted.

At the port towns the harbour office shipping record where they existed, were analysed. At other important points such as Lautoka and Levuka in Fiji it was necessary to maintain an independent record on the movement of small craft. In every case, however, these records were supplemented by documentary information from, and interviews with, shipping companies, government departments, and many other organisations and individuals connected with island trade. Not all the statistics and information obtained by these methods in the port towns are fully reliable, but where serious doubts still exist they have been stated in the text.

Use was also made of historical documents and official records at the Central Archives of Fiji and the Western Pacific High Commission, Suva; the Mitchell Library, Sydney; the Australian National Library, Canberra; and the Department of Pacific History, Australian National University, Canberra.
Fig. 1
PART ONE

THE PHYSICAL ENVIRONMENT
CHAPTER I  

NAVIGATIONAL AND TRADING CONDITIONS

The Navigators

A look-out man climbs aloft  
To be quite sure how the ship must steer.  
Nairai lies right ahead  
Koro is away to Leeward  
And the ship is sailing down the wind towards Vuya /Bu  
The foreigner is a wide-awake-person,  
And takes care to follow the open channel.


From the deck of an island schooner the coconut palms of an atoll can be raised at eight to ten miles, but even before this landfall is made the look-out man may have seen the thin green band at the base of cumulus cloud which indicates the existence of shallow atoll waters. Now navigation becomes pilotage and it is the local knowledge of the master - of reef passages, coral heads, and tide rips - which will bring the vessel safely to an anchorage in the lagoon.

Irrespective of whether the island is 'low' coral or 'high' volcanic it is often the skills of a pilot from the mast-head, rather than the techniques of a deep sea navigator, that make for successful voyaging in many of the Pacific archipelagoes. Only in such regions as the 'strewn' islands of the Gilbert and Ellice is a full knowledge of ocean navigation an additional and necessary requirement. Here, the equatorial current sets westwards and the equatorial counter-current can be bafflingly erratic. Sun and star sights are taken, therefore, on the long voyages south from Tarawa to the
Ellice or eastwards to the Phoenix and Line Islands (Fig. 1.1).

In the Tongan group remote Niuafo'ou 210 miles northwest of Vava'u can be reached by 'dead reckoning'; as can the island of Rotuma 270 miles north of the Yasawa Islands of Fiji. The practice is hazardous; particularly so during the hurricane season when a vessel can be driven far from its track and may have to gain the island from a position without a terrestrial point of departure\(^1\). Consequently, fully qualified navigators are normally employed on these long runs. In the Pacific, therefore, we can distinguish between the ship masters who can navigate, in the true sense of the term, and (with several classes in between) the captains of small craft whose knowledge of navigation is rudimentary and whose skills lie in local knowledge.

The masters of small schooners, cutters, and the bigger trading canoes have acquired their competency as pilots by experience amongst the reefs and channels of the islands. Some of these captains have little knowledge of English and they can be exceedingly perplexed when confronted with a chart of their own area. During the day they set an approximate course by magnetic

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\(^1\) This can happen on a 'local voyage'. During mid-October, 1951, for example, the cutter 'Fetu Moana' left Lomaloma in Northern Lau to trade around the other Lau Islands. The vessel was forced to run before a storm and the captain lost knowledge of his position. After four weeks of vague sailing, in bad weather, they arrived off Brisbane - 1,500 miles away. And Gladwin (1958, p. 896) reports the inability of the indigenous canoe traders of the Truk Islands to continue a voyage or remake their departure position with any certainty if they are driven off course on local trips.
Fig. 1.1
and sight known island landforms. At night a rough dead reckoning is mentally made and an estimated set and drift allowed for. Usually night departures are arranged to make a morning landfall of some high island. Many small vessels, such as those which trade in the Yasawa Islands of Western Fiji, have not the refinement of a magnetic compass, and their helmsmen throughout the night may be a succession of dozing passengers.

On a long interinsular trading voyage the master of a small vessel could be the only person on board with a knowledge of simple navigation and pilotage, and he may be required to work for extensive periods while the boat is in reef-waters. As more stringent oral and written tests are introduced the captains who rely solely on a compass and local knowledge are being replaced by seamen who understand something more of the techniques of modern navigation. This is fortunate, for the *tie porau* (indigenous navigators) and their knowledge have all but disappeared from the Gilbert Islands, and from

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1 Some old captains interpret the compass in their own way. The captain of the cutter 'Adi Maopa' in Fiji gave many of his general courses with reference to the Fijian wind rose throughout a voyage accompanied by the writer. (The Fijian directional system is explained by Neyret, 1950, pp. 11-12).
other parts of the Pacific\textsuperscript{1}. However, in the immediate past, native-captains have conducted long-distance interinsular trading voyages and bargained for commercial cargoes in places remote from contact with their owners.

The local and expatriate masters of the bigger interinsular ships of 100 to 300 tons have often qualified in modern navigational methods. They can take an amplitude and azimuth of the sun and thereby determine the compass errors, and a meridian altitude and longitude by chronometer in order to establish their position. Some of the shipping in the Gilbert and Ellice has for several decades been commanded by 'foreign-going' masters who are fully qualified. Several of the old European captains of this class have been held in esteem by island people for their prowess as navigators; and there are tales of how old captains brought their vessels closer to the villages than anyone would dare to nowadays.

This is all by way of emphasising, at the outset, that navigation and trade are intimate, if somewhat

\textsuperscript{1}There are several examples of the loss of indigenous skills (in addition to those already mentioned) without the compensating knowledge of European navigation. On the 18th July, 1951, a cutter left Kwajalein in the Marshall Islands on a local trading trip. Bad weather drove them off course and the compass was not functioning. After many days the Captain and two others died, but the rest sailed on for 110 days: '... they tried to sail to the Philippines \(3,000\) miles westwards but without a compass actually sailed south. When they staggered up the beach at Epi in the New Hebrides, \(1,500\) miles southwards they thought they had reached the Philippines'. (PIM, Nov., 1951, p. 129).
risky, operations in the Pacific archipelagoes. This intimacy extends from the various navigational skills of individual captains, and the detailed knowledge required to approach badly charted village locations, to the appreciation and comprehension of local tabus and customs which will ensure that cargo will be obtainable when they finally arrive. It is nowadays often the supercargo (F. Vunivola ni waga) who is well versed in the distinctive village traditions and personalities, and on the bigger vessels he has taken over from the master as the negotiator of cargo.

The Distribution of Islands

There are three spatial relationships which are important for Pacific Island trade. First, is the proximity of the archipelago to an international trade route. This can be a significant factor for the development of island resources. Present day cross-Pacific shipping tends to follow routes dictated by cargo and passenger potentials, port facilities, and minimum distances. Where these factors combine, as in Fiji, the territory has increased locational values and opportunities for trade. Tonga lies on the periphery of most modern cross-Pacific shipping belts; but new port

1... 'the first steamer to cross the Pacific, the American ship "Monumental City", actually called at Tongatapu, and it was hoped that at least Vava'u harbour might be included in the regular trans-oceanic route, the subsequent development of Fiji has acted to Tonga's detriment and today Tonga is in the backwater of steamer communication'. (Wood, 1952, p. 90).
facilities under construction (1965) at Nuku'alofa (Wilton and Bell, 1962) may alter this locational disadvantage by attracting some of the shipping which at present by-passes Tonga. The Gilbert and Ellice Islands are even more isolated from modern channels of trade. This isolation may become particularly pronounced when the shipping link between Australia and the phosphate islands of Ocean and Nauru is broken with the exhaustion of that resource. At present Ocean Island offers a place of trans-shipment when chartered vessels are unobtainable for voyages from Australia direct to Tarawa.

The second relationship lies in the distance and degree of dispersion of the numerous archipelago islands from their focal ports of overseas loading. Many islands are widely scattered, and the transport task is therefore time-consuming and expensive. The range of products which can be safely transported to the local port town, and then loaded on to overseas vessels, is thereby limited. The main chain of the GEIC is made up of 25 very small units (this excludes the groups to the east and Ocean Island to the west) and they are strewn longitudinally over almost 1,000 miles of ocean. In Fiji the wide arc of the Lau islands, 200 miles from the port of Suva, is sufficiently dispersed to involve island vessels in long voyages, and, as a result, perishables are seldom shipped.

Finally, in some of the Pacific territories there are islands that have no obvious geographical affinities with the areas to which they are politically and economically attached. Isolated islands and groups,
such as Rotuma, linked with Fiji (400 miles from Suva), Niuafou'ou linked with Tonga (400 miles from Nuku'alofa), and the Line Islands of the GEIC\(^1\) (2,000 miles from Tarawa) present special problems for interinsular shipping based at a port town.

**Types of Islands, Reefs and Passes**

The islands of the Central and Southwest Pacific are of four main types; low coral islands, raised coral islands, high volcanic islands, and high continental islands. Low islands of coral and raised coral are found throughout the region. The islands of the GEIC are entirely of this type. Tonga has a western chain of raised coral-limestone. In Fiji the main islands are complex structures of igneous and metamorphic rocks with volcanic extrusions and basaltic flows. The islands of the Yasawas, Lomaiviti, and Western Lau, are mainly of the high volcanic types, and the more distant and smaller islands of Lau are composite structures which include basic coral-limestone rocks - or they are low coral atolls.

The 1,000 mile chain of the GEIC comprises 25 atolls and reef islands with an aggregate land area of about 112 square miles (G.B. Colonial Office, 1965, p. 8, G).

\(^1\)Until 1925 the Tokelau Islands were included in the GEIC. They were so isolated from the rest of the Colony that neither trade nor administrative links could be maintained. Their actual trade was with Samoa and as a result the group was transferred to New Zealand jurisdiction, and in February, 1926 were placed under the administration of Western Samoa. (H. E. Maude, personal com.).
The atoll with the largest total land area is Tabiteuea with 19.0 square miles, this is made up of 50 reef islets1 over a 30 mile radius. The smallest reef island in the GEIC is Nuilakita with 0.16 square miles of land (GEIC Census, 1964). Tonga has 200 islands totalling 260 square miles; most of these islands are small and only 30 of the bigger ones are occupied. Tongatapu measures 99.2 square miles and is the largest land area while Kotu with 0.06 square miles is the smallest occupied island (Tonga Census, 1958). The Fiji archipelago comprises 300 islands (95 inhabited) with an aggregate land area of about 7,055 square miles, of which 87 per cent is contained in the two islands of Viti Levu and Vanua Levu (Ward, 1965, p. 1).

Almost all island coastlines are fringed by coral reefs, and many islands have off-shore barrier reefs. The true coral islands are merely reefs on to which coral debris has been thrown by the sea to form fragmented islets, usually along the windward sectors. They all look very much alike, with a thick mantle of coconut trees, a narrow white coral beach, and a surf breaking off-shore; they are consequently very difficult to recognise and name from seawards when a seaman is unsure of his position.

Pacific seamen distinguish the following three main types of coral islands on the basis of their

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1'Reef islets' are the small fragmented land areas above high tide along the rim of atolls, they are not to be confused with 'reef islands'. (For full definitions of reef terminology see Wiens, 1962).
accessibility to trading vessels (Fig. 1.2). 'Lagoon islands', where the reef and land area encloses a lagoon which can be entered by interinsular trading ships; 'outside anchorages', where the reef and land area encloses a lagoon which can only be entered by boats; and 'reef islands', where there is no lagoon and the fringing reefs are steep-to so that an anchorage is impossible or at best, unsafe. (Heyen, 1937, p. 1).

The 'lagoon islands' in the GEIC have provided safe harbours for all the main administrative and trading centres in the past; with the exception of Ocean Island which is a 'reef island' whose raison d'etre as a main port (and for a brief period a government centre for the GEIC) lies in phosphate deposits. The atolls of Butaritari, Abaiang, Tarawa, Abemema, Nonouti, South Tabiteuea, Nukufetau and Funafuti are all 'lagoon islands' with sheltered anchorages, but varied approaches, in depths of five to seventeen fathoms. These atolls are also the largest in area. With the exception of Funafuti all their ship passes are on the southern, southwestern, or western sectors of the reefs, the leeward sides (Fig. 1.3). The remaining seven

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1 The relationship between lagoon size and lagoon depth appears to be a significant one. Wiens, reviewing the work done on this in the Marshalls and Carolines, writes: '... this relationship is attributed to the relatively fast deposition of sand debris from the reef where the radius of the atoll is less than the distance to which sandy debris can be carried lagoonward from the reef.' (1962, p. 30). In these circumstances lagoons shoal rapidly, as they appear to do in the seven small atolls of the GEIC which are less than twelve miles across.
TYPES OF ISLANDS AND SETTLEMENT PATTERNS

Tarawa Lagoon Island

Tongatapu Raised Coral Island

Onotoa Outside Anchorage

Nikunau Reef Island

Koro High Island

Naitauba High Island with lagoon

Fig. 1, 2
Sources: Admiralty Charts and Local Maps
atolls are 'outside anchorages', as are three of the
ten raised atolls. But these anchorages outside the
reef are of varying quality. Places with very
precarious anchorages are Little Makin, Marakai, Tamana,
Nukulailai, Nanomanga, Nanomea and Nui.

The predominance of deep ship-passes and shallow
boat-openings on the leeward side of atoll reefs is a
fortunate phenomenon related to prevailing winds and
lagoon current directions. It means that a vessel is
normally on a 'weather shore' when it comes in close to
the reef either to enter or in order to send boats in
to the lagoon. This was a great advantage for sailing
craft which stood 'off and on', and it remains a
valuable safeguard even for power-driven vessels. Not
all lee passes are easily navigable, however, for this
location is also the most favourable for the growth of
patch reefs (Wiens, 1962, pp. 35-39). In the Ha'apai
group of Tonga there is a proliferation of coral heads
as the trading places are approached from southern
passes; and at Tongatapu 'foul ground' extends northwards
from the lee side of the island. The conditions of sun-
light are therefore important for the crossing of a
lagoon when the captain usually conns the vessel from
aloft.

Exceptions occur to the distribution of passes on
the lee side of atolls. At Funafuti in the Ellice there
is a steep-to reef to windward which has ship passes,
but access through these is occasionally made difficult
by swells which roll in from the southeast. Passes
through the barrier reefs which wholly or partially
encircle high islands and enclose large lateral lagoons
Fig. 1.3

Sources: Marine Dept., GEIC and Local Maps.
(moats) may also appear on the weather side, but in general they are related to prevailing winds and currents and to the ebb tide scour (Fig. 1.4). Where these lateral lagoons are small reef breaks may result more from stream run-off and the effects of sedimentation on coral growth. The river entrances on the main islands in Fiji are reef-free channels but they are often encumbered by sandbanks. Approaching the Rewa River there are also sunken coastal reefs and these may, after heavy rains, be difficult to see in the silt-laden waters near the estuary.

**Climate and Weather**

Many of the islands in this study come under the influence of the southeast trade winds. These are the prevailing winds in the archipelagoes of Fiji and Tonga for most of the year. During the southern winter they blow with a remarkable steadiness in these groups but trend more easterly in the Gilbert Islands where they are experienced north of Little Makin (3°N) in the months from May to August. During the southern summer the northeast trade winds blow through the islands of the GEIC. This is also a time when irregular westerly gales may be experienced over the whole archipelago, but especially in the Ellice (Fig. 1.3), and, between November and March, hurricanes occur in Fiji and Tonga.

The hurricane season causes occasional dislocations of trade in the archipelagoes of Fiji and Tonga which last for several days as vessels seek shelter in hurricane anchorages. The storms rarely occur fully formed in the Gilbert Islands, although Little Makin experienced
Sources: Admiralty Pilot and Field Survey.
one during December, 1927 (Sachet, 1957, p. 2). But when there is a major cyclonic disturbance the effects are supra-regional and are felt in all three archipelagoes:

24th November, 1958 ... a series of depressions formed in the Wallis area with winds of 25 knots being reported. At the same time that these depressions were moving south-eastwards towards the Lower Cooks, fresh to strong westerly winds had developed along the equatorial region, spreading eastwards on to Nauru and Ocean Islands. By the 29th winds of 35 to 40 knots were reported at Islands north of the equator, and later in the Ellice Islands. Two active centres developed, the one in the northern hemisphere moving northwards and deepening so that winds of 60 knots were recorded at Beru \(10^\circ 21' S\). The southern centre deepened rapidly in the Ellice group and passed over Rotuma... After passing Rotuma, the movement was south to southsouth west and by 0600Z on 1st December widespread easterly winds had developed over the Yasawas and northern Fiji ... the storm began to move south-eastwards passing just east of the Yasawas at 2000Z where winds of 100 knots and a pressure of 977 mb. were recorded. The cyclone passed into Vatu Ira channel between Vanua Levu and Viti Levu ... (Annual Met. Summary, 1958, p. 53).

After clearing the Fiji group this storm brought strong gales to Tonga as it continued on its path towards Niue Island where it also caused damage.

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1 Strong winds always disrupt phosphate loading in these islands. The port at Nauru is open to the west, and at Ocean Island Home Bay moorings are open to the southwest. In both places with fresh westerlies vessels have to stand-off and drift in the open sea; often for ten to twelve days, and during exceptionally bad weather for a full month.
South Pacific seamen have a body of both facts and myths associated with cyclonic storms. In general, the precursors to a hurricane are recognised, and sometimes acted on. A long swell, especially from the north, a sudden development of surf, variable winds, muggy weather, high cirrus cloud and a luminous halo round the moon would make them wary during the season. The myths concerning phases of the moon are only a little more awry than is the 'law of storms' contained in books of seamanship which some of the masters have. South Pacific hurricanes move in almost any southerly direction (Fig. 1.5) and it is extremely difficult to taking avoiding action with any degree of certainty even in the open sea. In an archipelago such as Fiji where there is little 'sea room' in the Koro Sea most captains are prudent enough to stay in a safe anchorage when a hurricane warning is given.\(^1\)

The hurricane season is, for all its dangers, a good one for short distance sailing\(^2\) (F. draki vinaka). Winds, between storms, are seldom very strong and are often from the north. This makes travelling on the deck of small cutters relatively comfortable for

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1One of the best hour to hour accounts of a vessel being driven on a reef in the Koro Sea during a hurricane is contained in the logbook of the barque 'Ellesmere' (1869), which with all the signs of a hurricane around it left the shelter of Savusavu Bay and proceeded to sea (Logbook, M.L. No. 437).

2This applies only to the present day trade with auxiliary cutters. Hocart points out that the canoes of Lau were beached during the hurricane season in the old days. (1929, p. 110).
Fig. 1.5

Source: Meteorological Office, Suva.
passengers compared with conditions under the cool and often boisterous trades of the winter season.

As well as the climatic elements of some magnitude there are a few local winds and pressure systems worth mentioning from the standpoint of navigation. For example, during the southern winter a high pressure system often passes to the south of Fiji and Tonga. The wind circulation from this anticyclone can reinforce the trades and set up complex waves of squally conditions. These spells of bad sailing weather (F. draki ca) are known as the Bogi Walu in Fiji and the Aho Valo in Tonga. The names imply that they last a duration of eight nights and eight days. The conditions make voyaging from Suva to the western and southern islands of Lau particularly onerous.

The trade winds amongst the high islands of Fiji are occasionally deflected over or around headlands. The sobusobu winds (lit. to reach the water) of Natewa Bay and the straits of Somosomo are of this type for they result from the trades blowing across high interfluvial barriers to become katabatic on steep lee slopes, small sailing craft watch out for these strong gusts during the winter season.

The most marked alteration to the prevailing winds occurs for brief periods along the coastal zones of the continental islands of Fiji. These land areas give rise to diurnal land and sea breezes. The westerly sea breeze (F. Cagura) which blows in the afternoon towards Lautoka, in Viti Levu, has been used for decades by the sailing cutters of the Yasawa Islands to make the port of Lautoka. The land breeze (F. Caucau) which comes
away in the evening and blows out to sea is the home-wind of the Yasawa cutters.

Locally generated winds are of no significance amongst the low islands of the GEIC. However, in the past, departures from the trade winds in Tonga — which is on the margins of the trades (Tongatapu Island 21°S) — have given variable navigational conditions. With the southeast trades blowing, the NNE/SSW orientation of this group allowed sailing cutters to make a long board through the archipelago, always on a lee shore on an outward starboard tack and inward port tack. A departure from these wind conditions (especially during November to March when northerlies occur) delayed cutters, and this seems to be one reason why banana shipments from the Ha'apai group to Tongatapu (for export) were irregular until a power-driven vessel entered the trade.

Currents

Our father speaks
Exhorting the current to have
Mercy
And flow towards the island.

(An old Ellice song: Kennedy, 1931, p. 131).

When, on the 24th February, 1956, the auxiliary ketch 'Arokarimoa' stranded on a reef at Guadalcanal

In the GEIC some captains advise the use of the weather side of islands for night navigation. Reefs are steep-to on this side and in spite of on-shore currents and winds a vessel can approach close enough to see the land or the line of surf. Along the lee side with little land, broken reefs, and off-lying banks, on which the sea may not be breaking, night navigation is more hazardous.
in the Solomon Islands she had been drifting southwestwards for sixty-four days (see PIM, 1956, March, p. 20, and October, pp. 106-107). The ketch was one of a long succession of small craft which have been carried away from the Gilbert and Ellice Islands by the current

Fourteen of the twenty people on this particular vessel survived the ordeal, but in the past many more have disappeared

'Si on en croit les récits anciens, la mer aurait enseveli le tiers des indigènes'...

(Sabatier, 1939, p. 25). Captain G. Heyen, a shipmaster with long experience in the GEIC, has summarised the currents:

The equatorial current flows through the group, but is irregular in force and direction. Generally, the set is westerly and the rate from twenty to thirty miles a day. At times, usually after a spell of steady, fresh south-east trades, it attains a velocity of three, or three-and-a-half knots, and may flow to the north-west or south-west.

Between Butaritari and Abaiang the easterly counter current occasionally runs, the average rate being about a knot, and may be experienced at any time of the year. During the months of June and July the counter current sometimes

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1 The latest, at the time of writing, was a 12-foot canoe containing two fishermen. They luckily fetched up on Nauru Island on the 28th March, 1964, after a nine-day, 500 miles, drift from Tarawa. Because of this danger of losing the land the direction and force of the wind frequently determines the places for launching canoes and areas of fishing around these islands.
flows as far south as Nonouti. (Heyen, 1937, p. 2).

Navigation in the GEIC is complicated by these movements. It was customary for sailing vessels on the run from Sydney to Butaritari to make a course for Fiji in order to gain as much Easting as possible before meeting the Equatorial current. Heyen (Maude, H. E., 1959, p. 326) describes how when the 'Alexa' became becalmed near Tarawa on the fifty-fifth day out from Sydney, they drifted westwards and then sailed through the Marshalls and thus made Easting again to the North Pacific and eventually reached Butaritari 155 days out from Sydney. There are, in addition to these strong drift currents, subtle local eddies; but some indigenous people can still tell by the steepness of the sea and other signs the directions in which the currents are running, and they will wait a long time for favourable conditions before voyaging between nearby islands.

The equatorial currents which affect the GEIC divide in the Western Pacific, flow southwards as the East Australia current and then eastwards in the latitude of

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1 The voyager Burnett (1910, pp. 62-67) met a boat near Baker Island (10N.) and the people told him that during darkness they had been carried eastwards by the current from their home island of Nonouti, they thought the current had set them westwards and they made an easterly course to regain Nonouti. This course and the current took them 700 miles to Baker Island.

2 Woodford (1895, p. 346) while travelling in the group in 1884 took nine days to come from Kuria to Abemama (35 miles) because of the current. He was surprised on arrival at Abemama, to see a fleet of canoes which had left Kuria only the previous day come beating up the lagoon.
New Zealand. The ocean area between these major surface currents has a variable circulation. Fiji lies in this area and experiences only slight movements in open waters (several vessels lying stopped in the Koro Sea have reported virtually no drift) but tidal streams in the straits of Somosomo can run at three knots after full and change of the moon. Tonga in a latitude further south than Fiji has an increase in ocean current rates but other than close to reefs they are normally comparatively slight.

**Tides**

Throughout the region the rise of tide is an important phenomenon in the working of cargo. There are many places from the Gilberts to Tonga where vessels have to wait for a rising tide, and occasionally the top of high water, before boats can be sent over the reefs. In Fiji more than half the coastal villages of Natewa Bay and the Macuata coast are tidal, particularly those located in rivers and creeks. The tides are semi-diurnal, but this still involves long delays until sufficient depth is attained to approach a trading place.

The ebb tide stream in lee passes can prevent boats and vessels from entering lagoons even when there is sufficient depth. Water circulating in the lagoon moves under the influence of the wind and the distribution of passes. Waves which are driven across the weather reef, and the tide coming in through passes and inter-islet channels tend to build up water in the lagoon; this finds the best outlet through passes on the
lee reef during the ebb tide\(^1\). Passes at places such as Aranuka, Nukufetua, and Nanumea in the GEIC, and Fulaga and Namuka i Lau in Fiji can often only be entered, other than by canoes, during high tide slack-water.

At Totoya in Fiji there is neither slack-water nor an observable flood tide. Waves from the southeast cross a barrier reef, cause a water circulation around the sides of a breached volcanic crater, and find an outlet through a narrow 'gullet' again on the southeast side. As villages are located around this degraded crater rim vessels must enter through the 'gullet' whenever the outflow eases during what is nominally the flood, but consequently at a time of dangerous tidal rips.

**Sea and Swell**

In the lagoons where the water area is large (Tarawa approximately 130 square miles) strong winds can create short seas and delay or prevent boat and canoe communications in the atoll. In a fragmented land area such as Tarawa, with 25 villages distributed over 18 reef islets, this can be serious. Inter-islet causeways have reduced the problem for Tarawa; but contact between the commercial, administrative, and medical centres, and the villages on separate islets is still precarious in bad weather.

Seas in the open waters of the Pacific reach their maximum heights during the passage of a hurricane. Wave

\(^1\)Volume computations indicate that about 3.8 per cent of the lagoon's volume is transported into and out of the lagoon per tidal cycle. (Wiens, 1963, p. 220).
trains set up by varying cyclonic wind directions can raise a confused and tumultuous sea when they meet in the waters around Fiji and Tonga. Seas in the Gilbert Islands seldom reach the same heights, but in the Ellice a rough sea can always be expected. Seas generally run in the same direction as the wind then blowing but swells may originate distant from the area affected by them. In the Gilbert Islands high swells are reported more often than high seas. A heavy southeast swell which runs through this group during the southern winter is generated by the trades. This is a sign of fine weather (then westerly gales are rare) and according to Heyen (1937, p. 2) is named Te Aumaiaki (lit. 'the sea [swell] from the south'). During the southern summer Te Aumeang (lit. 'the sea [swell] from the north') runs in the group as a moderate swell and indicates the possibility of westerlies and unsettled weather.

In Tonga and Fiji the swell is generally from the southeast or south. High altitude storms occasionally cause heavy swells which break on the southern coasts of the islands. In these archipelagoes swells which move out ahead of cyclonic storms can also cause unusually severe reef surf; and as their wave trains meet and mix with the run of the sea, and other swells, cause bad sailing conditions for small craft. The distant storm-generated waves have frequently a long period between their crests, and those from the north can disrupt cargo work on the northern and lee coasts of the Fiji Islands (e.g. Taveuni, Mago, Nautauba, etc.) where they are known as the loka. Occasionally a loka surge can occur in
Suva harbour (Annual Met. Summary, 1955, p. 34) and the term loka is also used for the tsunami phenomena which are sometimes experienced in Fiji and Tonga.

Seas are the result of local wind-generated waves and except in severe storms some shelter can be obtained from them on the lee sides of small islands. Generally the majority of the boat passes occur on this side and, unless westerlies are blowing, cargo can be worked. Swells on the other hand can heave round a small island. Near high volcanic islands which have steep cliffs to the sea, or only narrow fringing reefs, there are few major coastal irregularities to break the swell and cargo working conditions can be difficult. Niuatoputopu, Niuafo'ou, and some of the uninhabited volcanic islands (Kao and Late) in the Tongan group present this landing problem on many occasions during the year.

Locations and Sites of Island Trading Places

So far sea and coastal conditions have been referred to primarily from the navigational point of view. It is now proposed to consider how these have influenced the choice of trading places.

One of the most obvious criteria for a trading place, which has to be supplied from the sea, is ease of access. This varied greatly among the coastal settlements in early contact times, and in any case the access requirements of European-type trading vessels almost always differed in some respects from those of native canoes. The requirements of the commercial trading ships have in turn altered over the years. This discussion will, therefore, centre mainly on the places which have increased
their interinsular trading functions in recent times, either as minor inland trading-stations or as port towns.

The locations of settlements on coral islands have two distributional characteristics (Fig. 1.2). Where the island has a lagoon the settlements are normally distributed on the lagoon side of the vegetated islets, and these islets lie (usually) on the windward sector of the atolls. On 'reef islands' without lagoons most of the settlements are located on the lee side of the islands. Vessels bound for villages on 'lagoon islands' must normally enter by lee passes and make their way across the lagoon to an anchorage opposite a village. If the entrance to the lagoon is shallow then they may anchor on banks, or on submarine erosional terraces of the lee reef, and send boats into the lagoons ('outside anchorages'). At 'reef islands' submarine terraces may also be found close in on a steep-to reef opposite villages. Vessels can anchor in this position and the trade winds may hold the ship from swinging on to the reef. This is often a dangerous practice and most trading vessels prefer to stand 'off and on' while their work boats 'shoot' the surf at the reef edge and cross the tidal flats to the settlements. Fig. 1.6 illustrates the two main types of island trading conditions referred to here and in other parts of this study.

The 'lagoon islands' have an advantage over 'outside anchorages' and 'reef islands' for vessels can work in sheltered waters close to the settlements in almost any weather. It is very unlikely that all the villages around a lagoon could ever have been reached directly by trading vessels. If, of the villages which could be
reached, one of them had further locational and other advantages, it may have been chosen in the years of early trade as the site of an island trading station, an administrative centre, mission centre, or a principal port of entry. One advantage was a greater area of land and reef, giving a better fresh water holding capacity to the porous rock (compared with narrow land areas) and more agricultural and reef products. Wide reef and land areas are often found where a reef bend occurs (Wiens, 1962, p. 44). If this is in the vicinity of a deep pass, or a channel across a lagoon from a pass, then a settlement located on that point held several attractions for shipping and trade.

Many fortuitous circumstances entered into the actual siting of a village trading station. Access was certainly an important locational factor, and in the case of Captain Kustell's station at Buota in Tarawa lagoon a suitable foreshore for the careening of vessels was also found. Several villages were, however, difficult to reach by ship, or even by ships' boats, but the traders set up their stores there nevertheless for this is where the people were. A shipmaster normally made every attempt to reach these traders, for if he did not some other captain would and he would lose trade and outward cargo - and very likely his employment.

Nowadays there are no rival captains competing for trade in the GEIC. A semi-government organisation controls the shipping. As a result, the tendency for economic and administrative activities to concentrate at the places of best access has been reinforced by Government policy and the more difficult villages are avoided.
The modern interinsular vessels as they trade through the GEIC archipelago attempt to call only at places with good access which have been scheduled as 'first class' loading points. Delays in the working of cargo are thereby minimised and more efficient economic links are made between these island 'ports' and the port of overseas trade at Tarawa. If there are no settlements in the land area opposite a pass then cargo may be concentrated there none the less, and new incipient marketing centres are produced\(^1\). In other cases new passes are made in order to avoid a lagoon crossing. Thus at Beru in the Gilberts a bend in the northwestern end of the land area brings a horn of the atoll close to the lee reef, there a shallow pass has been blasted and a boat landing place created superior to that of the old trading site of Nukantewa, which had a mediocre anchorage and wide lagoon crossing\(^2\).

Many of the old trading sites are still used in the Gilberts by island co-operative stores, but the trend is for local lagoon craft and trucks to pick-up and deliver cargo from and to selected coastal 'first class' points. In the Ellice there is, in modern

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\(^1\)During July, 1964 the writer had the opportunity to accompany the Registrar of Co-operatives for the GEIC in the examination of a boat pass through the reefs to an uninhabited islet in Aranuka lagoon. This may in the future be the main trading place of that atoll.

\(^2\)Throughout 1962 boat passes were blasted or improved at Nui, Nanumanga, Tamana, Arorae, Beru, Tarawa, Marakei, Aranuka, Maiana, Makin. The pass at Maiana was completely re-silted by 1964. (District Office Records, Tarawa).
times, only one large settlement on most islands and this is usually at the best place for landing cargo — although on many of the reef islands all landing conditions are poor.

In the high islands of Fiji a great number of villages are at places with difficult approaches. Many Fijian settlements are in areas sheltered from winds (usually around small bays and behind headlands) or they lie a mile or so landwards on the banks of tidal creeks. Good soils and favourable slopes are in this archipelago important locational factors; and at a place like Totoya Island almost all the villages lie in a relatively fertile area of difficult access from the sea. By contrast, on the southwestern part of Koro Island there are good anchorages close in to a reef-free coast, but settlement is sparse due to the steepness of land (Fig. 1.2).

Small trading stores or family shops are found in most of the Fijian villages and their primitive hinterlands seldom extend beyond the village lands. However, in modern times locational values in terms of access have tended to assert themselves. A village possessing good approaches and a trade store may develop a greater trading sphere of influence as a result of more reliable shipping connections with the port town.

At Lakeba in Lau, for example, there is a wide entrance through the windward barrier reef but the lagoon is so encumbered by coral heads that this is not utilised. A main pass has been improved opposite the chief village, Tuboa, on the eastern coast and this has given increased commercial importance to that settlement.
in recent years. The advantages of accessibility in modern times were also noted by Sahlins in his study of Moala in Fiji:

There are two major passages through the barrier reef. The larger one, in the north-east, leads to a good anchorage sheltered from the prevailing trade winds. Here is the principal point of interaction between Moala's natural and cultural environments, the influences of the latter are quite literally channeled by the former through the north-east passage, which is the main entrance for trading schooners operating out of Suva and Levuka as well as for Government vessels. The ranking Moalan village, Naro, centre of the local polity, is situated opposite the north-east passage. This is also the largest village and the only one with two Chinese operated stores. A second passage - narrow, but adequate for schooners - lies off the central west coast opposite a deep inlet. Cakova has burgeoned in population over the past few decades, and it is the site of the only Chinese store outside of Naro (1962, p. 22).

On the main islands of the Tonga archipelago there are few settlements along the cliffed coasts (the 'Liku' shore, see Fig. 1.2) where access to the reef flat and sea is difficult. The small islands in the Vava'u group and the bigger volcanic islands of Late, Kao, and Tofua are also without permanent settlements at the present time. Again, difficulty of access due to the swell (PIP, 1943, vol. II, pp. 380-390) as well as a scarcity of reef resources (Maude, A., 1965, p. 77) may be the main causal factors for their lack of permanent populations. On the other hand at the minor 'ports' where the trading stations are, or were, located there is relatively good access. Kennedy (1958, p. 162) pointed out that in Tonga ... 'the chief villages of Ha'apai (Pangai), Eua (Chonua) and Nuiatoputapu (Hihifo)
are at the only breaks in the fringing reef suitable for navigation by small vessel'.

Locations of the Major Ports

In the establishment of a major port the choice of a good harbour was of prime importance, and quite often the range of choice was restricted to a few locations in an archipelago. Once the decision was made, the port of entry scheduled, and the administrative paraphernalia established at a particular place, then the regions immediately surrounding the port were stimulated in many socio-economic ways. Places distant from the favoured location may also have felt the stimulation, but this has depended on their wealth of marketable resources, on the ease of contact, and on the efficiency of the transport media over the years. The historical and economic relationships between the major trading centres and the hinterland societies are discussed in various parts of this study; it is intended here to look mainly at the physical factors which influenced the choice of a port-site, for this was one of the most important decisions to affect island trade and economic development.

In the Tonga archipelago there are two harbours, one at Vava'u and one at Tongatapu, which stand out as superior places for port locations. The site values of these places and their centrality in relation to the major islands of the archipelago were probably recognised by the Wesleyan missionaries who established themselves at Neafu (on Vava'u) and Nuku'alofa (on Tongatapu) in the early nineteenth century. Captain Rhodes (1954, p. 66)
when he entered Vava'u's excellent and popular 'Port Refuge' in 1836 was astonished on the one hand by the discipline with which the Wesleyans ruled, and on the other by being presented with a bill for harbour dues - an unusual phenomenon in the Western Pacific at that time.

Nuku'alofa has taken precedence over Vava'u in modern times as the tendency to centralise administrative and other activities has increased. In terms of physical suitability for ports and regional centres it would, however, be difficult to dispute the correctness of the early locational decisions.

The same cannot be said without qualification for the location of the main port of the GEIC at Betio on Tarawa lagoon. It has the land and navigational prerequisites for a major atoll trading place - a wide reef islet about two miles in length and close to the main ship pass into the lagoon (Fig. 1.2). But rainfall is subject to such variations that it may impose strict limits on the growth of population and 'urban' facilities (Grundy, 1961); and shipping both local and overseas have had their fresh water supply restricted on occasions. The chief locational value of Betio is trading centrality for it lies within 120 miles of all the main copra-producing islands of the GEIC.

The oldest trading place in the archipelago is Butaritari (see Maude, H. E. and Leeson, I., 1965,

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1Vava'u harbour was one of the few places in the Western Pacific which could be entered by sailing vessels at any time of the day or night.
pp. 405-406, for an account of this port). It also has a wide reef islet, a good ship pass, and a clear channel across the lagoon to the principal village. Rainfall is more reliable than on Tarawa (see Fig. 2.1), and the atoll has a higher potential for the production of copra and foodstuffs. The only disadvantage is that of a peripheral location on the northern end of the island chain.

At Funafuti in the Ellice Islands the land area around the lagoon varies from 50 to 150 yards in width until a reef bend occurs and the land widens to 700 yards. The lagoon can be entered, and vessels drawing 26 feet can reach an anchorage off the principal settlement. This village of Fongafale is the regional centre and port of entry (now restricted) for the Ellice Islands.

The three major trading places of the GEIC (Butaritari was a port of entry until 1940) have many common physical characteristics, and some of these are also shared by other lagoon islands in the archipelago. The decisions which gave Betio precedence have been discussed by H. E. Maude and E. Doran (1966). The preferences of surveyors and administrators during the period 1892-1895 are shown, in that study, to have swung between Butaritari, Abemama, and Tarawa; finally the choice lay between Butaritari and Tarawa. Either way it would have been a debatable decision; Betio, however, became established as the

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1 As late as 1908 Im Thurn wrote to the Secretary of State that Butaritari '...seems to me a much more important position from a native and also from a European point of view' (Cmd. 4356, 1908, High Co. to Sec. of State Col., p. 8, G).
principal port and quasi-metropolis of the territory and it successfully retained this position in post-second world war times.

In the Fiji archipelago good harbours are to be found in several regions. Some of these which were principal ports in the past have declined, for their hinterlands had relatively little attraction for modern international trade and town development, and their locational advantages in terms of navigation changed with the coming of power-driven vessels.

The village of Lomaloma on Vanua Belavu was a port of entry in the days of sail and somewhat different commercial and political circumstances (see Chapter 4). The three passes distributed radially on the windward reef of this small group made arrivals and departures relatively easy with winds from almost any direction\(^1\). Levuka, the former capital on the small island of Ovalau, also has alternative channels which were valuable with a leading wind for sailing vessels. Similarly Galoa Harbour at the island of Kadavu offered good approaches and shelter, and was used by shipping on the cross-Pacific trade. Galoa was selected in 1870 as a meeting place of steamers from San Francisco and Australia - mainly because the island of Kadavu lies on the periphery of the Fiji group and as a result the

\(^1\)The bigger sailing vessels of over 2000 tons which used Lomaloma had to warp their way out of the anchorage, 'as a long spit of coral grit running out west of Yanuyanu narrows the space for tacking' (Sailing Directions, 1884, p. 692).
reefs of the inner archipelago were avoided. However, a more settled period of economic and political development around Viti Levu rendered the harbour and hinterland of Galoa of comparatively little importance, and now, like Lomaloma, it is used only by local cutters.

The choice of a location for the principal port of Fiji was, as in the Gilberts, the subject of some debate. The first commercial port town of Levuka was rejected early in the colonial period on the grounds of inadequate flat land for development, its separation from the main island, nascent problems of sanitation, and land tenure difficulties. The good harbour of Savusavu was also rejected because, paradoxically, Vanua Levu was relatively peaceful at that time (the capital was presumably thought of as a garrison), and Galoa was obviously too peripheral. The choice lay between Nadi and Suva (Despatch 42/1875 and enclosures F).

Evaluated in terms of suitable harbours and potential port developments there can be no disputing the choice of Suva over Nadi. The capital of Fiji would of necessity require a good harbour, and as a report to the British Government categorically stated 'the nature of its harbour renders it impossible to contemplate the establishment of the capital at Nadi'. (Despatch 185/1876, para. 2, F). As a result Suva became the capital and principal port of Fiji in 1882.

1Seeman (1862, p. 141) recommended Galoa harbour be used on these grounds after he visited Fiji in 1860. This was the beginning of the steam age and a safe coaling place somewhere in this region had become essential (see Lawson, 1927, pp. 7-22).
Many sailing vessels found the new port of Suva less convenient than Levuka, for they were often required to tack on a dangerous lee shore until Naselei Reef was cleared. Otherwise Suva harbour has excellent approaches and access to the bay is through a narrow channel where a break in a long barrier reef has been improved. The harbour is protected by this natural breakwater and the modern port is sheltered from prevailing easterlies by the 200 feet high peninsula on which a large proportion of the capital has been built. At the west end of the harbour, in the Bay of Islands, there is also a safe hurricane anchorage to which local vessels can retreat when a hurricane is imminent.\footnote{The location and growth of the capital has been discussed by Whitelaw (1966).}

The port of Lautoka in Western Viti Levu was established in 1903 as an outlet for the sugar hinterland of the west. The area of the harbour is limited, and inshore protecting barrier reefs are lacking. Some protection is obtained from the west by Vio Island; and as the prevailing winds, on this coast, are from the southwest the wharves have been built with a SW/NE alignment to facilitate the manoeuvring and berthing of ships in this rather open roadstead.

Fiji is the only archipelago in this study which has river ports, but these nowadays are restricted to local vessels. The lower Rewa River was once an important channel of trade for barge traffic on the 11 mile stretch between Nausori sugar mill and the old Laucala loading place for overseas vessels. Since the development of roads, and following the closing of the sugar mill, few
vessels enter the Rewa. The Sigatoka River was also, in pre-first world war days, used by small craft for transporting bananas to the port of Momi, adjacent the river entrance, where overseas vessels could load (Cd. 6007-27, 1911, p. 8, F). It was a poor harbour and the decline of the banana trade from the Sigatoka valley plus the opening of the circum-insular road finally killed this small river port. The Labasa River, however, is now one of the busiest sections of interinsular trade routes. Vessels of up to 200 tons can reach the jetties three miles from the entrance and overseas ships are served by barges at an anchorage near the river entrance. Many of the other rivers are used by work-boats only, owing to silting; and long-distance river traffic, which is extensive and vital for some inland villages, is carried on by launches and rafts.

Conclusion

The navigators, their methods of navigation, and the physical conditions of sea and coastline have a significant bearing on the contact situations in the archipelagoes. Islands which are difficult to reach or find in bad weather, and trading places to which access is dangerous, may occasionally be omitted from a vessel's itinerary. Conversely, where conditions are favourable and other economic factors exist, there is the possibility of island shipping concentrating there and increasing the trading potential of such places. This tendency reaches its most obvious conclusion with the scheduling of ports of entry; but the trend is also evident in a minor form among the villages of the outer islands.
It will also be appreciated from this brief description of archipelago conditions that, \textit{prima facie}, there would be a high rate of marine casualties in some regions. This is the case (see Chapter 7) and, amongst other things, it affects the structure of the shipping industry for it often means that private capital is difficult to attract and poor quality shipping can result, unless some governmental measures are taken to support or provide sea transport.

The marine environment is thus an important factor in the operating of island shipping services. It can be modified by beaconing and by the blasting of reefs; but for many of the islands in these archipelagoes the physical conditions of sea, coastline, and reefs, are fixed factors in the trading systems. Navigators and the methods of working cargo must generally adjust to these conditions.
Chapter 2
POPULATION, ISLAND RESOURCES AND ENVIRONMENTAL HAZARDS

Population

A very generalised notion of the population trends, and of the present size and composition of the populations, is given in Table 2.1.

The dramatic period of population decline between the late 18th and the mid 19th century is not included in Table 2.1 for only very crude estimates exist. It is nevertheless well authenticated that a decline did take place as a result of disease and warfare during the early days of European contact (Report...1896). The last of the great epidemics were the outbreak of measles in 1875, and to a lesser degree the influenza epidemic of 1918. Most island communities suffered from these, from tuberculosis, and periodically from destructive ship-borne diseases such as dysentry. In addition the islands of the southern Gilberts and the Ellice were ravaged in the mid-19th century by 'blackbirders' seeking labourers for Fiji, Tahiti, and Peru (NZPP, A-3A, 1874, pp. 13-15, G). The population of Fiji was slightly augmented by the addition of these labourers, and it was radically altered in composition by influxes of indentured Indian labour from 1879 to 1916 (Mayer, 1963). The most remarkable feature of Table 2.1 is the great increase in population which has occurred since the first quarter of this century in all three territories.

One important aspect of population from the point of view of trade is its size. Table 2.1 indicates that
TABLE 2.1: POPULATION TRENDS

<table>
<thead>
<tr>
<th>Territory</th>
<th>Components</th>
<th>19th Century</th>
<th>20th Century</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mid</td>
<td>Last Quarter</td>
</tr>
<tr>
<td>Fiji</td>
<td>Fijian</td>
<td>200,000&lt;sup&gt;1&lt;/sup&gt; (?)</td>
<td>115,000&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Indian</td>
<td>None</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>?</td>
<td>6,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>?</td>
<td>121,600</td>
</tr>
<tr>
<td>Tonga</td>
<td>Tongans</td>
<td>18,500&lt;sup&gt;1&lt;/sup&gt;</td>
<td>19,968&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>GEIC</td>
<td>Micronesians</td>
<td>40,000&lt;sup&gt;1&lt;/sup&gt; (?)</td>
<td>(34,700&lt;sup&gt;2&lt;/sup&gt;)</td>
</tr>
<tr>
<td></td>
<td>Polynesians</td>
<td>?</td>
<td>3,457</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>?</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>?</td>
<td>35,000</td>
</tr>
</tbody>
</table>

*This total includes 246 Europeans working on Ocean Island and it omits 1099 Colony citizens on Nauru.

Sources:
Fiji has obvious advantages for the development of local manufacturing industries in order to supply a relatively large population. The other territories have only small home markets and must import all but the most basic of consumption goods. The large Fiji Indian population in addition affects the demand pattern of this archipelago; and consequently the type and volume of goods imported and redistributed in island trade differ in some respects from those of Tonga and the GEIC.

The population of Tonga is, by contrast with Fiji, almost homogeneous; the three per cent non-Tongans (Europeans, part-Europeans, and other Pacific Islanders) are mainly resident in Nuku'alofa. Similarly, in the Gilbert and Ellice Islands there are only a handful of non-indigenes outside the administrative centre of Tarawa and the Ocean Island phosphate industry.

The population distributional trends during recent years have had a similarity in the three territories. In Fiji at the time of the 1956 census about 72 per cent of the people were on Viti Levu, 18 per cent on Vanua Levu, and 10 per cent in the islands (CPI/1958, p. 3). Likewise, in Tonga during 1956 almost 50 per cent of the total population was on Tongatapu Island (Census 1956, p. 3). In the GEIC there is no island which dominates quite to this extent. But there is clearly a movement of population to Tarawa. In 1963 there were 8,000 people on Tarawa and more than half of these were drawn from the rest of the GEIC (Census 1964, p. 41). This was twice the population of any other island in the Gilbert group and more than the total population of the Ellice group. The islands of Viti Levu, Tongatapu and Tarawa contain
the main port towns of the archipelagoes.

It is at the port towns themselves that the most spectacular increases have taken place in the concentrations of island population. As Table 2.2 shows this trend has been especially marked since the end of the second world war, and Ward (1965, p. 108) notes that a major source area of urban migrants in Fiji has been the outer islands.

**TABLE 2.2: GROWTH OF PORT TOWN POPULATIONS**

<table>
<thead>
<tr>
<th></th>
<th>1931</th>
<th>1936</th>
<th>1946</th>
<th>1947</th>
<th>1956</th>
<th>1963</th>
<th>% increase between last two figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suva</td>
<td>-</td>
<td>7,128</td>
<td>25,409</td>
<td>-</td>
<td>37,371</td>
<td>-</td>
<td>37%</td>
</tr>
<tr>
<td>Nuku'alofa</td>
<td>4,005</td>
<td>-</td>
<td>-</td>
<td>9,202</td>
<td>15,834</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Betio</td>
<td>-</td>
<td>-</td>
<td>424</td>
<td>-</td>
<td>2,679*</td>
<td>84%</td>
<td>84%</td>
</tr>
</tbody>
</table>

*3,500 in 1966, CIN 29/66.


Finally, in this brief résumé of island population, the densities are considered. Table 2.3 gives the details for selected regions. The crude densities are given for the islands of the GEIC and Tonga, for a very high proportion of the land can be utilized for agriculture in these coral and raised-coral islands. In the high islands of Fiji on the other hand crude densities are less meaningful. The densities shown for Fiji are based on estimates made by Ward (1965, pp. 112-114) for land which can be
used for arable agriculture purposes. By say Javanese standards the densities in Table 2.3 are not impressive, but for some of the coral islands in the central and southern Gilberts, and for the islands of Ha'apai in Tonga, they are nevertheless very great in relation to the agricultural potential of these areas.

TABLE 2.3: POPULATION DENSITIES

<table>
<thead>
<tr>
<th>Territory</th>
<th>Region</th>
<th>Number of persons per sq. mile of potentially arable land</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>NW Viti Levu (sugar region)</td>
<td>900</td>
</tr>
<tr>
<td></td>
<td>Kadavu Island</td>
<td>701-900</td>
</tr>
<tr>
<td></td>
<td>NW Vanua Levu</td>
<td>501-700</td>
</tr>
<tr>
<td></td>
<td>Outer Islands</td>
<td>201-350</td>
</tr>
<tr>
<td>Tonga</td>
<td>Ha'apai</td>
<td>496</td>
</tr>
<tr>
<td></td>
<td>Tongatapu</td>
<td>313</td>
</tr>
<tr>
<td></td>
<td>Vava'u</td>
<td>279</td>
</tr>
<tr>
<td>GEIC</td>
<td>Tarawa Island</td>
<td>900</td>
</tr>
<tr>
<td></td>
<td>N. Gilberts</td>
<td>330-580</td>
</tr>
<tr>
<td></td>
<td>C. Gilberts</td>
<td>90-320</td>
</tr>
<tr>
<td></td>
<td>S. Gilberts</td>
<td>250-640</td>
</tr>
<tr>
<td></td>
<td>Ellice Islands</td>
<td>250-830</td>
</tr>
</tbody>
</table>

*The reef flat is an important food gathering area in many coral islands and, to be strictly accurate, this too should be taken into account when densities in relation to food resources are considered.

Sources: Fiji, Ward (1965, pp. 112-114).
          Tonga, Census 1956.
          GEIC, Census 1964.

Island Resources

Fiji has several large high islands on which areas of deep rich soils have developed, and the agricultural
potential is good. In Tonga the raised coral islands, and some of the low islands, have a deep top covering of volcanic material and offer land suitable for a variety of crops. The soils of the GEIC are, by contrast, merely coral sand on top of which a thin layer of organic matter has developed. They are highly permeable and can provide a basis for only a very restricted range of agricultural products.

The most important crop, financially, for Fiji is sugar and this is grown mainly by Indian farmers in the western and north-western regions of Viti Levu and Vanua Levu. All three archipelagoes are, however, exporters of copra. In round figures Fiji produced 41,000 tons of this in 1963 compared with 10,000 tons in Tonga and 4,000 tons in the islands of the GEIC (excluding the private commercial plantations in the Line Islands).

Fiji and Tonga also export bananas and other fresh produce. A few bananas can be produced in the northern Gilbert Islands and on some of the Ellice Islands but merely for local consumption. It is only in these latter Gilbert and Ellice Islands that the subsistence foodstuffs have a range slightly greater than coconuts, pandanus, breadfruit, babai (a rough taro grown in excavated pits) and fish, which are the main staples of the GEIC as a whole. In Fiji and Tonga there is, on the other hand, a large range of local foods available to the island populations except at times of natural catastrophe.

The types of products actually exported from various parts of the three territories are determined to a great extent by markets and marketing opportunities. The volume of exports likewise responds to efficiency of
marketing, market prices, and international quotas; but also to climatic and weather conditions. The influence of markets will be discussed in Chapter 8. In this chapter the main environmental hazards which cause variations in agricultural production are now considered for they often constitute an unpredictable element in island trading potentials from year to year.

Droughts

The movements of Pacific pressure systems bring variations in wind direction and rainfall to the archipelagoes. A most spectacular response to these changes can be seen in the rainfall regime of the Gilbert Islands. Westerly winds which blow under the influence of the ' Asiatic and, or, Australian pressure systems' (Wiens, 1962, p. 144) may bring some weeks of heavy rain; while the advance of the 'dry tongue' of the southeast trades from the East Pacific high pressure system can bring prolonged droughts (see Trewartha, 1962, p. 88).

During drought conditions in the GEIC coconut trees reduce their yields, and some trees in narrow sections of the islands perish due to the disappearance of the freshwater lens and the penetration of salt water (Moul, 1957, p. 2). The island-grown foods are thereby reduced; but in addition it has been reported of a Gilbertese drought by H. E. Maude that ..., 'at the height of the drought, when flora was dead or dying, the prolific fish population deserted the lagoon' (1963, p. 174); Grimble has also observed this phenomenon (1933-34, p. 29).

While fewer nuts (and other foods) are available on islands during a drought the alternative uses for these
increase at such times. They are potentially a food for the present, a store of food for the future\(^1\), a substitute for drinking water (when wells become salty) and food for pigs. As cash incomes fall, due to the inability to make copra, then more nuts tend to be eaten as a substitute for purchased foodstuffs. In the past this vicious circle could only be ended by rainfall; but nowadays it can, at least for the present and the immediate future, be ameliorated by money which comes to the islands from wage-labourers employed on the phosphate workings of Ocean Island and Nauru (see Chapter 10).

It is on the Gilbert islands between 2\(^\circ\)N and 3\(^{\circ}\)S that droughts occur most frequently. They have been recorded there during the years 1937, 1938, 1949, 1950, 1954, 1955, 1956, 1957, 1962 and 1964 (Grundy, 1961, p. 12 and Annual Met. Summary, 1949-64). As Fig. 2.1 shows places outside this belt have also experienced periods of diminished rainfall. Generally these low rainfall years are followed by a reduction in coconut yields; but the effect is not the same on each island for the age of the palms, width of the islet, salinity of the soils, and many other local variables enter into this. Fig. 2.2 gives some idea of the great fluctuations in copra production which occurred throughout the archipelago.

\(^{1}\)People traditionally (and by island regulations) store their nuts in the Okai (small huts) when rainfall decreases and a drought seems imminent. Mrs. R. L. Stevenson witnessed this at Nonouti in 1890 and commented on ...'the number of houses we saw piled up with dried coconuts not yet made into copra. We were told that a famine was feared and these nuts were stored as provisions.' (1915, p. 168).
Fig. 2.1
Sources: Annual Met. Summary and Local Records.
between 1949 and 1964. A comparison of Figs. 2.1 and 2.2 shows that for most of the islands in the central and southern Gilberts the lowest levels of copra production were reached in the years 1956 and 1959 following their lowest rainfall periods.

In the Ellice Islands there are, in spite of a reliable and relatively high annual rainfall\(^1\), marked fluctuations in the production of copra from year to year. These often coincide with small variations in rainfall. It would be possible to postulate some sort of physiological control whereby trees attuned to a high rainfall responded to slight variations from the normal by producing less nuts. This is, in fact, the substance of one explanation given in the GEIC for changes in Ellice copra output. But it hardly accounts for comparatively low production during high rainfall periods when the copra tonnage remains below that of the small islands in the southern Gilberts. The main reasons for fluctuations in the copra supply of the Ellice Islands appear to be linked with many transport and other organisational problems, the various aspects of which will be discussed in several of the following chapters.

The essential rains of the Gilberts come with the irregular westerlies (mainly in January and February), from line squalls at any time of the year, and from

---

\(^1\) The lowest rainfall recorded in the Ellice during 1950-63 was 58.3 inches at Nanumea (Lat. 5\(^\circ\)S). By the de Martonne formula \(I = \frac{P}{10+T}\) (where \(I\) = index of aridity, \(P\) = mean annual rainfall, \(T\) = mean temperature) an index of aridity of 39 was obtained. This was 19 per cent above the index 20 which indicates drought conditions.
Fig. 2.2
Sources: Records of Copra Board and Co-operative Society, Tarawa.
doldrum conditions which (in contradistinction to the simple concept of the doldrums) are infrequent in this longitude. It should be stressed that the variability of rainfall is so great in this climatically transitional belt that droughts must always remain an inevitable but unpredictable cause of fluctuations in the copra trade.

Low rainfall conditions also affect production for the market in Tonga. The year 1957 had a higher than average annual rainfall, but for two months of that year rainfall totals were only a quarter of the normal. This was sufficiently critical, when combined with scab moths, to reduce by half the quantity of bananas exported from Tongatapu, and cut by two-thirds those from Vava'u, as compared with 1956 figures. The response of banana crops to short periods of drought was noted by Ward in Western Samoa when he wrote 'If more than two consecutive months occur with water deficit, production drops rapidly and will not start to rise until two or three months with water surpluses have elapsed.' (1959, p. 132). This is probably even more critical in Tonga as A. Maude has pointed out 'because soils tend to dry out quickly even a short spell of about two weeks without rain may produce drought conditions and affect food crops' (1965, p. 11).

In Fiji the mean annual rainfall falls below 70 inches only along the coastal zone of Western Viti Levu (Wright and Twyford Map SB. 958L) and possibly on some of the lower islands of the Yasawa Group. There are nevertheless occasional periods of critically diminished rainfall in these lowlands and in islands that have a strong dry season (and also in some of the low Lau Islands)1 and this

---
1 See also Brookfield and Hart, 1966.
can affect copra production. In 1957, for example, copra output was reduced by over 2000 tons largely, it would seem, as a result of dry periods during 1956 (McPaul, 1964, p. 11 and Annual Met. Summary, 1957, p. 16).

Banana production for export in Fiji is now almost entirely confined to the eastern zone of Viti Levu which has a high rainfall and a very weak dry season. As a result the banana trade can rarely be reduced through a lack of rain. The crop is, on the other hand, particularly vulnerable to strong winds in this location.

Gales and Hurricanes

It has already been noted that the Gilbert and Ellice Islands generally lie entirely outside the hurricane belt. The westerly gales which occur in these groups during the southern summer can cause damage to the bread-fruit trees grown in the villages, and may also cause a premature fall of coconuts; but the overall effects of these winds are of little consequence compared with the damage done by hurricanes in Fiji and Tonga.

Destructive hurricanes occurred in Fiji during 1941, 1948, 1952, 1958, 1964 and 1965 (Annual Met. Summary). The hurricane of December, 1958 devastated the banana areas of the Rewa and thereby repeated the pattern of destruction of the previous hurricane in January, 1952 (see Fig. 1.5). The effect of the 1958 storm on the export of bananas is illustrated by Table 2.4.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>309,141</td>
</tr>
<tr>
<td>1958</td>
<td>148,604</td>
</tr>
<tr>
<td>1959</td>
<td>73,831</td>
</tr>
<tr>
<td>1960</td>
<td>201,075</td>
</tr>
</tbody>
</table>

Fortunately, banana crops make some recovery (mainly from fresh plantings) during the twelve months following storm destruction. On the other hand, in the islands of copra production there is economic dislocation immediately after a hurricane, and a period of five to seven years may elapse before there is complete recovery. During February, 1965, for example, a storm with wind speeds of 140 knots was almost stationary for two days over the Yasawa Islands. Approximately one quarter of the houses were destroyed, many local sailing cutters were damaged, and food crops perished due to saline spray carried inland. Coconut trees were stripped of their crop, consequently the Yasawa people could expect the local economy to be almost completely devoid of its main cash income for the following two years.

How severely a tropical storm can reduce cash incomes in the years which follow is illustrated by Table 2.5. The hurricane struck Ha'apai and Vava'u in Tonga during 1961, and the following year, when money was desperately required for reconstruction, there were few coconuts available for copra making.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vava'u</td>
<td>517,168</td>
<td>165,166</td>
<td>11,612</td>
<td>156,078</td>
</tr>
<tr>
<td>Ha'apai</td>
<td>390,026</td>
<td>171,336</td>
<td>46,128</td>
<td>105,584</td>
</tr>
</tbody>
</table>


Copra production is, by virtue of the ubiquitous coconut, widespread throughout all the islands of the archipelagoes. The risk of hurricanes, however, has materially influenced the location of banana plantations.
in Tonga, but not in Fiji. In this latter case the report by Messrs. Paterson and Dodds advocated the acceptance of risks which may involve a complete loss of crop. They argued in 1945 for more centralisation of banana growing in Fiji, on the grounds that 'Production over a number of smaller islands affords an insurance of continued production in the case of hurricanes but the premium in terms of marketing and transport costs seems hardly worthwhile in the circumstances' (CP 29/1945, p. 24). Nevertheless, in the year following the 1958 hurricane in Fiji the island areas managed to supply 29 per cent of bananas for export. Unfortunately, stormy conditions at sea and on the island coasts, inadequate vessels with poor facilities for the carriage of bananas, and protracted methods of loading, resulted in both growers and buyers abandoning further attempts to develop this trade from the outer islands of Fiji (see Chapter 9). The destruction of bananas by hurricanes and the reduction in the supply by disease has, on the other hand, encouraged the government of Tonga to spread the crop as widely as possible in order that quotas for New Zealand can be met. They have been able to do this through improved sea transportation in recent years (see Chapter 9).

The effects of severe tropical storms on the island trading systems are self-evident; less copra and bananas for sale means the inability to purchase consumer goods and ships call with cargoes less frequently. When these hurricanes occur in Fiji during the period December - March (as they usually do) the hardships are intensified for this is close to or during the time of scarcity for
native foods (F. Vula-i-Lala) when cash incomes are particularly important.

The catastrophic disruption of the local economy by a hurricane often sets in motion a chain of events designed to re-adjust the pattern of life to a scarcity of island resources. Frequently this is manifest in a move by some of the population away from the area of destruction:

Men are taking wing
Flying in all directions
To islands where there is food, and trees standing.

(An old song of Ifaluk, Burrows and Spirow, 1953, p. 25)

Nowadays in Fiji and Tonga the move is more often to the port towns. In this way some of the pressure on reduced island resources can be relieved, and in the towns money may be earned. Walsh discussing the effects of hurricanes and other causes of migration from the Ha'apai group of Tonga wrote "... the hurricanes have left the overall economy more unbalanced than ever before. It is this imbalance from one part of the group to another that is the constant and increasingly serious cause of migration" ... (1964, p. 157).

Conclusion

Demographically the three archipelagoes show similar trends. In particular, a high annual rate of population growth, the comparatively large numbers of people on one island, and the rapid increases of population at the port towns. These large islands and their towns are places of immigration in the three archipelagoes.
Population densities are also quite high on some of the outer islands of Tonga and the GEIC. The densities in the southern Gilberts are especially worthy of note in view of the droughts which these areas must inevitably experience from time to time. In Fiji and Tonga it is the outer islands which, in turn, are particularly vulnerable to hurricane destruction, for food gardens as well as coconuts can be lost and migration to the towns may be an immediate response.

Many of the physical conditions discussed in this chapter (and in Chapter I) will be referred to again, in more detail, in various parts of this study. Once more they constitute hazards over which little control can be exerted. Apart from the disastrous effects which the variable physical factors produce they can also make ship-earnings extremely uncertain, and the island-based trader may likewise have to survive a year or two of actual financial losses in a drought or hurricane-prone area.
PART TWO

DEVELOPMENT OF THE TRADING SYSTEMS
Chapter 3
EARLY TRADE AND THE EXCHANGE ECONOMY

Itinerant Traders

During the early 1800's many islands were visited by itinerant vessels engaged in a barter trade. This commerce is usually associated with an 'extractive' period in the economic history of the islands; the classical examples are the sandalwood trade, and, to a lesser extent, the trade in bêche-de-mer. These brought periods of intensive economic activity to limited parts of some archipelagoes until the resources were exhausted.

Into the category of itinerant traders came also the whalers, who, like Rhodes on the barque 'Australian' in 1836 traded beads, tobacco, muskets and ammunition in Tonga for provisions (Rhodes, 1954, p. 12). Before the American Civil War it was common for American whalers to trade in Fiji for bêche-de-mer and coconut oil in addition to foodstuffs (CLB, 1864, p. 329, F); and the first vessel recorded as bringing coconut oil to Sydney from the Gilbert Islands was a whaler in 1847 (Maude, H. E., and Leeson, I., 1965, p. 403).

The Island Base

In order to carry out repairs, break out their holds, and to barter, whalers and itinerant traders sought harbours easy of access (and egress), where good relations could be established with the local chiefs. Levuka in Fiji was such a place, and by 1839 there were, according to the missionaries Cargill and Calvert, several resident Europeans (including Whippy, Miller and Simpson) who had
built schooners and were hiring themselves to overseas vessels for the purpose of collecting island produce (Williams, 1870, pp. 465-466). It also became the practice for trading vessels to leave men behind at Levuka to trade on their behalf, and the captains usually paid the local chief to help and protect them (Thurston, 1881, p. 40).

So began the island base from which trading excursions could be made around the archipelago. The British Consul at Levuka reported in 1865 that deserters from ships were acting as agents for the Levuka traders. They sailed small boats around the islands and exchanged calico and hardware for bêche-de-mer, tortoise shell, and coconut oil. The consul went on to say that the principal trading firm at this time was the agent for the German House of Godeffroy (CLB, 1865, p. 452, F).

The traders and whalers also left men on several of the outer islands. Some of these beachcombers began to function as intermediaries between the island people and visiting ships. The impetus to this system of employing resident agents in island villages came around mid-century when there was an increased demand for coconut oil by the merchants at the entrepôts of Sydney and Valparaiso.

**Resident Agents**

About the year 1840 technical advances in the making of soap and candles from coconut oil gave the product a higher value on the market. This meant that the Pacific Islands had now a valuable resource which could be exploited on a sustained commercial basis. Merchants recognised the advantages of having a trader **in situ** who
was always ready to exchange goods for oil and to store the oil until the arrival of a company ship.

The first resident traders were, once more, usually seamen who preferred island life to the hardships of a whaling or merchant vessel; they constituted in the Pacific the traders whose presence ...'at the economic frontiers of a growing economy provides a demand for the output of the local producers and acquaints them with the goods which the market offers. These influences are important in encouraging production for sale and thus the emergence and spread of the exchange economy' (Bauer and Yamey, 1959, p. 109). This advance from itinerant to resident trading in the outer islands was remarked on by the Reverend Thomas West who wrote of Tonga in the mid 19th century: 'A number of foreigners now reside on different islands for the purpose of trade; so that the people find ready purchasers for their products, instead of being dependent, as in former times, upon the casual and uncertain visits of trading ships' (1865, p. 431).

For the merchants the coconut oil trade was particularly profitable. The American commercial agent in Fiji reported in 1847 that for $US2,500 of trade goods about 60,000 gallons of oil could be obtained, and this would realize $US34,000 on the American market (Brookes, 1941, pp. 420-421). During 1858 the Godefroy Company of Hamburg had their resident agent William Hennings purchasing oil in the Lau Islands (Hennings, 1948, p. 43), and by 1863 an Anglo-Australian firm had set up machinery on the island of Taveuni in Fiji for the extraction of coconut oil (CLB, 1863, p. 320, F).

Trading stations spread in the Fiji group, particularly
under Hennings along the windward islands. Vessels tended to arrive from overseas, range through the archipelago and move on. They were not required to report their movements, and Consul Jones complained:

The manner in which commerce is carried on by vessels engaged in island trade renders it difficult to state for certain the value of the goods imported. The masters make the tour of the several groups of Islands, calling at each of the trading stations, and replenishing the stock of the resident traders as they may require to have it renewed... (CLB, 1865, pp. 468-469, F).

Goods delivered to resident traders in Fiji included printed cottons, red shirts, tobacco, fish hooks, axes, muskets, shot and other merchandise (Lonnberg, 1864-8, unpub. memo.). These came mainly from England and Germany and were transhipped at Sydney. Freights were high on the Sydney-Fiji trade, usually 80/- per ton for the outward voyage of twenty days, and 70/- per ton for the homeward passage to Sydney which, running free, took about twelve days (CLB, 1863-65, p. 331, F).

In the 1860s coconut oil was a sine qua non of trade and involved a few of the new European planters. With oil selling in Sydney at £33 to £38 per ton (Derrick, 1963, p. 156) and obtained cheaply in the villages the high freights and other overhead charges were of little consequence for merchants. For the new planters and settlers, however, these charges sheared away 30 per cent of their profits and they depended on Sydney merchants for trade goods and for the disposal of their produce. So much was this the case that Consul Jones wrote 'the poverty of the settlers has hitherto placed them at the mercy of the Sydney traders, forcing them to depend on
the latter for the trade goods necessary for carrying on their work, and also to sell their produce at the price which their creditors choose to offer (CLB, 1866-69, pp. 48-49, F). This early conflict of interests between merchants and planters was to renew frequently and affect the pattern of archipelago trade.

With the exception of the Godeffroy agents in the Lau Islands, where the Tongan Ma'afu had control, the resident traders relied on the good will and the caprices of local Fijian chiefs. Their presence also gave some status to the villages, and they were gradually becoming indispensable in other ways. Jones brought this to the notice of some chiefs when he wrote to them in 1863:

Now it is your duty as chief to keep your people in order and protect the property of the white traders - if you injure them by stealing their goods the whites will leave your neighbourhood, and you will have no opportunity to purchase muskets, powder, knives or cloth, other chiefs will become powerful because they are friends of the white men and you will become weak because you are their enemy. (CLB, 1863-65, p. 338, F).

The resident European traders in the Tongan archipelago obtained allies besides the chiefs in the process of acculturation. Missionaries had a vested interest in trade, for 'decent' clothing was required for the natives and a cash revenue for the missions. "The Missionaries", wrote the Rev. Thomas West, "adopted various measures calculated to encourage the manufacture of the article "coconut oil" and to facilitate its sale to resident foreign traders." (1865, p. 141). West was describing Tonga in 1846 but much of the subsequent 19th century history of trade in that archipelago may be
partially described in terms of a collusion between the missionaries and the trading companies. The mission also became active in Fiji at a later date. A part-European captain complained bitterly to Seemann in 1860 that the missionaries were injuring their trade by inducing the natives to contribute coconut oil towards the support of the Wesleyan Society. Seemann estimated that this contribution amounted to about £1,200 per annum at local prices (1862, p. 41 and p. 285). These measures are unlikely to have directly enhanced the economic well-being of the people but may have extended the exchange sector of the economy and brought into use resources which were not fully used.

Coconut oil exports from Tonga amounted to £14,796 in 1866 (CLB, 1867, F) compared with £3,260 from Fiji in 1867 (CLB, 1866-69, p. 378, F), and in 1885 copra from Tonga had an export value of £90,000 (Kelly, 1885, p. 14) compared in the same year with £57,975 from Fiji (Fiji Customs Returns, 1884-1887). These figures, it will be seen, made the small and accessible archipelago of Tonga sought after by rival trading companies.

The attraction of the coconut oil trade was the main factor in the setting up of a trading station at Butaritari in the Gilbert Islands during 1846 (Maude, H. E. and

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1The mission-trader arrangements reached their apex under the Rev. Shirley Baker. Layard wrote of him in 1876:
'They accuse him of being a trader in disguise, and in league with the firm of Messrs. Godeffroy Brothers of Hamburg, in whose favour he obtains (or makes) concessions of every kind, and into whose stores he directs the streams of copra poured into the mission treasury' (FOCP 11/4285, 1876, T).
Leeson, L., 1965, p. 406); and in the same year the British company of Lucett and Collie began to manufacture oil on remote Fanning Island (Lucett, 1851, p. 246). From Butaritari the small shipowners Randall and Durant sent out their island agents; they were ... 'left on the beach to fend for themselves with nothing except a supply of empty casks and a case of tobacco to buy oil to fill them with' ... (Maude and Leeson, 1965, p. 409). Occasionally native chiefs acted as agents in the Gilbert Islands and Damon records in his journal that the King of Abaiang had obtained money ... 'as a commission for procuring oil of his people for the traders' (1861, p. 16). By the mid-1860s, at least, the system of resident traders had become widespread, although many of them must have remained independent entrepreneurs selling their purchases to ships whenever the opportunity occurred.

Regional Differences

In all three archipelagoes there were regional variations in the methods and prospects of trade. This was particularly so in the Gilbert and Ellice Islands where edaphic and climatic factors exercised so much control over production, where islands had been raided by 'men stealing vessels' (NZPP, A-3A, 1874, pp. 13-14, G), and where civil wars and local political disturbances were often encountered. Some islands were as a result avoided, and others regularly visited; in at least one case the historical events which made an island desirable as a trading place have had lasting effects.

During the 1870s Captain Randall commanded the brig 'Thyra' and his chief officer Mahlmann has left an account
which illustrates the peculiar nature of trade to the Gilberts. They sailed from Sydney with the holds full of half ton butts to be used for the carriage of coconut oil. Trade goods on board were the usual tobacco, cottons, hardware, guns and ammunition. On this voyage they made Tabiteuea first, and then called at all their island stations northwards to Little Makin - but omitted Abemama (and probably Kuria and Aranuka). At Makin Randall did something that made the trade of the Gilberts even more unusual, he began to paint and clean the ship and get it into 'proper order for direct trading with Abemama' (Wahlmann, 1918, p. 20).

At Abemama the King knew the principle of surplus value; 'he has', wrote Sterndale in 1874, 'for many years back kept his people making coconut oil and curing bêche-de-mer which he disposes of to Sydney traders' (1874, p. 21). He did more than this. By systematically and drastically reducing the populations of his vassal islands Kuria and Aranuka, and by virtually enslaving his own people, King Baiteki commanded a relatively vast supply of island resources. He also concentrated the powers of collection, exchange, and distribution in his own hands by the simple expedient of killing the potential European middleman in 1852 (Sterndale, 1874, p. 21).

The 'Thyra' anchored in Abemama lagoon and Captain Randall was allowed to land on a small islet, where for two months he traded for coconut oil, bêche-de-mer, turtle

1When Grimble took charge of the Central Gilberts in 1917 there were still ...'less than 200 souls on Kuria and they were unable to gather the rich coconut crop unaided' ... (Grimble, 1960, p. 167).
shell and coir (Mahlmann, 1918, p. 25). The trade of this atoll, and the adjacent islands, was therefore competed for by rival shipmasters, and Baiteki and his successor Tembinok were courted by them\(^1\). Despite the extreme variability of rainfall (Fig. 2.1) Abemama remains the most important copra producing area in the Gilberts. This is largely a result of the events which reduced the population and placed so much emphasis on production for trade. Now that the royal monopoly has been removed the local economy is by far the healthiest among the islands which lie to the south of Tarawa.

**The Exchange Economy Established**

It is difficult nowadays to appreciate just how multifarious was the role of overseas shipmasters in the Pacific up to the 1870s. Some were boatbuilders, owners of trading vessels, partners in firms, Sydney merchants, and supervisors of resident traders. They played an important part in establishing the commercial exchange economy, and in making the South Sea trade

\(^1\)Tembinok had few illusions about the trading Captains who visited Abemama. According to Stevenson the King put them into three classes — 'He cheat a litty', 'He cheat plenty', and 'I think he cheat too much'. For the first two classes Tembinok had perfect tolerance (1908, p. 283).
...'a very lucrative one in these days'\(^1\) (Mahlmann, 1918, p. 29). Having done this they were destined to be replaced if they could not build on it. The predominance of the overseas captain-owner was coming to an end; for one thing the Godeffroy company had introduced some large competitive ships, and their agents from Tahiti were pushed ...'southwards into the Friendly archipelago, including Nieuw (Savage Island), Niuafo'ou, Fotauna, and Wallis Island; northwards throughout the whole range of the Kingsmills and the isles in their neighbourhood, that is to say, Tokerau, the Ellis and Gilbert groups' ... (Sterndale, 1874, p. 3). Other powerful companies were shortly also to appear in these regions.

The resident traders for their part had made a niche for themselves in the exchange economy of the villages. Some on rich islands like Rotuma could obtain oil for the smallest article, even a needle (M'L., 1876). But before long, they, too, were virtually all to become the 'bondsmen' of some large trading firm (Osborne, 1924, p. 29).

\(^1\)Some of the wives of resident traders were also of importance in this connection. An agent of Robert Towns on the island of Tabiteuea in 1876 had a wife who looked after the business and knew the quantity of oil required for every article (M'L., 1876). Captain Randall was even more fortunate for not only did his wife often act as his supercargo but she came from a royal family (Mahlmann, 1918, p.22) This type of connection with the chiefly class no doubt contributed also to the success of William Hennings in Fiji, who in the 1860s married Adi Mari, daughter of Ratu Maru and niece of Cakobau (Cyclop, 1907, p. 301). Others were less fortunate, poor Brechenfeldt on Nonouti had to padlock everything against the depredations of his wife on behalf of her relatives (Burnet, 1910, p. 98); and Osborne said that the wives would be e mama (shamed) if the trader was not generous to their relatives (1905, p. 95 unpub.).
Chapter 4

THE ASCENDANCY OF ANGLO-AUSTRALASIAN COMPANIES

New Settlers, Transport Improvements, and New Products

Between the period of high demand for coconut oil in the 1860s, and the development of the copra market in the 1870s, Fiji, as a result of the market opportunities offered by the American Civil War, passed through a cotton boom. At the same time Australia experienced an economic depression (see Derrick, 1963, p. 160 and p. 184). The cotton market failed in the 1870s but some of the effects of the boom remained. The European population had increased from about 200 in 1860 to 4,000 by 1870 (NZPP, 1874, A-3A, p. 5, F) and many of the new arrivals were dispersed as planters throughout the group. Levuka had grown in importance during the boom years, and by 1869 merchants from Australia were overstocking the port with trade goods (CLB 1866-1869, p. 379, F).

Many of the European planters of the pre-1865 era had been attracted to the Rewa district and the island of Kadavu by ...'the facilities that both these places offer for transport and communications' (CLB, 1864, p. 324, F). There were at that time only 15 small craft plying in the group (CLB, 1863 Report ...F) and the few planters and traders in the outer islands depended to a great extent on contact by ships arriving from overseas. By the 1870s there was a wider dispersion of settlers (CLB, 1866-69, p. 378, F) and it was necessary to have regular communications with the port town of Levuka. The steam yacht 'Pioneer' began operating a mail and passenger service to the outer islands (Cyclop, 1907, p. 258); and by 1874
(the year of cession to Britain) there was a local fleet of - 36 ketches, cutters, and schooners from 2 to 12 tons; 27 other vessels under 5 tons; and many larger ranging up to 60 or 70 tons. All these were owned by British subjects (CLB, 1874, pp. 62-63, F) who were now able to secure a large proportion of the interinsular trade as the British port of entry restrictions eventually eliminated overseas itinerants (see below).

The failure of the cotton market in Fiji was followed by a loss of some of the European population, depressed commercial conditions, and experimentation with alternative crops. As far as the planters in the outer islands were concerned the most successful of these proved to be copra. The Godeffroy company of Hamburg had started the copra trade in the Pacific before 1870, and it was eminently suited to island transport conditions. Copra had good storage and handling properties and could withstand trans­shipments and long ocean hauls without appreciable losses or serious deterioration. Coconut oil on the other hand did frequently deteriorate and the casks were cumbersome and invariably leaked. The one disadvantage of copra in these early days of the trade, when it was loaded in gunny sacks and transported over a long ocean haul, was its liability to spontaneous combustion - the full significance of this remark will be appreciated later.

By 1880 copra was the main export from Fiji, Tonga, and the Gilbert and Ellice Islands. Banana exports in relatively large quantities were made from Fiji in 1878 (McPaul, 1963, p. 32), but owing to inadequate shipping not until 1887 from Tonga (Maude, A., 1965, p. 41). The missions were encouraging this increased production for
trade, especially in Tonga, and the governments of all three archipelagoes were doing likewise. Sir Arthur Gordon, the first governor of Fiji, introduced a system of native taxation in kind. This by 1892 was realising £30,266 (Report...1896, p. 97, F). In the year after the Gilbert and Ellice Islands were made a British protectorate (1892) native taxes were also introduced there and were likewise paid in copra (High Commissioner to Secy. of State, 1894, No. 6, 17.2.94, G).

The small-scale sugar industry in Fiji began to expand in the 1880s (see Lowndes, 1956, pp. 31-32) and in 1883 the Colonial Sugar Refining Company's mill at Nausori opened and sugar exports rose in that year to three times that of copra (McPaul, 1963, p. 2). By this time, Morrell remarks, about £1,700,000 of Australian capital had been invested in Fiji (1960, p. 393). The economic bases of the modern trade of the archipelagoes were thus established by the early 1890s; the direction of economic control was also evident for the main contenders to the Australian and New Zealand firms were the Germans, and their power was waning.

German Commercial Power

The Godeffroy Company secured a monopoly of the profitable trade of Tonga during 1870 and they issued Bolivian currency as the official coin of the realm (Sterndale, 1874, p. 2). Most of the resident traders were reduced to the status of Godeffroy company agents; the missionary Greenwood wrote in 1872 that the Godeffroy manager Weber 'holds every one of the traders in Vava'u between his finger and thumb' (Greenwood, 1872,
letter 170, T). This German trade was rationally organised with depots at the three focal ports of Tongatapu, Ha'apai, and Vava'u. All the intermediate islands were connected by small vessels which collected the copra and brought it to the depots for transhipment (Sterndale, 1874, p. 2). The regional system introduced by Godeffroy was to endure almost unchanged in the Tongan archipelago.

The Lau Islands of Fiji came also within the Godeffroy sphere; and the Tongan Ma'afu (who ruled Lau) and the Godeffroy agents mutually reinforced each other (see Derrick, 1963, p. 162). In the Ellice Islands Godeffroy 'owned' the atoll and good harbour of Nukufetau and controlled the trade of the Ellice group. By the early 1870s his agents were on all the Gilbert Islands, with the exception of Abemama, Kuria and Aranuka (Sterndale, 1874, p. 25).

When the Godeffroy Company became bankrupt in 1879 (Spoehr, F. M., 1963, pp. 46-47) its assets in Tonga were taken over by the Deutsche Handels-und-Plantagen Gesellschaft (DHPG). This company had a central office in each of the regions (Tongatapu, Ha'apai and Vava'u) and these in turn were controlled from Apia. The traders at the out-stations either worked directly for DHPG or were tied to them (Dalton, 1918, p. 59). The only serious competitor to the Germans in Tonga, at this time, was McArthur & Co. of Auckland (NZPP, A-4D, 1885, p. 47, T).

In the Gilbert Islands most of the Godeffroy commercial empire fell to the Jaluit Gesellschaft, but in the Ellice Islands the unified commercial structure disintegrated. The Jaluit Gesellschaft was an amalgamation of German
firms, German government interest, and the American company of Crawford. They operated out of Jaluit in the Marshall Islands and had a trading station on Butaritari in the Gilberts (Interstate Commission ...1918, p. 142). Most of the Gesellschaft resident traders were British, Dutch, or American, and they were placed on almost every island. As with all these firms the method was to give the new trader a list of native debts and charge him with that amount, and also with the value of the station stock and property; he was then bound by agreement to sell all copra received to his patron firm (Resident Commissioner to HC 13.3.1894, G).

The rivals to the German companies in the Gilbert Islands were the Australian-Chinese firm of On Chong (NZPP, A-9, 1885, p. 6, G) and the Auckland shipping and trading company of Henderson & McFarlane. On Chong ran a service from Sydney to Butaritari where their supply ship connected with their island trading vessels (Heyen, 1964). Henderson & McFarlane also sailed from Sydney via the Ellice Islands, and after 1893 they called also at Fiji and Rotuma en route to the Gilberts (Secy, High Commissioner to H & McF, 16.8.1893, G). This firm became the most important trader in the Ellice Group until they were taken over by the Pacific Island Company.\(^1\)

\(^1\) The Pacific Island Co. went into phosphate trading about the turn of the century and they sold their other trading interests to the Jaluit Gesellschaft (Osborne, 1933, pp. 34-35). By this time, however, the German company had lost interest in the Ellice which was in any case firmly within the British sphere of influence.
The German companies in Fiji soon had their powers curtailed as a result of the ceding of that archipelago to Britain — and, it will be shown, by concomitant port of entry restrictions. In the early 1880s it was still Tonga which was the most productive supplier of copra and it was there that the German merchants were most firmly entrenched. The yields of copra were in 1884¹: between 8,000 and 9,000 tons for Tonga compared with 1,680 tons for the 'Gilbert and Ellice and other smaller islands' (NZPP, A-4D, 1885, pp. 46-47, G) and 4,800 tons for Fiji (Customs Returns, 1884-1887).

Most of the non-German traders in Tonga found it as difficult to compete with the DHPG as they had with the Godefroy Company. Thurston, the acting Consul General in Fiji, was, however, of the opinion that regular communications between Tonga, Sydney and Fiji would, by providing alternative channels of trade, help free the small traders from the monopoly (FOCP, 5199, 1884, Report 25, p. 9, T). To this Thurston could have added the likelihood that Anglo-Australian commercial empires would emerge in the Pacific using the British Colony of Fiji as their base.

Consolidation of Fiji Ports, and Anglo-Australasian Commercial Opportunities

When Fiji was ceded to Britain in 1874 Levuka, Suva and Lomaloma were made ports of entry. The settlement

¹ In 1884 Tongans were being paid £8.10/- per ton for copra. The price to shippers was £12 per ton, and the price in Europe £22.10/- per ton. Jull (1883-84). The traders made most of their profits on consumer goods.
at Suva was proclaimed the capital in 1882 and during the same year Lomaloma in Lau was closed as a port of entry (Return of Customs Dues...1881-1884, F) while Galoa harbour had ceased to be used by overseas vessels in 1877 (Thomson, 1889, p. 629). Ships arriving from overseas to trade in the Fiji archipelago had now 'to enter inwards' at Suva or Levuka and 'clear outwards' from one of these ports only. The trade of the group was as a result channelled through the ports of entry, and the productive but distant islands of Lau and Rotuma became focused on Suva and Levuka.

There were many benefits to accrue to local merchants and shipowners as a result of the consolidation of overseas ports. Not least were the effects this had on German participation in the trade of Fiji. The German Consul Stuebal wrote to Bismarck in 1883:

In Rotuma the Company ĐHGF\] monopolized the whole trade, until the island was annexed by England. Since then, vessels proceeding to Rotuma are obliged to call at a port of entry in the Fiji Group; and this restriction necessitated a stoppage of the trade, and the Company's buildings on the island have recently been sold with great loss... In Fiji, likewise, the Company had formerly the largest share in the copra trade... (NZPP, 1885, A-4D, p. 46, F).

In his last statement Stuebal was doubtless referring to the trading network which William Hennings had built up in Lau. In its hey-day Charles Hennings reported six vessels calling at Lomaloma in a week, and William, who was German Consul at Levuka, was exporting copra and a variety of island produce by the German barques which called at Levuka (Hennings, 1948, p. 43). The Lau trading interests were taken over by A. S. Bowman in the
1890s (Cyclop, 1907, p. 298) at a time when Anglo-Australian commerce began to dominate.\(^1\)

**Development of Port Specialisations in Fiji**

By the time Suva was proclaimed the capital Levuka had a new wharf alongside of which a ship of 1,000 tons could berth (Thurston, 1881, p. 10). Also located there were most of the vessels of the interinsular fleet. In addition many of the planters had built sailing cutters and it became the practice for them to sail to Levuka and combine the marketing of copra with social and other activities. Levuka was an easy port to make from Vanua Levu, Taveuni, Lomaiviti and Northern Lau. While, therefore, the sailing cutters of the copra planters remained cheap and fashionable, the quantity of copra relatively small, and the need for spot cash great, Levuka remained the planters' town. Even after the companies established stores with copra buyers in the estate areas,

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\(^1\) It is an interesting reflection on the links between Government and Commerce as far as spheres of influence were concerned to read the correspondence of the High Commission in Fiji to Messrs. Henderson & McFarlane on 16.8.1893 on the subject of their vessel, the 'Archer':

In the event of the 'Archer' coming to Fiji there is no reason why your firm should not also resume trading at Rotuma, with which island there is very little connection with the outside world, and where there is every reason to suppose you might do a profitable business. As regards this part of the question I am to say that the H.C., as Governor of Fiji, would make arrangements by which you would be relieved of customs duties leviable in respect of that island. The island you are aware exports about 600 tons of copra annually (Secy/HC to Henderson & McF., 16.8.1893, G).
and operated regular services, some small planters preferred to come to Levuka and many of the copra trading vessels continued to unload there, often for transhipment to Suva. Only, in fact, when a coconut oil mill was located in Suva, at a much later date, did the capital begin to usurp Levuka's leading role in the copra trade.

Suva from the start became the outlet for the sugar mill built in the Rewa area by the Colonial Sugar Refining Co. of Australia (CSR Co) in 1882. Bananas from the Rewa were also taken to Suva by barge and loaded on to vessels bound for Australia and New Zealand. The capital became a stopping place on the transpacific trade and a main coaling depot was established there. Into Suva came a large proportion of the general cargo destined for other parts of Fiji, and eventually for other Pacific Islands.

The results of sugar production on the Rewa did not come up to expectation and the CSR Co. constructed a second mill at Rarawai near Ba and exported sugar from there in 1886. This was followed in 1894 by exports from the sugar port of Labasa on Vanua Levu, and in 1903 from Lautoka (Lowndes, 1956, pp. 32-33). Of these sugar outlets only Lautoka ever received port of entry status.

A Merging of Port Town Commercial Interests

Following the annexation of Fiji by Britain, the consolidation of overseas trade, and the removal of many German trading interests the way was now open for commercial empire building by Anglo-Australasians. The suva merchant Henry Marks began to buy out smaller firms. He then took over the shipping department of James McEwan & Co. in the
early 1880s (Cyclop, 1907, p. 214), the 'Fiji Trading Co.' in 1888 (Derrick, 1943, p. 205) and in 1889 he purchased Benjamin Bros. (Cyclop, 1907, p. 223). During 1899 Marks extended his business from Suva to Levuka and Navua, and in 1901 bought the trading stations of Lau from A. S. Bowman, and the Rewa business of Finlayson at Nausori (Cyclop, 1907, pp. 316-317). He appointed Gustav Hennings as manager of the head station at Lomaloma (Obituary, 1955, p. 130).

During the 1880s the important merchant and shipping firm of Brown and Joske was formed by an amalgamation of Hartenstein and Brown with A. Brewster Joske (Cyclop, 1907, p. 244), and in 1888 Morris Hedstrom & Co. was similarly established by amalgamations. During the first quarter of the following century this latter company bought out the 'Fiji Shipping Company' and added to its numerous branches the Lau trading network of Henry Marks. It was about this time also that Burns Philp & Co., originally of Townsville and later Sydney, began to show some interest in the Fiji trade and they started acquiring some local firms. In 1906 they bought the firm of D. Robbie in Levuka, followed by the old established shipping and trading company of Christian Kaad. In 1912 Burns Philp added F. A. Thomas of Suva and they later commenced trading in Fiji under their name of Burns Philp (South Sea) Co. (Kerkham, 1958, unpub.).

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1In 1902 J. Maynord Hedstrom and P. A. Morris bought out the firm of Miller Hedy, then the company of Arthur Joske in Suva. In 1920 they amalgamated with Henry Marks and Marks joined the board of Morris Hedstrom, they then bought out Marlow & Co. (see PIM, August, 1946, pp. 36-37).
A Merging of Australasian Shipping Companies

Contemporaneous with the port developments and commercial amalgamations taking place within Fiji some Australian and New Zealand overseas shipping companies began to expand. In 1881 the Union Steamship Co. of New Zealand (USS Co.) bought out the Auckland Steamship Co. and took over their vessel 'Southern Cross' which traded between Auckland and Fiji. The following year the USS Co. purchased the only service between Melbourne and Fiji. By 1890 this company had introduced three large new steamships to the Pacific island trade (Waters, 1952, p. 28).

The Burns Philp Co. also expanded their shipping interests during the 1880s by the part-purchase of the Australian Steam Navigation Co. In 1887 Burns Philp managed and had shares in a shipping service to Fiji under the name of the Australian United Steamship Co.; and despite the low copra yield of what was by now the Gilbert and Ellice Islands Protectorate (GEIP) they sent their SS 'Titus' there in 1899 'prospecting for trade' (Chatfield, 1959, p. 39 and p. 42, unpub.).

The Geographical Extension of Anglo-Australasian Merchants

The expanding merchant companies in Fiji were by the 1880s moving into a powerful position within the colony, and also, by virtue of local and overseas shipping services, in relation to other Pacific islands. Kelly in a report to the Auckland Chamber of Commerce in 1885 wrote:

Fiji itself having now direct communication with England has entered the lists as a candidate
for the commerce of the Pacific and by means of a New Zealand steamer owned by a New Zealand Company has commenced a regular monthly service between Levuka and the Tongan group, whilst the Fiji Govt. are projecting another line to run monthly from Levuka in the near future to Samoa so making Fiji a centre for the three groups (Kelly, 1885).

The role which the ports of Fiji were to play as entrepots for other Pacific territories was already clearly recognisable by 1885. Thurston in that year was also able to state 'Fiji merchants are quite ready to open agencies in Tonga' (FOCP, 1885, 5199, p. 85, T); and the New Zealand Herald (Aug. 17, 1885) predicted that in a short time the German company DHPG which was being rapidly superseded, would have little or no footing in Tonga. The Tongan archipelago was in fact coming into the British sphere of influence both economically and politically and in 1900 it was officially made a British Protectorate under a Treaty of Friendship. Both New Zealand and Australian interests continued to increase their trade in Tonga but it was Burns Philp which, in 1906, became the largest buyer of copra (Cyclop, 1907, p. 58). The German company on the other hand was not quite so easily dislodged. As late as 1913 (a poor copra year) it secured 40 per cent of the total copra production of Tonga (Dalton, 1918, p. 59) and not until the DHPG was forcibly liquidated in 1914 were the Australian and New Zealand merchants able absolutely to dominate the trade.

1In 1883/4 small quantities of copra were arriving in Fiji from Futuna, Keppel, the Line Islands, Niuafo'ou, Tonga and Wallis Island (Fiji Trade Report, 1886).
After the voyage of the 'Titus' to the Gilberts in 1899 the Burns Philp Co. formally entered the trade of that region. They very wisely set up their head station at Betio on Tarawa lagoon which was by then the administrative centre and was to become the main port. By this time the native people of the Gilbert and Ellice had been freed from their many years of accumulated debts to the traders, for as a result of the declaration of the Protectorate it was no longer possible for the foreign companies to claim on many of these old debts (CO 225/61). The traders therefore had no longer a lien on the copra of individual islanders. Burns Philp, however, found that most of the traders were still bound to the Jaluit Gesellschaft or to On Chong & Co. (Chatfield, 1959, p. 81) and they set about 'freeing' them from their bonds. By 1922 Burns Philp owned directly eight trading stations in the Gilbert and Ellice (Stewart, 1922) and had become the largest exporter of copra.

As a result of the growth of Suva the importance of Tonga for overseas shipping had diminished. Whereas in 1874 the Californian Mail Service had contemplated using Tonga as a coaling place (NZPP 1874-A3- p. 1, T) it was by the early 1900s merely part of the hinterland of Suva as far as cargoes from Europe and America were concerned. The attempts to improve harbour installations (Mouat and Davis, 1913, pp. 60-79) did little to attract into Tonga cross-Pacific shipping. On the other hand the archipelago trade in fresh produce became vulnerable to the vicissitudes of shipping schedules which were often altered to suit Fiji or Samoa (see Dalton, 1918, pp. 61-62).
Conclusion

Many of the events which have been outlined in this chapter contributed to the emergence of a new economic milieu in the archipelagoes. Specifically, unified political control, spheres of political (and trading) interests, ports of entry, port town growth, merchant company powers, and new relationships between port town hinterlands and forelands.

The most important of these changes, for this study, are those which affected the distributional patterns of island trade. The island governments had a vested interest in trade for most of their revenue was derived from port dues and customs charges, hence the importance of the ports of entry. The governments also made it more difficult for foreigners to send trading vessels into their political spheres of influence and unified trading regions like the Marshall and Gilbert Islands fell apart.

In the outer islands the trader found it much more difficult under the new shipping arrangements to import his goods and market his produce without recourse to the services of the port town merchants - and the goods had increased in volume and diversity with the increasing importance of the market sector of the village economy.

The merchants in the port towns had for their part to face increased capital requirements. They had to purchase greater quantities of island products and await their sale in the overseas markets. Similarly a long delay could occur between the purchasing of trade goods in Australia and their sale in some remote island area. Only the large company could carry out these functions
efficiently. As political stability had made investment in the islands very much safer there appeared at this time the integrated Anglo-Australasian financial oligarchies with commercial interests in Australia and New Zealand, in ocean shipping, port town entrepot functions, and outer island trading businesses.

Capital thus flowed from Australia and New Zealand, particularly to the port town of Suva. Investments were made in the enclaves of shipping, merchandising, banking, insurance, and port warehousing facilities. Here was the true alien imposition referred to by Spoehr (1960, p. 587) - a town whose main functions were simply those of organizing trade between the island hinterlands and the forelands of the metropolitan countries. It was the merchants of these towns, such as Joske, Marks, and Hedstrom of Suva, who entered local politics and further influenced the securing of commercial advantages for the ports and their shipping.

Undoubtedly it was the Godeffroy company that set the model for the highly integrated financial and political oligarchies. By the early 20th century, however, Australian companies in particular were in undisputed control of the mercantile activities of the three archipelagoes. They had also gone a long way towards making Suva the equivalent of the old German Haupt Agentur of Apia, from which cargoes were transhipped and where the regional headquarters of the leading firms were located.

Between the port town and the villages of the islands there was now a world of difference; the urban and
village peoples led increasingly different lives, but they were connected by commercial trading links which were destined to break down further much of the old self-sufficiency of the village economy.
Chapter 5

MONOPOLY AND COMPETITION

Several references have been made to the growth of merchant company combines in the port towns. This chapter considers in more detail the trading situation in the island hinterlands; in particular the way in which company power and competition between rival trading interests affected the distribution of traders and brought about the effective, if not official, subdivision of the archipelagoes themselves into company spheres of influence.

Very few of the merchant companies that emerged by the first quarter of the twentieth century appear to have secured pure monopolies in their areas of trade. On the other hand the degree of competition between the large Australian companies is difficult to gauge. At Rotuma in the 1930s for example the 'competing' companies of Burns Philp, Morris Hedstrom, and Missen & Gibson combined (PIYB, 1932, p. 76) to confront the individual copra sellers with a trading oligopoly. These and other arrangements designed by the shipping and merchant companies to regulate competition between them became progressively more pronounced up until recent times. During the early part of this century, however, competitive practices would appear to have been more typical of inter-insular trade than company co-operation or conference.

The rivalry between the companies took several forms and the outcomes were often significant for regional patterns of trade and development. The most important categories of competition, as far as this study is con-
cerned, may be conveniently taken as indirect, structural, and direct. The first includes the securing of Government contracts and the effects of parochial politics on the movement of goods and choice of carriers. The second considers the advantages which the larger companies possessed by their ability to set the pace in ship types and to replace vessels quickly. The discussion of the effects of direct competition is confined to the trade wars conducted by resident traders who were bound to the various companies - for the secrecy which surrounds the manipulation of freight rates as a direct competitive measure made it impossible to assess in a historical context. Freight rate cutting is the competitive method par excellence in shipping and it is dealt with in a later discussion of present day practices.

**Indirect Competition and Local Politics**

Most of the shipping companies tendered for the right to collect 'tax copra', that is copra made by individuals and communities as a payment in kind to the government. In Fiji and Tonga this was commuted to

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1 The large companies could always obtain freight concessions. This was an added advantage which the German DHPG had in Samoa and Tonga over the smaller traders during pre-first world war days. Dalton reported that the USS Co. charged the DHPG very much lower rates of freight than other traders (as much as 35 per cent) and since duty was charged cif the goods sold by the German firm could, in turn, be even further reduced in price (1918, pp. 22-23).
payments in cash, but in the Gilbert and Ellice Islands it was still tendered for, and usually collected by Fiji-based Burns Philp vessels, up until 1939 at least (Jackson, 1940, pp. 365-370).

By far the most important of the indirect competitive advantages was the securing of Government shipping subsidies. From about 1910 to 1938 subsidies were offered by the government of Fiji to companies providing ships of an approved type for the purpose of scheduled services to certain island areas. These subsidies were, theoretically, promotional in their intent. The government by encouraging a marine transport service ahead of the level of economic development was merely applying to an island territory the 'seminal' role which transport had played in the newly settled regions of contiguous land.

In early 20th century Fiji, outside of Viti Levu, there were a few compact regions where a high agricultural potential still appeared to be realizable from improved sea transport. They included sections of the accessible girdle of lowlands around Vanua Levu; the alluvial soil areas in the vicinity of major navigable rivers; and the coastal zone of basaltic flows on the lee side of the island of Taveuni. It seemed to be a rational use of

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1 As early as 1907 a resolution in the Lau Provincial Council called for the payment of taxes in coin instead of copra. The District Commissioner remarked...'I daresay the traders are at the bottom of this movement' (Res. V, 1907, p. 159, F).

2 One company vessel in Fiji was still receiving a subsidy as late as 1954, and in 1955 the government called tenders for a subsidised service to Rotuma (PIM, Jan., 1955, p. 99). This was the last of the shipping subsidies.
resources to concentrate high quality shipping in these areas. However, much of this land had been purchased by Europeans in the pre-cession period (Ward, 1965, p. 153), and as Spate (CP 131, 1959, p. 1) says, 'those who secured freeholds or long leases had a good eye for country.' Further, the companies which could provide vessels of a required standard were the large merchant companies, and they too could be numbered among estate owners or shareholders.

In effect, under the Fiji shipping subsidy the most productive and wealthy of the estates received improved services and the more affluent shipowners obtained financial support. The merchant shipping companies, it will be recalled, had also established trade stores in the townships adjacent to the estate areas. Some subsidised vessels were, as a result, carrying goods to be sold by their company stores, supplying planters who had accounts with their Suva branches, and, in one or two cases, serving their own estates. It was left to small cutters and the Fijian wagi ni koro (boat of the village) to provide for the outer islands; while many small planters in out of the way places had to rely on their own or their neighbours' boats. The marketing arrangements which evolved in this situation effectively prevented the small freight-earning vessels from participating in the most lucrative trades.

The Shipping Commission of 1915 did have some misgivings about the pattern of subsidised shipping and trade. They cited the 'Adi Keva' belonging to the Fiji Shipping Co. as giving undue preferences... 'to certain leading firms in Suva', and they felt that the subsidy stood in
the way of 'legitimate competition'. The Commission had the temerity to suggest that the... 'subsidy should not as a rule be granted to firms or companies trading as merchants in the colony'(CP 19/1915, paras. 30-33).

The main rival to the Fiji Shipping Co. was the Australian United Steam Navigation Co. (AUSN Co.) and soon afterwards Burns Philp\(^1\), and they also at times obtained support for their vessels. During a Legislative Council debate on steamship subsidies in 1917 Hedstrom made a case against an annual payment of £9,000 to the AUSN Co. vessel SS 'Arma', which was to be raised from a general tax on copra. Hedstrom argued ... 'the planters served by the "Arma" are amongst the largest and most prosperous in the colony' (mainly Taveuni, Savusavu, Mago Island, and Lever Bros., on Rabi Island); 'in other words, we are taxing all the copra producers of the colony to provide an excellent steamer service for the wealthiest of the copra planters' (Fiji Council Debates, 1917, p. 251). This statement may not have been completely devoid of bias in favour of personal business interests, but it was an accurate enough appraisal of the situation.

For their part the planters would have been expected to support subsidized vessels. They, however, never relished the idea of being served by one company only. Many of the planters were traditionally 'against the companies' whom they considered had always profited in

\(^1\)New twin screw ships like the 'Makatea', which could carry 400 tons of copra and 25 head of cattle, and the 'Yanawai', belonging to BP have never been equalled in the Fiji interisular trade.
Fiji at their expense. The period 1917 to 1920 was for them the palmy years of copra with prices rising to reach a peak of £34.7 per ton (not until after 1947 was this to be repeated) and the large estate owners could now dictate their terms.

In 1917 the Taveuni and Savusavu planters formed the Savusavu Planters' Co-operative Association (McPaul, 1963, p. 3) and they built a warehouse on the shores of the deep water harbour at Savusavu. This was close to all the largest and most compact copra producing regions in Fiji and their objective was to export their copra directly overseas instead of through the Suva and Levuka merchants. For a time they succeeded in doing this by using American schooners (W. R. Carpenter & Co. n.d.).

For the purpose of collecting copra the Planters' Association purchased the vessel 'Manoura' (Marine Board Records, 1921) and it was only when difficulty was experienced in obtaining American vessels during the 1920s¹ that the practice of exporting part of their copra directly overseas declined. Some planters also found alternative vessels to those receiving a subsidy in order to carry their copra to Levuka or Suva. It can only be attributed to the personalities and local politics involved that between 1927 and 1931, for example, the subsidised ships were running partially loaded. The total copra carried by these vessels amounted to 18,736 tons, whereas the copra output of Taveuni alone

¹This was also an era of protectionism and tariff raising. Philippine copra had as a result free entry to the U.S.A., whereas other imports of copra and oil were subject to high duties (see Wright, 1935).
over this period was 27,000 tons, and Taveuni was only one area in the subsidized region (CP26/1932). The strong individualist tendencies of the planters diminished during and after the depression years, but were never completely squashed.

A further manifestation of local politics and the conflicting interests of merchants and planters reappeared in the frequent agitation by the estate owners for a proper overseas port on southeast Vanua Levu. A Select Committee during 1929 rejected the proposal to build a wharf at Savusavu (CP37/1929). The planters had argued that such a project would open and develop Vanua Levu, and that there was a needless carriage of copra to Levuka which could be exported from a wharf in the main producing areas (CP22/1929). The Suva and Levuka merchant companies were, and some still are, opposed to direct shipping links from overseas to Vanua Levu. However, with the increase in sugar production, population, and local merchants in northwest Vanua Levu, it was Labasa which later became the contender for port of entry status.

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1 An overseas wharf was constructed at Savusavu in the late 1940s during a period when copra was being exported to Britain under a Ministry of Food contract. The installation was abandoned in 1957 when the contract ended, for by then almost all copra was going to the newly expanded Carpenter oil mill at Suva. This possibility had been predicted several years earlier (see PIM, Dec., 1953, p.11

2 Sugar interests in Fiji were able to secure direct outlets for their product almost immediately, whereas the copra estates were required to use the more distant port of Suva. This was due partly to the relative strengths of the organisations involved.
The competition between subsidized and unsubsidized vessels, which was partly a result of planter attitudes, produced an oversupply of shipping to some areas of the group. On the other hand many of the outer islands were virtually ignored by the larger companies. Despite their doubtful value, especially during prosperous years, subsidies continued in Fiji, and both Burns Philp and Morris Hedstrom received a share in them.

There were few developments in Tonga and the Gilbert Islands to compare with the subsidized services of Fiji. In 1893 Henderson and McFarlane obtained a subsidy for the SS 'Archer' to call at Fiji, the Ellice Islands, and the Gilbert Islands (Secy HC to H & McF 16.8.93, G); and about 1907 Burns Philp obtained a mail contract operating from Australia to Vila, Tarawa, Butaritari, Jaluit, and back through the Gilbert and Ellice Islands. The schedule left little time for trade (Chatfield, 1959, p. 104, unpub.) and on occasions they refused to take copra from non-company traders at places where tide and weather delays were likely. These mail runs through the islands were probably useful for administrators, and would certainly have strengthened the position of the company traders, but they were unpopular at a few small islands which were by this time without resident traders (Ellice Is. Report 5/1913).

One disadvantage (for shipowners) of the subsidized mail runs from Australia was the requirement that they employed European crews. This also meant that additional island seamen were taken on to work cargo and whale boats during the interinsular part of the voyage. The outbreak of the first world war, and the subsequent shortage of
shipping, disrupted these services (Cmd 8973, 7, 1916-17, G) and also almost put an end to the transhipment of copra from the entrepot of Sydney to Europe\(^1\). The result was that:

American timber vessels, that formerly went home empty from Australia, began to pick up copra as back loading, and, in addition, American trading schooners began to ply among the islands selling goods and buying copra (Interstate Commission... 1918, p. 51).

The shipping companies do not appear to have been unduly perturbed about reducing the Australia - GEIC links with their own costly vessels. It was also fairly evident that Sydney could not continue for long as a copra entrepot, for many island shippers were seeking more direct links with the actual copra markets.

Burns Philp reduced their bi-monthly services from Sydney to a three monthly trip (Cd 8434-11 Report 1915-16, G). Then in 1919 following the loss of their SS 'Tambo' on Abemama Island (Cmd 508.21, 1918-19, G) they began to use American registered schooners (owned by their San Francisco subsidiary) to bring in all their company stores and to load copra for San Francisco and Portland. This arrangement lasted until, like so many of the copra schooners, several of the BP American

\(^1\)In 1912 27,367 tons of copra were transhipped from Sydney mainly to Germany and Britain (Interstate Commission ...1918, p. 42).
registered vessels on this run were lost by fire\(^1\); and, as was pointed out in the case of Fiji, the American copra market became restricted. From about 1923 onwards Burns Philp sent most of their stores to the Gilberts by chartered steamships; but On Chong continued to trade to and from Sydney with their barquentine 'Alexa'. This vessel normally carried about 400 tons of copra three times a year and would spend 4 to 8 weeks in Sydney awaiting the sale of the cargo (logbook, 'Alexa', 1927-1929). On Chong lost the 'Alexa' by fire in 1931 and they too began chartering ships for this Pacific link (Heyen, 1964).

With Sydney no longer a transhipment point of any great importance, and the American copra market restricted, Western Europe became the main export destination for Pacific copra – a large proportion of which now moved through the Panama Canal. The vessels of the British 'Bank Line' took over the shipping of almost all copra from the Gilbert and Ellice islands during this period\(^2\).

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\(^1\) Copra was also shipped from Tonga under arrangement with American schooners as the USS Co. refused to carry copra – and for Tonga there were no alternative carriers to Australia and New Zealand. Dalton wrote 'The attitude of the Union Company in this matter is probably due to the fact that they have already lost one or two vessels as a result of fire said to be due to spontaneous combustion of copra or the sacks in which the copra was contained' (1918, p. 27).

\(^2\) Captain Heyen says the first Bank Line ship that he recalls loading at Butaritari was the SS 'Mineric' on 26.6.1932 (personal communication, 1966).
The Bank Line ships normally arrived in the GEIC from other territories in the Pacific, and the direct links with Australia were extremely tenuous from then on. Most of the general cargoes from Australia to the GEIC came via Fiji, mainly on Burns Philp based Fiji vessels, or were transhipped through Ocean Island after being discharged there by vessels of the British Phosphate Commission. This latter transhipment arrangement was to prove expensive in later years and a burden on the interinsular ships of this extremely dispersed territory, for they were required to make regular voyages to Ocean Island in order to collect the cargoes and thus they neglected their main functions of servicing outer island communities (see Chapter 7).

**Structural Competition**

Under the physical conditions of navigation in the archipelagoes a company which introduced a power-driven vessel achieved immediate trading advantages. Chatfield recalls... 'once let a steamer take up the Copra Trade, it is goodbye to all but a few old established hands in the sailing trade' (1959, p. 19, unpub.). The problems for the small trading companies were firstly most power-driven vessels proved expensive to obtain and operate, secondly their machinery and engines were extremely difficult to maintain in the islands, thirdly they had to have a regular supply of coal or oil.

Burns Philp operated seven vessels in Tongan waters between 1915 and 1929 and five of these were engined. There were two other engined craft plus the German auxiliary schooner 'Elfrida', but the remaining vessels
of the interinsular fleet were under sail only (Tonga, Certificates of Registry, 1915-1929).

In the Gilbert Islands Burns Philp entered the trade with a power driven ship. When On Chong's interinsular schooner 'George Noble' was wrecked soon after the arrival of their competitor they replaced it by the SS 'St. George'. But they continued using their sailing vessel 'Alexa' as the Sydney to Butaritari supply ship carrying coal and trade goods inwards and copra outwards. The Germans also had auxiliary schooners (Osborne, 1905, p. 1) and they chartered a sailing vessel to transport coal from New Zealand to Jaluit and copra outwards from there and from Butaritari (Interstate Commission, 1917, pp. 58-59). It was probably these competitive conditions which caused Captain Allan, the last of the overseas captain-owners, of the Samoa Trading Company to use the old SS 'Dawn' for delivering cargoes around the Ellice Islands and the brigantine 'Jeanette' for his Sydney to Funafuti supply ship (Heyen, personal com.).

In the structural type of competition immediate replacement was of importance, for a competing ship would quickly appear following a marine disaster, and these were all too common in the islands. When the SS 'Dawn' was condemned in 1924 the owner did not, or could not, replace the ship immediately. Instead he took the rash step of working the Ellice Islands schedules with the 'Jeanette' under sail. It missed stays and ran on a reef at Nanomanga, and Burns Philp then took over the Ellice trade from the defunct company (Heyen, personal com.).

1Heyen was mate of the 'Jeanette' in 1923.
Direct forms of competition

The struggle for island trade among the resident traders became more intensive as their numbers increased. At the turn of the century Basil Thomson wrote of the 'inextinguishable hate' between the rival traders of Vava'u in Tonga (1894, p. 264-265). The trader Osborne remarked in 1905 that there was great bitterness among the nine traders at Abaiang in the Gilberts as they competed for an annual yield of 350 tons of copra (1905, p. 6, unpub.).

There seems little doubt that under company bondage, mounting debts, and intensive competition, the lot of many of the small European traders was no longer a prosperous one. The process of elimination must have proceeded rapidly under these circumstances. When Mahaffy visited the Ellice Islands for the British government in 1909 he reported that only two European beachcombers were on these islands, whereas in his previous visit in 1896 there were white traders upon every island ...'and some of them making a fair living at the business' (Cd 4992, 1910, p. 7, 9). By 1922 there were only three traders on Abaiang (Stewart, 1922) and in 1932 they were reduced to two (PIYB, 1932). Elsewhere in the Gilbert Islands this process seems also to have been taking place, for there was a total of 54 traders listed in 1922 (Stewart, 1922) and only about 30 left by 1929 (Maude, H. E., 1950, p. 9).

These resident European traders were antagonistic towards the missionaries who traded sub rosa with their
flock,¹ and on some of the Gilbert Islands they complained about returning labourers from the phosphates workings who brought goods, instead of wages, back to their home island (Osborne, 1905, p. 15, unpub.). The spleen of the European resident trader was, however, frequently reserved for his Chinese, and later Japanese, competitors.

In the Gilbert Islands the Chinese were mainly agents of On Chong & Co. According to Chatfield many of them were New South Wales country storekeepers who had failed to pay their accounts to On Chong and were sent to the Gilberts to make good the loss (Chatfield, 1959, p. 95, unpub.). Whatever their origins the Chinese were willing to operate for low returns as they bartered store goods for green nuts and made their own copra. Mahaffy wrote that the Chinese introduced by On Chong had extremely frugal habits of life which 'enabled them to compete successfully against the impoverished class of white men who are trading with the natives' (Cd 4992, 1910, p. 5). Osborne describes the store of one of these Chinese traders (Yong Fat at Beru) as ...'microscopic, and his stock of goods might be carried in a sack' (1905, p. 20, unpub.). During 1922 there were 23 Chinese traders on the Gilbert and Ellice Islands (Stewart, 1922), or a little under half the trader population.

Many of the Chinese in the Fiji Islands had arrived there as traders. The Fiji Times of October 15, 1873

¹The LMS was known locally as the 'London Missionary and Trading Society' (Chatfield, personal com.).
ran an advertisement for Houng Lee & Co., merchants of Levuka, and Layard in a letter to the Registrar of Shipping in Sydney during May, 1874 mentioned several Chinese from Melbourne and Sydney who had purchased small craft (CLB, 1874, p. 63, F). These were evidently Chinese who had made money in the Australian goldfields. By 1917 there was hardly a place in Fiji without a Chinese storekeeper (Fiji Council Debates, 1917, p. 123).

It was not only the European traders on the outer islands who complained about the Chinese, the town merchants did likewise. 'The white traders' said Hedstrom, 'should be able to live according to the standards of a white man's life. The reason why the Chinaman can beat the European is because he can keep his place open from daylight till midnight, then he can sleep under the counter so that the stray customer can wake him up'. To this the merchant Marks added that Chinese competition was not fair competition (Fiji Council Debates, 1917, pp. 125-127).

The truth of the matter was that the European traders were now being displaced by the Chinese precisely because the Chinese adopted many of the methods of the old resident traders. It was particularly during the years following the first world war and again from 1933 to 1935 (when the Suva price for copra fell to about £4 per ton) that the Chinese gained many of the remote areas of Fiji as a result of their methods of trade. The European companies maintained their stores in the townships, and some old European traders survived in the Lau Islands and Yasawas Islands, where they were literally at
home. A European traveller in Lau during 1934 wrote of the depressed conditions of the copra trade; and at Lomaloma he observed that of the three stores, European, Indian, and Chinese, the European one was nearly always deserted... 'the natives preferred to deal with the Chinese where they could get better credit and, being on a more equal footing, they could hang about the counter and haggle over the prices' ... (Shepherd, C. Scoresby, 1934).

The Chinese had added advantages in their trading systems. Many of the store managers were bound to the company by kinship ties, not merely a cash nexus. They received little or no wages throughout the depression years, but by extending credit and using the available and cheap sailing cutters the stores continued to function (On Wah Chang & Co. and K. W. March & Co., person. com.).

Several of the European and part-European planters were at this time existing in dire economic conditions. It was hardly worthwhile making copra, and it was officially reported that they were living 'on bare necessities' and their estates were 'mortgaged to the hilt'; while the storekeepers in the estate areas were also impoverished. For the Fijian population the depression was less acute as the making of copra was still only a means of obtaining a few consumer goods over and above their subsistence crops and local handicrafts. As a result the village Fijians were at this time producing half the total copra of Fiji (CP 3/1935, p. 1). By the time the copra industry entered its second depression in 1938 many estates had become neglected and the planters
were unable to obtain or pay for labour (McPaul, 1963, p. 6). Then two-thirds of the output of copra was from Fijian sources, a large percentage being made by storekeepers who bought the green nuts from the people. The Chinese, who were by now the principal island storekeepers, had clearly come into their own and in some of the islands and remote areas of Vanua Levu they too began to press their monopoly advantages on the people.

In the port town of Suva, and in the sugar ports and areas adjacent to them, Indian traders were operating. A Gujerati merchant class had also emerged in the towns especially since the first world war (Mayer, 1963, p. 35) and they were financing stores in country districts and on some islands. There also appeared Indian peddlers, or packmen, who travelled the archipelago as passengers on small vessels. This increased participation and competition in trade by the Indian community was further emphasised by European planters who made contracts with these traders to set up stores for the sale of goods to their estate labourers (Dalton, 1919, p. 20).

Neither the Chinese nor Indian traders were to become substantial owners of local vessels. Between 1906 and

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1 Remote trade stores in areas of difficult transport have an obvious 'built-in' monopoly. The Chinese merchants will readily admit to high 'mark-ups', but they point out that due to unpaid debts (often from credit to local chiefs), 'leakage' to the relatives of storemen's wives, and the cheating that went on in badly lit stores at night, net returns were not so high.

2 Indians very soon became the largest proprietors of road transport in Fiji (CP 24/1934).
1911 the division by ownership of local trading craft in Fiji was clearly between the Europeans and Fijians but from 1912 onwards the Fijians began to lose ground (Table 5.1). The Chinese craft listed in Table 5.1 were owned mainly by Joong Hing Loong (but other Chinese had no doubt shares in these) and, like the Indian and Japanese owned vessels, they were crewed by Fijians and often commanded by part-European masters (Joong Hing Loong & Co., personal com.).

Many of the part-European participants in the trade of the islands were descendents of European planters whose estates were subdivided amongst large families. They owned and operated a few trade stores, especially in parts of Vanua Levu, and were also in the employment of the merchant companies as managers, supercargoes and ships' officers. The most important entrepreneurial role of the part-European section was, however, increasingly in the ownership of small shipping companies. Their vessels became the main freight-earning sector of the interinsular fleet and carried cargoes for all companies and traders; while the vessels of the merchant companies remained basically adjuncts to their wholesaling and retailing businesses.

1The general reduction in the number of vessels operating at this time may have been due to the poor copra output following several hurricanes in March, 1910 and January, 1912.
### TABLE 5.1: OWNERSHIP OF THE FIJI INTERINSULAR FLEET BY RACE

1906-1927

<table>
<thead>
<tr>
<th>Year</th>
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<th>Fijian</th>
<th>Chinese</th>
<th>Part-European</th>
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<th>Japanese</th>
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<td>No. Tons</td>
<td>No. Tons</td>
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<td>1915</td>
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<td>1918</td>
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<td>1927</td>
<td>74</td>
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<td>40</td>
<td>523</td>
<td>10</td>
<td>107</td>
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While few Chinese traders reached the Tongan archipelago the Japanese began to do so after the first world war. The Japanese company Nanyo Boyeki Kaisha also took over German interests in the Marshall Islands and ran a supply ship from there to Butaritari. They had a small trading station at Butaritari and their inter-island schooner 'Karumakini' worked the villages of the two northern islands from there (Heyen, 1964, unpub. memo). Japanese companies were active in the interinsular trade of Fiji in 1915 (see Table 5.1) and in Tonga by 1935 the Japanese firm of Banno Bros. had trading representatives in all the chief villages (PIM, Feb., 1935, p. 152).

From about 1918 onwards the Australian merchant companies were challenged in the fields of island retailing, copra buying, and transportation. They, however, never lost control of the most profitable estate districts as spheres of trading influence. They retained also the bulk of importing, exporting and wholesaling in their own hands. Dalton in the report of 1919 (p. 20) warned the merchants in Fiji that the 'Eastern element' in the Fiji trade might some day offer competition in these latter fields. Also, in the 1930s the Pacific Islands Monthly wrote of the 'steady, silent, ceaseless advance' of Japanese interests in the Pacific (Jan., 1935, p. 3). But, in actual fact, the Australian companies had few effective large-scale competitors.

1 There was an early prejudice against the Chinese, this found expression in the Tongan Constitution of 1875 which, in article three, states... 'it shall not be lawful for anyone to make any contracts with any Chinese to come and work for him, least the disease of leprosy be brought to Tonga'...
The Final Commercial Fusions

During the depression years of the 1930s Burns Philp and Morris Hedstrom were joined by W. R. Carpenter in the trade of Fiji. Carpenter purchased the combine of Brown and Joske (PIM, March, 1936, p. 7) and commenced buying out smaller commercial firms in Fiji.

It was in this period that On Chong in the Gilbert Islands felt the effects of the trade depressions - in particular the disadvantages of operating a steamship instead of a sailing vessel when carrying low value cargoes. There are obviously no extra costs in running a sailing vessel after the crew is hired; a steam vessel on the other hand incurs additional 'voyage costs' in the way of fuel - and coal bunkers were expensive in the Gilberts. The Chinese in Fiji could operate economical sailing cutters but On Chong, in competition with Burns Philp, in the Gilbert Islands had to run a 500 ton steam vessel. The Log Abstract of this ship, SS 'Macquarie', indicates some of the difficulties. In 1931, for example, it lay at Butaritari from March 9 to June 9 and one entry reads:

Coal supply finished, also crew's rations, two hands sent to cut wood for fuel for galley, and three hands fishing five days each week.

During a voyage in July, 1933 the log reads 'Acute shortage of coal. Rigged boat sails. Burnt 3 bags of copra, 2 hatches, etc.' And from July to January, 1935 the ship was laid-up in Butaritari - again without coal and stores. In that year On Chong sold out to W. R. Carpenter. The trade of the GEIC was from then on divided between W. R. Carpenter and Burns Philp (PIM, Jan., 1935, p. 7).
In order to see the working out of the processes of amalgamation started by the Anglo-Australasian firms in 1880 more recent concentrations of commercial power are noted here. During 1955/6 W. R. Carpenter took over Morris Hedstrom, Ltd. with their interests in Fiji, Tonga and Samoa (PIYB, 1963, p. 97). In this way they finally brought together the enterprises of Marks, Hedstrom, and Brown and Joske and with these the remnants of the old Godeffroy empire which Hedstrom had taken over from Marks; Burns Philp and W. R. Carpenter, Holdings, Ltd., became thereby the main shipping and trading powers in the archipelagoes of Fiji and Tonga. Their withdrawal from the Gilbert Islands will be discussed elsewhere in this section. All that remains to be noted here is that W. R. Carpenter is a substantial shareholder in Burns Philp, and Burns Philp has, likewise, considerable capital invested in the combine of W. R. Carpenter (Sun Herald, Nov. 8, 1946, p. 70

Conclusion

At various times since about 1900 there has been a withdrawal of some European traders from the outer islands. This appears to have taken place first in the Ellice as a consequence of the disintegration of the Godeffroy empire and the many subsequent changes in the proprietorship of trading stations. Mainly, however, it was the years of poor copra prices and intensive competition from Asiatic traders (as well as some competition from islanders, see Chapter 6) that brought about a retreat of the Europeans.

The policies of the major companies appear also to have changed in this era. They found it cheaper to charter vessels for the Gilbert and Ellice trade. They
also found it more advantageous to obtain control of wholesaling at the port towns and leave some of the outer islands to very small Asiatic-owned trade stores, which of course frequently purchased from them. This was infinitely cheaper than attempting to supervise a network of company trading stations and pay several European resident traders in the 20th century. At the same time the commercial interests in the port town of Suva were no doubt partly behind the successful resistance to the scheduling of more ports of entry, especially on Vanua Levu, which might have weakened their dominant position.

The period of competition between the resident traders, and of the merging and co-operation between the town merchants, clearly contributed to a change in the composition of the outer island trading population; but also to the division of the archipelagoes between the merchant company vessels and those of the small 'freight earners'. In Fiji the companies with large vessels, stores in the townships, and the patronage of many estates and planters, held the most prosperous trading areas. The majority of small scattered islands and the less developed coastlines of the larger areas were left to schooners and cutters. This is how things appear to have stood in the late 1930s; but the following chapter will show that already there were other changes coming about, and that some of the events which were to contribute to more far reaching changes in the trading systems of the outer islands had already made their appearance long before the 1930s.
Chapter 6

ISLANDERS AS ENTREPRENEURS IN COMMERCE AND SHIPPING

Early Indigenous Traders

Trade within and between the archipelagoes had been going on for centuries before the introduction of European commerce. In the Fiji Islands there were communities of trading specialists, or middlemen. Wilkes in 1841 described how these 'Levukians' had no fixed place of residence but lived principally at Lakeba, Somosomo and Vuna - or occasionally at some other island. Most of the exchange trade was in their hands (1852 ed. Vol 2 p. 34).

The Tongans appear to have been even more active as they traded to Fiji for canoes, sails, and scarlet feathers, and exchanged the latter in Samoa for fine mats (Williams, 1870, pp. 82-83). The low coral islands of the Gilbert and Ellice offered less opportunities for island specialisations, and therefore for interinsular trade, but voyages did take place. Wilkes, for example, was told that a king not long dead 'had voyaged to every island in the group on a pleasure trip to see the world' (1844, Vol. 5, p. 82) and H. E. Maude (1963, p. 51) has described an elaborate kinship network in these islands which ensured the support of travellers.

There is little doubt that islanders were skilled in the organisation and methods of trade and they could press bargaining advantages. Mariner observed that the Fijians raised the price of sandalwood to the Tongan traders, and would accept as payment only European axes and chisels of the best quality (Martin, 1818, p. 332). Erskine also noted that the Fijians had 'a decided turn for commerce'
(1853, p. 269). It is unlikely therefore that the early European trading system would have radically altered the direction or extent of native trade. The people would have understood it as a simple and direct exchange. Within the Fiji archipelago, at least, indigenous exchange were strongly based on kinship and complementary needs. Foodstuffs from the high islands were exchanged for native manufactured articles from the low islands (Thomson, 1940, p. 211) and the ties and obligations between the various people governed many directions of flow (see Chapter 13).

In spite of experience in interinsular and inter-archipelago trade Pacific islanders seldom survived as traders or shipowners when they entered the European commercial system. Cash transactions and later the complications of book-keeping were certainly contributory factors to the failure of many of their enterprises. These however were not insuperable difficulties. The most frequent cause of failure was the inability to resist the demands of relatives for credit. In effect, a trading system based on cash tended to become inextricably intermixed with another on kinship. So strong was this dualism in native commercial trading ventures that even the wife of a resident European trader 'was compelled by her needy relatives to rob her husband for their benefit' (Burnett, 1910, p. 98).

Some of the kings and chiefs were, of course, in a position where they could become traders without the interference of social obligations. Baiteke of Abemama was relatively successful in a non-competitive situation. There were also early attempts at Pacific trade using sailing vessels purchased from the Europeans.
Kamehameha I of Hawaii and Pomare II of Tahiti not only traded among the islands but financed voyages to China, America and Sydney. The powerful chiefs in Tonga and of Makin and Abemama in the Gilberts also owned schooners, and, according to Stevenson, King Timbinok had vessels which ...'sailed as far as the colonies. He has trafficked direct in his own bottoms with New Zealand' (1909, p. 275). But these and other forms of commercial trading on the part of chiefs were certainly unprofitable by commercial standards. Nevertheless the desire to own schooners, cutters, and later ocean-going cargo vessels, was to remain an extremely compulsive one in island society.

It is now proposed to look at some of the main attempt by island people to take part in the commercial trading systems other than as mere producers and consumers. The motives behind these attempts were, it is suggested, very similar to those which later brought support for the village co-operative societies. Similarly the reasons for the failure of many early enterprises also threatened the co-operatives; and the fate of local shipping societies in particular must spell a warning for co-operatives, in their early years, to steer clear of certain sectors of the island shipping industry. Viewed in this way the adoption of co-operatives by villagers may be seen as the culmination of a series of attempts by them to enter commercial trade in opposition to the alien traders.

Boycotts and Protests against the Alien Traders

While the people of the islands were often prevented by their social relationships from successfully adopting entrepreneurial roles they did occasionally combine to win
concessions from the traders. As early as 1864 the coconut oil machinery in Fiji was frequently brought to a standstill when the Fijians refused to supply the coconuts (CLB, 1864, p. 324, F). In Tonga the Godefroy Company was boycotted during 1872 when they reduced the price paid for copra. The people took their produce to the mission instead (Greenwood… 1872, T) and although it eventually reached the Godefroy company through that channel the move did demonstrate a will against commercial exploitation. Similarly in the Gilberts a Scots trader complained in 1883 that the Kau-Puli (old men) of Arorae had raised the price of copra to him and had forbidden any sales at a lower price (Lee Hunt, 1883, Letter 2, p. 13); and in 1901 there were reports of the destruction of property on the island of Onotoa due to disputes over trade prices¹ (Maude, H. E., 1965, p. 14, unpub.).

These sporadic protests may have improved the bargaining position of the island people vis-a-vis the traders but they in no way threatened to usurp the role of the aliens in commercial trade.

By the early twentieth century it appears to have been less easy for traders to dispose of poor quality goods and

¹Prices at Beru in the southern Gilberts were in 1904; soap 1/- per small bar, kerosene 1/- per wine bottle full (24 bottles to each ton - and a ton cost 3/6 to 3/9 in Sydney). The missionary William Goward reported these prices to Arundel of the 'Pacific Islands Company' - and said that as the people were 'wretchedly poor' could he not do something about these traders or send his vessels around the islands to trade in competition (Arundel Papers, 1904).
raw spirits in the islands\(^1\). The missionaries had some impact on this latter activity, and the experience of working on Ocean Island brought islanders into contact with a wider range of consumer goods (Cd 4992, Mahaffy, 1910, p. 14, G). In any event the people do appear to have become more aware of the prices they should receive for their copra, and more discerning in their purchases of goods. The District Officer in the Ellice Islands reported in 1913, for example, that the previous year had been poor for the trade of these islands for only the ships of Burns Philp & Co. had called. They came from the Gilberts and their trade rooms were badly stocked. On the other hand the SS 'Dawn' always arrived with a well stocked trade room and a better class of goods. He anticipated that if it returned in 1913 larger exports of copra could, as a result, be expected. He went on to state that... 'all islands have certainly begun to appreciate the better class of goods, even if they have to pay more for them' (Ellice Islands, no. 9 of 1913, paras. 12-14).

\(^1\)Very poor quality cargo was foisted on the islanders as a condition of supplying guns and liquor (Cmd. 4356, 1908, para 16, G). As far as the alcohol went it was some sort of raw methylated spirits, or wood alcohol, known as 'Chain Lightning'. Sterndale describes this (p. 41) and also points out 'It must be remembered that the Kingsmill Islanders (Gilbertese), barbarous as they were before they made the acquaintance of Europeans, lived in a condition of respectability as compared with the state in which we now find them...it would be difficult to conceive a more perfect pandemonium than most of the Kingsmill Isles present. The inhabitants are incessantly drunk and perpetually fighting...' (1874, p. 20).
Many of the resident traders would have been hard put to meet some of the demands for higher copra prices and better quality goods, even if they had wished to. The Butaritari Copra trader Ernest Osborne puts their case in his semi-fictional book set in the 1900s:

The natives are awakening to a desire for a higher price for their produce, which they know is scandalously undervalued. Traders may be willing enough to increase the copra price, but without a corresponding increase in the price paid them by the leading companies, they cannot afford to. And the companies secure in their financial power and trading monopolies refuse to agree to an increase (1924, p. 64).

There were nevertheless some signs that the islanders were beginning to see the value of unified as distinct from individual trading in order to force price concessions.

Already by 1897 it had become fashionable among the Tongan community of the Lau Islands to form the Kabani (company) 'under various fanciful names' (Report... 1896, p. 56, F) although these do not appear to have been used as a commercial trading media at that time. On the other hand Mahaffy reported of the Ellice Islands in 1909 'The natives are endeavouring to start small companies for the purpose of trading' (Cd 4992, para. 47, G).

It was during the period when island people were becoming increasingly conscious of the profits of the trading companies, and many of the small traders were disgruntled, that the first of what may be termed the 'proto-co-operatives' appeared. These seem frequently to have been started by Europeans and part-Europeans. What the motives of the organisers were are of little relevance here, the important thing was the immediate response of the island people to schemes designed to
circumvent the trading companies. The movements were attempts at co-operatives, at the same time they represented further protests against the traders. They bore a slight resemblance to the formal co-operative movement which will be discussed later.

'Proto-Co-operatives'

During 1909 there appeared in Tonga an association with the characteristically Tongan title of Tonga Ma Tonga Kautaha (Association of Tonga for the Tongans). It was organised in Nuku'alofa by A. D. Cameron. At the first meeting Cameron described the association as 'a trading company somewhat on co-operative lines for the sole benefit of the Tongans'. He also said that 'copra was to be sent to the white men's land and the people were to receive the correct value of their produce'. Cameron went on to claim that 'the Europeans had grown fat upon the profits made out of them [the Tongans] for several years' (TGG, No. 8, 1911).

The TMTK was immediately acclaimed, and spread to Ha'apai and Vava'u during 1909. About 4,000 people joined the movement in the first year (Fiji Times 5th Oct. 1910, p. 1, col. 7) and some sort of oath or resolution appears to have been proposed which proclaimed that 'no one shall deal with Messrs. Burns Philp & Co. Ltd., up to their death' (TGG, No. 25, 1910). The association purchased the schooner 'Makamaile' for interinsular trading, opened stores at the main centres, appointed agents at Auckland and Sydney, and commenced importing and exporting. Their success was, however, short lived (TGG, No. 8, 1911).

During 1910 allegations of fraud were made against
the promoters of the TMTK and the government of Tonga dissolved the Association and seized its premises and books. There were difficulties in bringing the President and Treasurer before a jury, for, by then, the Law Reports state 'It would be practically a case of the bulk of the tax payers against the Government' (TLR, 1908-1959, p. 6).

The accounts of the TMTK appear to have been badly kept and there were large debts and some cash unaccounted for. Cameron gave three reasons for the failure; a lack of time to accumulate sufficient capital, too few people educated enough to help him, and the activities of the papalagis (Europeans) working against the Association (TGG, 1911, Documents G and L). The TMTK was disbanded and despite its initial popularity no further attempts were made in Tonga to organise co-operatives, as such, in opposition to the merchant companies.

Almost three years after the banning of the TMTK the government of Fiji received reports about a group of Fijians who were forming ...'a company on co-operative

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1 The circumstances leading to the banning of the TMTK were highly suspect. A former colonial official Mr. T.C.T. Potts accused the British representative in Tonga, Mr. Telford Campbell, of duplicity in the affair and went on to point out ...'It is stated that all this [Breaking the TMTK] was done at the instigation of a large European firm, and that directly the Kautaha was closed the price of imported goods rose again.' (Potts to Secy. of State, 1912, T). A. D. Cameron later sued Telford Campbell for damages in the court of the Western Pacific High Commission. However, the court held that as the Tongan government had authorised the closure of the TMTK they had no authority to question the legality of that action (Fiji Law Reports, 1875-1946, pp. 88-97).
lines, for the export of products and the import of goods' (Viti Co., 129/14). The first reports came from Lau and shortly afterwards from Kadavu and Colo East. The Viti Kabani, or Viti Company as it came to be called, had the support of some Europeans and part-Europeans but the leader of the movement soon emerged as Apolosi Nawai, a 36 year old Fijian commoner from the Western District. The Europeans played only a minor role in directing the company. This was an unfortunate beginning, in some respects, for neither Apolosi nor anyone around him appears to have the commercial skills necessary for the success of this venture.

The aims of the movement were laid out in a letter distributed to the Bulis (government chiefs) during April, 1914. In Fijian part of the circular stated:

A market is being established in Australia and one will be built in Suva to accommodate all our things for sale in accordance with what is mentioned above. The cause of the beginning of this thing is through the Europeans here in Fiji swindling us, the price of all our things are different, and the cost of things for us black men is different, as we have seen in years past until the present day. Their swindling us will never cease. This is why I am writing you my friends, the Chiefs of Fiji, to be good natured and stir yourselves with the spirit of confidence and let us help in helping this matter to be of use to your people, and to us in the sale of all our things... (Viti Co., 271/14).

By mid 1914 the Viti Company was well established in eastern Viti Levu and had scattered branches extending from the Lau Islands to the Yasawas, as well as at various places on Vanua Levu. There is little evidence of any real commercial successes. What appears to have been the
first shipment of company bananas were condemned by the produce inspectors during the loading of the 'Matua' and 'Tufua' about November, 1914. The Viti Company claimed that the Europeans had bribed the inspectors to condemn the fruit (Viti Co., 3902/14). This allegation contributed to a boycott by Fijian producers of the European banana buyers in the Rewa district during December, 1914; and bananas which could not be handled by the company were destroyed, 'although there were European buyers on the spot anxious to buy surplus bananas' (Viti Co., 257/14).

The influence of the Viti Company was quite substantial, particularly in the Rewa area. Apolosi called a meeting at Draubuta Village in eastern Viti Levu during January, 1915 and between 3000 and 4000 people attended. The meeting lasted three to four weeks and according to government officials disrupted local government and interfered with communal duties (Viti Co., 151/15). Amongst other things the assembly at Draubuta agreed that the company should have a store in every locality, their own provincial ship-building yards, their own police and church, and there should be no more dealings with Europeans (Viti Co., 1946/15).

From its inception there was an irrational element in the aims of the Viti Company. Apolosi claimed he was in touch with the King of England; his local leaders said the government approved of the company, that all Europeans were to be driven out of Fiji, and there was talk that the company was not started by human beings (Viti Co., 311/14). As it gained in numbers and spread among the villages, which were at different levels of economic sophistication and social evolution, the company became the vehicle for
political discontent and the fears of the people for their land; only the Viti company could protect the land again the 'capitalists' (Viti Co., 1935/15). Basically, however, it was a secular movement and the economic aim of by-passing the European middleman was never lost sight of. But, like the TMTK, it became bogged in a morass of debts, bad accounting, and commercial chaos. Apolosi was eventually arrested and deported to Rotuma.

The European 'Directors' of the Viti Company in Suva had remained ineffectual throughout; and they were obviously unaware of the extent to which the company had spread and the amount of support it had in the villages. They made a statement to the Governor, however, which, by implication, attributed some of the failings of the Viti Company to commercial rivalry:

The Directors cannot overlook the fact that in a new Company of this sort they have to meet the opposition of vested interests, which are very far reaching in Fiji, and the point should be remembered considering difficulties the Company may have to overcome... (Viti Co., 18 March, 1915).

And Alexander, who was chief police magistrate in Fiji about this time, has written in retrospect:

The new company was in difficulties from the beginning. It incurred the hostilities of the white planters and merchants, who strongly resented the appearance of a united body of native rivals in business. The Wesleyan Methodist Mission suffered a huge financial loss, when large numbers of natives transferred the contributions which they

1 Even when the formal co-operative movement was being organised in Fiji there was 'a definite aversion to giving or requesting receipts, thus implying an un-Fijian lack of trust' (Spate, CP/13, 1959, p. 56).
would ordinarily have given to the mission to the new company. To the government Apolosi was anathema (1927, p. 72).

With this type of opposition commercial survival was bound to be precarious even if the organisation had been well conducted.

The main characteristics of the proto-co-operatives so far discussed were: their immediate appeal to the people as a means of controlling their own commerce and thereby securing the profits of the European middlemen, and their rapid spread in the archipelagoes. Indeed, the Viti Company was clearly an extension westwards of the ideas of the TMTK. Under sympathetic guidance from the Tongan administration the TMTK might have achieved something better. In the case of the Viti Company had the more realistic aspirations of the movement been officially supported then the unrealisable objectives which they strove for, particularly during the period of commercial chaos, might have been averted; and at least local marketing co-operatives started.

In a region of dispersed islands archipelago wide marketing movements of unified control would be even more difficult to achieve in the face of Government and Company opposition. In the islands of the Gilbert and Ellice boycotts and protests appear to have been local affairs. There were also indigenous associations of people known as mronrons (round wheels) which were similar to the indigenous Tongan Kautaha\(^1\). These were

\(^1\)The Kautaha Ko Kaa'nga for example is an association of tapa makers in Tongan villages for the making of long sheets of native cloth, but it often retains the same women members throughout their lifetime.
ephemeral groups which were bound together for work or to achieve in some other way a social objective. They would buy goods from the traders and re-sell the goods to themselves at higher prices until sufficient funds were collected to meet a specific requirement, then the group would disband. The mronrons soon learned that they could get better prices from the traders if they sold and purchased in bulk.

During the 1930s an extension of the mronron appeared at Abaiang as the Tangitang Mronron (cry, or complaint, round wheel). This movement was a protest against the lower prices obtained for copra and the higher prices paid for trade goods at Abaiang compared with the centre at Tarawa. The Tangitang began buying copra, carrying it to Tarawa by canoe and cutter and returning with store goods for its members (Cooper, HRRL, 1963, unpub.). It spread to some of the central and northern islands and appears to have been organised by a part-European and former supercargo of the Burns Philp Company (Shutz, H., personal com.). This was an important development and more will be said about it and about the shipping side of the association. During the same period, another event took place in the attempts to improve the position of islanders in the marketing of their products.

The Co-operatives

During 1926 D. G. Kennedy, a European schoolmaster on

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1The first reference to these organisations in the Log Abstract of the SS 'Macaoarie' is on 27th January, 1933 at the island of Marakei.
Vaitupu Island in the Ellice group, established the first *fusi* (retail co-operative society). This was followed in 1931 by *boboti* (retail co-operative society) developments at Beru in the Gilbert Islands under H. E. Maude. By 1934 there were 34 societies in the Gilbert Group (Maude, 1950, p. 3) and in 1935 Heyen reported that a co-operative society was functioning smoothly on every island in the Ellice Group (PIM, June, 1935, p. 42).

These societies had to face the competition of the resident traders and supercargoes. However, unlike the associations which had appeared in Fiji and Tonga the early co-operatives in the Gilberts were carefully conceived and organised and their island officials obtained some training in simple accounting from the founders. The co-operatives were enthusiastically received, and by their successes won the approval of the government. H. E. Maude, the main force behind the co-operatives, has summarised some of the difficulties and successes of the movement:

The societies had no option but to buy from and sell to one another or the two European commercial companies who appear to have a price fixing arrangement which made them, in effect, a single monopoly. These firms treated the societies fairly, according to their lights, but they naturally tended to support their resident European and Chinese traders, many of whom had been in their employment for years, rather than these new purely native groups.

Fortunately, the commercial rivalry between the two companies was sufficient to prevent either of them boycotting the native societies entirely and so, by placing one firm against the other, the co-operatives were able to increase their own strength at the expense of the resident traders.
until, at the time of the outbreak of war with Japan, there was not one single European or Chinese trader left in either the Gilbert or Ellice Islands, other than a few salaried managers of the companies' main branches (1950, pp. 3-4).

The merchant shipping companies continued to carry out importing and exporting for the island co-operatives until the Japanese invasion of 1941. When the trade of these islands was revived in 1943 the importing and exporting was done under a government trade scheme (which later became the Colony Wholesale Society). The small village based boboti of limited membership could not be re-organised under the trade scheme which required a single agent in control of each island. Only in the Ellice, where the populations were small, could the fusi take on the role of an agency.

The Tangitang Union had survived the war and it became linked with the formal co-operative movement. It is considered that at this time ...'due to the work of the manager of the Union, a former employee of Burns Philp, the group had a centralised and efficient accounting system far superior to anything else in the co-operative movement in the Colony' (GEIC Co-op Report, 1956, p. 12). With war reparation payments to some islands, and under the guidance of the then Resident Commissioner H. E. Maude, a revival of the formal co-operatives commenced in 1947 (GEIC Co-op Report, 1943, p. 3).

The association of the Tangitang with the co-operative movement appears to have been an uneasy one. The Union (at Marakai, Abaiang, Tarawa, Maiana, Kuria, Aranuka and
Abemama) continued to import some of its cargoes directly from Fiji and Australia and so by-pass the Colony Wholesale Society which was supplying the co-operatives. This meant that societies involved in Tangitang were required to have large balances with the Union in order to provide for this importing side of the business (GEIC Co-op Report, 1956). The Tangitang suffered a financial loss with the wreck of the 'Arakarimoa' and again during the severe drought of 1956/57.

Finally, the Tangitang Union was liquidated in December, 1957. It had, said the Registrar of Co-operatives, proved too ambitious due to a lack of trained or trainable staff, and... 'For two years before this time and several months afterwards a great deal of the Co-operative Department's time and staff were devoted to unravelling the financial tangle into which these seven societies had entwined themselves' (GEIC Co-op Report, 1957, p. 2). There was nevertheless much bitterness over this liquidation, especially on Abaiang where the people felt that they still had financial credit with the Tangitang. With the characteristic independence of the Gilbertese however the small morons continued to expand in the group and some even attempted to import goods from Australia and Fiji (see Chapter 8).

The formal co-operative movement in Fiji was a post-second world war phenomenon. There had been a committee appointed in 1931 to 'report on the question of establishing co-operatives' and one or two attempts were made to
form marketing associations\(^1\); but it was not until 1948 that the co-operatives really began to function (Singh, 1962, pp. 116-261). They started in Viti Levu, but with the increase in world copra prices soon spread to the main copra producing islands of Lomaiviti and Lau. The Chinese storekeepers on the outer islands began to experience some slight competition from the new societies and groups. This was made more effective in 1951 when the Fijians were prohibited from selling whole nuts and green copra (the undried kernel of the coconut) to the traders (SPC, 1962, p. 25). The Chinese traders thereby lost the additional income which they formerly received from making copra\(^2\).

Many of the new co-operative societies in the Fiji Islands were producers' marketing organisations engaged in purchasing copra and shipping it to Suva. The trend, however, was towards attaching a consumer sector to the society. The running of a small store in conjunction with copra buying became a desideratum. It was also in some areas a necessary adjunct, for many societies were forced to import goods in order to obtain shipping.

\(^1\)During 1939 independent farmers in south-east Viti Levu began co-operatively marketing their fresh produce at a market house at Nausori (Parham, 1940, pp. 7-8).

\(^2\)As far back as 1910 island officials had asked that the selling of green nuts to traders be prohibited. The Buli at Vatulele said in the Provincial Council of that year that the Chinaman wanted two nuts for a box of matches and two for a leaf of tobacco, and the people stole nuts for this purpose, he wanted to tabu the selling of nuts (Western Prov. Council Report, 1910, p. 171).
otherwise the vessels would charge double freight rates on the copra (CP 14/1949). This trend towards store-keeping was in addition a conscious attempt on the part of some village societies to displace the established resident traders once and for all. It was now the turn of the Chinese traders to be ousted from the islands, and many societies went all out and achieved this 'in the first flush of enthusiasm' (CP 8/1958, p. 3). Several of the other traders began to withdraw when it was evident that their leases would not be renewed.

The creation of co-operatives did not solve the contradiction between island social relationships and the principles of commercial trade but it did provide an environment in which the methods of marketing, managerial skills and accountancy could be learned. The co-operatives in theory anyway, had a leadership which was not based on social status; and again theoretically, individual effort was rewarded through the bonus system. Many societies failed when bonuses were distributed between the idle and the industrious individuals, and the latter became discouraged. In other cases managers could not apply the rule of 'no credit' to relatives. There were also failures due to misappropriation of cash, but as Spate points out this was 'not so much a matter of conscious dishonesty as failure to discriminate between duty to the society and duty to kinship or customary demands: money was needed, money was to hand, and social or family pressure saw that it was used' (CP 13/1959, p. 56). There were nevertheless some remarkable successes in co-operative ventures, particularly those of the Rotuman societies which are described in Chapter 8.
As in Fiji the resident company traders in Tonga purchased green copra from the people and dried it themselves. The fresh meat of the nut was often carried in katos (leaf baskets) to the trade store and would probably remain there for some time before being put out to dry, and as a result it deteriorated. Clearly this was not making the best use of the main resource of Tonga. Equally uneconomic was the general procedure of the traders engaged in copra making:

The practice was for the trader to be paid a commission on the sale of general merchandise plus a commission on copra delivered to the main port and as more copra bought meant more sales gained, resulting in higher commissions received, the incentive was for quantity, and little thought was given to quality. It was apparent that so long as private enterprise controlled the buying of copra quality could not be improved (TCB, 1956).

In 1942 the government of Tonga took over the buying of copra from the traders with the aim of raising the standards of the product. The Tongan Copra Board (TCB) was set up for this purpose and it also began to provide the transport services. Stace has described this organisation as 'a type of compulsory co-operative undertaking' (1961, p. 7), but private traders have been left in control of wholesaling and retailing at the main centres for as yet the TCB has only entered into this field in a minor scale¹.

¹When the merchant companies closed their out-stations small Tongan village shops began to spread. The companies also withdrew their main stores from Niuafo'ou and Niuatopapu and on these islands it was necessary for the TCB to enter retailing.
The economic benefits of modern co-operatives for island communities are dealt with in a later chapter but it is worth noting here the comments of H. E. Maude in relation to the Gilbert and Ellice Island societies. First, the co-operatives eliminated the European and Chinese retail traders whose profits 'considerable in times of prosperity were largely sent out of the country'; Second, 'the profits of the commercial wholesale companies which operated in the Colony before the war now stay in the colony, to be used for the economic development of the country' (1950, pp. 9-10). Nowadays merchandise sales in the GEIC (excluding Ocean Island) reach $1,200,000 per annum and the fob value of copra exported is normally in the region of $800,000. The profits on this would have been regarded as reasonably substantial by any private company.

**Participation in Island Transportation**

Participation in any form of commerce was difficult in the social environment of the islands, but where Pacific Islanders would seem to have been best equipped for taking part in commercial trade was in the archipelago transport systems. They had the skills and knowledge necessary for interinsular voyages, and many communities already owned vessels which could have done the collecting and distributing tasks.

In the Gilbert Islands there had always been a shortage of wood for canoe building. The large canoes had been laboriously constructed from small pieces of local timber, and from a few redwoods carried from the American continent by the equatorial current. After 1900 timber
became more easily obtainable through Ocean Island using the money earned by labourers employed there (Cd 4992 Mahaffy, 1910, p. 4, G). This eventually worked a revolution in island canoe building and sea fishing (Goodenough, 1963, p. 168) but it came too late to be of use for interinsular transport. By the time imported timbers became relatively plentiful in the islan the irascible Telford Campbell, the then Resident Commissioner, had managed to obtain a check on natives who formerly travelled indiscriminately on what were nothing more than predatory voyages' (CO 225/61, G).

Mahaffy in his report of 1910 commended the ban on canoe voyages when he wrote:

Here the natives are restricted to their own islands and cannot venture to visit their neighbours because the equatorial current runs with irregularity but at times extraordinary strength, and since hundreds of lives have been lost in canoes which have drifted away and never seen again, the Government has wisely decreed that all inter-island voyages save in trading steamers are unlawful. (Cd. 4992, 1910, p. 5, G).

This was good for the shipping companies but it meant almost an end to ocean canoe building and the navigators lost their raison d'être. The ban on interinsular voyages was relaxed in the 1930s but by then it was too late for

1 Osborne described the canoes at Arorae in 1905 as 'made of small and very narrow pieces of wood. Sticks from the bush made the outrigger and their integral parts. Exotic wood is too expensive, and real good native wood seemed unavailable for canoe building. In the village I saw two double-ended boats native made of small pieces of wood sewn together' (1905, p. 30, unpub.).
any revival of local shipping on a large scale. This may have been fortunate in view of what occurred in Fiji when people turned to craft of European design (see below). In the Gilberts the Tangitang Union managed to obtain one or two European type vessels, and when the Union collapsed the people made great efforts to save the ships - the least profitable sector of the business - and they formed two new shipping societies called the Botaniboboti-Tangitang and the Winimeang-Tangitang whose final liquidation will be referred to later.

In the Fiji islands there were few checks on inter-insular voyaging, and between the 1890s and 1920s there was a period of great enthusiasm for the owning and operating of schooners and cutters. The Buli in the districts controlled the waga ni Tikina (boat of the district). These and the vessels owned by various mataqali (family landowning units) carried commercial and tax copra, made voyages between the islands, and were used for ostentatious displays of wealth. Not only was a large proportion of a community's cash resources

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1 One or two large 'Baurua' did survive (Grimble, 1924, pp. 101-139). The canoe shown in Plate 9 indicates the size and magnificent lines of these vessels. Plate 10 shows by contrast the largest canoe (56' long) in the Gilberts in June, 1964. This was being reconstructed on Aranuka Island where the people intended to use it for lagoon work and for voyages to Abemama and Kuria.

2 C. Percy Smith describes a similar mania in Samoa where 'like church building it has become the fashion of late years to possess these boats' (1919, unpub.) and in the Cook Islands schooners involved the Au (Councils) in debts and many costly litigations between 1890 and 1914.
laid out on these vessels but it was reported that:

Oppression is frequently felt and privations endured by communities in providing the price of too large a vessel or of too many vessels. The raising of such moneys necessitates the people's abstinences from the use of coconuts as food, and deprives them of the oil and clothes which under ordinary circumstances would be procured by the sale of copra. Growing food is often sold in order to raise money for this purpose. Much of this unnecessary expenditure is caused by the rivalry of tribes and chiefs as to the size of cutters (Report ...1896, p. 49, F).

The Kadavu Provincial Council requested in 1902 that some cutters of this province be granted a subsidy, from local taxes, in order to run a regular service to Suva. This was agreed to; however the District Commissioner had to point out that:

There is a large fleet of native-owned vessels in Kadavu and by the minutes of this Council it will be seen that the people propose expending some £700 more on new craft. I do not suppose that any of the vessels pay the owners, but that does not seem to trouble them so long as they have vessels to do as they like with - it is the one thing they willingly work and sacrifice for (Kadavu Prov. Council, 1902, p. 144).

A semblance of order seems to have been put into the cutter service between Suva and Kadavu in the following years, but the vessels could not earn freights for the Chinese storekeeper continued to hire 'some vessel the owners of which are in his debt' (Kadavu Prov. Council, 1914, p. 12).

The history of locally owned shipping in the Lau Islands repeats the pattern of Kadavu. Here Bowman commanded the trade until Henry Marks took over. The people were usually in debt to these merchants, and as a
result of their ownership of vessels fell even further into debt:

As a matter of fact no native vessel pays, all are a drag on the owners, even in Lau where freights are easily obtainable. The storekeeper rather favours the vessels being in debt as they can thereby commission their services. It is even alleged that in the hurricane months they lay up their own vessels for safety and employ native vessels at lower rates of freight than prevail ordinarily...The inference on this question is the natives are under the heel of the storekeeper through a pernicious credit system (Lau Prov. Council, 1906, pp. 147-8).

Far from being able to participate profitably in commercial trade the ownership of cutters, paradoxically, tied the people even more closely to the traders. Nor did these many vessels provide reliably inter-island contact. The Roko Tui Lau had 'several narrow escapes from ship wreck' and by 1914 he had 'lost his nerve for cutter travel' (Lau Prov. Council, 1914, p. 120). These craft were generally too small for comfort and safety and the Roko wanted a large vessel, but resources in the islands were dissipated on small craft, which were often crude imitations of European designs made by the matai (bush carpenters).

There should be few regrets for the passing of the majority of village-owned vessels in Fiji, in spite of the misgivings which the people may have felt when they no longer had command of their own transport and had to rely on commercial shipping¹. Time and again however in

¹The owners of island vessels may have gained something by reciprocal obligations in the native trading system. In Lau, in particular, people had to travel, and in the early years 'the system of borrowing food for other produce /and services/ was necessary' (Lau Prov. Council, 1901, Res. I).
the modern period an enthusiasm for a boat would sweep through a village, and no amount of counselling from officialdom would curb this. Even the co-operatives were not free from the burden, for launches and power-driven punts were purchased by societies and invariably they proved a steady drain on their resources:

Originally purchased to furnish transport for copra and store goods they have since become for all practical purposes the communal property of the related villages which keep them continually in use but seldom contribute adequately towards the expense of upkeep. Due to unskilled handling, the scarcity of trained mechanics and heavy depreciation (based in the case of engines on an estimated life of three years at most) the cost of maintenance is inordinately high and makes heavy inroads into profits (CP7/1960, para. 29).

The registrar of co-operatives in Fiji also reported in 1962 that one society bought a cutter for £Fl,250 ($2,750) but:

earnings of the vessel seldom got past the hands of the crew and there was generally insufficient interest among the members to engender any responsibility for its management or maintenance. Following the last breakdown it lay for several months neglected in the village, half full of water, before being brought to Suva for repairs, and by this time the damage was so extensive that the vessel was hardly worth repairing. (CP 23/1962)¹.

¹ The literal meanings of two Fijian proverbs have probably some significance: 'E dua na nomu waqa levu, E dua na nomu vusi levu', Lit: 'You have a large boat, you have a large cat (on your back): or, many dependents mean many worries; and 'Rekirekilaki waqa vou', Lit: 'Rejoicing over new boats': or, the habit of having enthusiasm for something new which is later neglected. (A. C. Reid, personal com.).
In other cases Fijian owned cutters would compete with the provincial vessels which were purchased from local taxes.

In Tonga interinsular trade in the 1880s was carried on by European trading vessels. Also by a few schooners which were owned by Tongan chiefs, and which, according to Jull (1883-84, p. 65, unpub.), were purchased by money collected around the villages; but Jull also reported Tongan double canoes still plying between the islands at this time (see Plate ). By the 1920s trading in Tonga was done mainly by cutters and schooners owned by the traders (NZPP, 1920, A-4T) and by small mission owned vessels.

When the traders lost control of copra buying, Tongan owned and mission cutters along with the government ketch became the main carriers; that is until the modern interinsular fleet owned by the government of Tonga was established between 1957 and 1963 (see Chapter 7).

The record of village and group owned vessels is not a good one in the commercial era. There is nevertheless little doubt that attitudes to the owning and use of sea-going craft have changed little since the mania of the 1900s. It is mainly the extremely high costs involved that tends to curb the purchasing of vessels at the present time. By way of illustrating this, and also of summarising the fate of the Tangitang shipping Unions, part of the proceedings of a meeting of the Union is summarised here from field notes made at the time.

The meeting was held in the Tuarabu village Maneaba (meeting house) Abaiang on 19th June, 1964, where the proposition was to be put that the Tangitang Shipping Union be liquidated. The Registrar of Co-operatives spoke:
...only the 'Aratoba' is left and she is unseaworthy, all her timbers are rotten, if the ship was allowed to go to sea it would be at great risk to the people on board. The society does not have the capital to get the repairs done, and it could not get a loan as the vessel is too old. My advice is to sell; you could not sell it as a ship but the parts would fetch about £800...

When the 'Aratoba' ceased operating the society had debts amounting to £2,000 which were the result of accumulated losses... The position is you are a shipping society without a ship that can sail. What do you want to do...?

One of the first replies to this question was 'get another ship'. No one knew where they could get one, how much it would cost, or where the money would come from. There followed a long frustrating discussion on the possibility of loans and of making a ship pay. The registrar won on facts - none of the ships had ever paid, all of them had cost the people money (Field notes, June, 1964).

It was finally agreed to liquidate the shipping society and put whatever money could be salvaged into expanded stock in the co-operative stores. One could easily see the regrets however, at not being able to get on the island radio and whistle up the 'Aratoba' from a distant part of the group when tobacco stocks were low on the island - without having to think too much about profit and loss.

**Conclusion**

There is at least one simple conclusion to be made from this description of the direct participation by island people in commercial trade. That is, in the transitional stage between a subsistence and cash economy many social traditions of the old are carried into new commercial ventures which have a different economic basis.
They often render the new ventures unworkable. This was true of the proto-co-operatives, and only resolute and guided leadership saved many of the early formal co-operatives from a similar fate. It was certainly true of island-owned vessels; and again, only Government-managed craft in Tonga and the GEIC have so far allowed an archipelago wide commercial transport system to function independently of the merchant shipping companies (see Chapter 7).

The dilemma of the islanders is thus clear enough. As they became more dependent on trade goods they became even more anxious to obtain control of the channels of trade. This had the effect of contributing to a reduction in the number of Asiatic and company traders on the outer islands. But the small village stores which replaced the traders were often overduplicated, poorly stocked and financially unstable. The port towns had meanwhile grown and many people began making more frequent trips to these centres. But by this time they had lost their own means of transport, shipping costs had increased and so had fares and freight. As a result economic isolation began to characterise some island regions.

It must nevertheless be concluded that island people were making many and often great efforts to win for themselves a larger share in the profits being derived from island resources and extracted from their labour. They tried it with boycotts, early attempts at co-operatives, running their own vessels, and by displacing the local foreign traders. The formal co-operative movement represents, at village level at least, a further modern development of these aspirations, and it appears to be the
future vehicle for commercial progress in the islands. In this respect the advice given by the Financial Advisor to the Council of Chiefs in Fiji shortly after the introduction of co-operatives in 1948 could almost have come directly from the Viti Company:

Until recently you have been content to live the life of a producer without the means of marketing your produce. You have been largely content to produce enough to provide you with the material commodities you have required. You have bartered your produce for store goods and cash and watched others prosper on the results of your labour. (CP 29/1950).
PART THREE

PRESENT DAY TRADE
Chapter 7

REGIONAL SHIPPING

Some Shipping Economics

At a time when the economic aspirations of island people were causing many of them to turn to the port towns the economic distance of the islands from the towns increased. At this stage in the modern space-economy of the archipelagoes shipping economics become a critical factor and call for detailed examination.

Ship operating can be either labour intensive or capital intensive. The choice of factor combinations is in each case determined by the economy of the region. For example, in a territory where labour is plentiful and cheap and capital is scarce small shipowners would, ideally, seek to employ large crews on vessels fitted with sails and, or, low-speed economically operated engines; these vessels would be provided with only a minimum of mechanical equipment for cargo handling and ship work. If survey requirements were lax and essential repairs could be done cheaply then the ships would most likely be pensioned-off craft from areas with more exacting marine standards, or craft cheaply constructed of local materials. If crew costs were high and surveys scrupulous then owners would tend to look more towards newer, faster, and more mechanised vessels.

Another important economic relationship in shipping exists between 'fixed' overheads (i.e. expenditure which remains fixed even if the vessel does not sail), 'fixed voyage costs' (i.e. expenditure which remains the same during a voyage irrespective of cargo and passengers
carried) and 'variable costs' (i.e., costs which vary according to cargo and passengers carried). In the case of island shipping the fixed overheads would include office costs, survey expenses, and depreciation on the vessels. Fixed voyage costs would cover such items as insurance, crew costs, and fuel. The only significant variable costs would be cargo handling charges and the victualling of passengers. In other words even if a vessel is running without freight or passengers it has to meet all costs other than those involved in the employment of stevedores and the feeding of passengers, while repairs are so unpredictable (and can sometimes be avoided) as to bring them within the category of either fixed or variable costs. We can have the position therefore whereby about 70 per cent of the costs of running a ship are fixed. One implication of this is that it will always pay to carry some cargo and passengers at almost any rate rather than sail half-empty, and competition in these circumstances can be particularly severe.

The high fixed costs in shipping mean that the securing of good load factors (the relation of load carried to available space) is vital, for the load must first cover the 'fixed' costs and then realize a profit. There must also, by the same token, be rapid turn-around times for the number of cargo and passenger carrying voyages that a vessel can perform in a given time the more it is likely to earn. Any unusual characteristics of regional shipping which appear to extend the time of voyages should be considered as reducing the earning potential.
This outline will provide the main economic framework against which the operating conditions of the island shipping industry are discussed in an attempt to arrive at the main reasons for high freight rates and the unreliability of some services.

Owners and Operators

The two Australian merchant companies of W. R. Carpenter and Burns Philp own and operate the largest of the interinsular vessels sailing out of Suva. The smaller commercial craft are owned by part-Europeans, Indians, Fijians and Chinese. The Fijian people of Lau and Kadavu also own two Provincial vessels which are managed by an agency and trade between Suva and these Provinces. Table 7.1 shows ownership by race of all craft registered for the carriage of cargo and passengers in Fiji During February, 1965.

<table>
<thead>
<tr>
<th>Race of Owners</th>
<th>Number of Vessels</th>
<th>Net Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>European</td>
<td>7</td>
<td>889</td>
</tr>
<tr>
<td>Part-European</td>
<td>16</td>
<td>369</td>
</tr>
<tr>
<td>Indian</td>
<td>10</td>
<td>141</td>
</tr>
<tr>
<td>Fijian (individuals and groups)</td>
<td>6</td>
<td>163</td>
</tr>
<tr>
<td>Fijian (Provinces)</td>
<td>2</td>
<td>58</td>
</tr>
<tr>
<td>Chinese</td>
<td>4</td>
<td>36</td>
</tr>
</tbody>
</table>

45 1656

Source: Fiji Marine Board Records.

Many of the small vessels registered as trading in the Fiji archipelago are so spasmodic in their activities
that they make little contribution to commercial trade. When these are deducted the 'effective' interinsular fleet is left. This has been listed in Appendix One along with the details of the effective fleets of Tonga and the GEIC. It should be noted in the case of Fiji that a little over half the tonnage included in the effective fleet belongs to the Australian merchant companies.

Fleet structure

Appendix Two shows the structure of the interinsular fleets by tonnage and age groupings. The total net tonnage of all vessels carrying cargo and passengers in Fiji amounted to 2304 tons in 1965, in Tonga it was 1904 tons and in the GEIC it equalled 740 tons for that year. In summary form the main features of these fleets are presented in Table 7.2.

<table>
<thead>
<tr>
<th>Territory</th>
<th>Percentage of fleet in ship units above 150 tons net.</th>
<th>Percentage of fleet built within the last ten years.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>26</td>
<td>16</td>
</tr>
<tr>
<td>GEIC</td>
<td>56</td>
<td>79</td>
</tr>
<tr>
<td>Tonga</td>
<td>84</td>
<td>95</td>
</tr>
</tbody>
</table>

Sources: Marine Board Records, Fiji; Tonga Shipping Agency; Marine Department, Tarawa, GEIC.

The fleets of Tonga and the GEIC are made up of fewer but more modern and larger vessels than those which trade
in Fiji waters. The large Tongan ships operate to places outside that archipelago, whereas those of the GEIC only do this, in recent times, for the purpose of proceeding to Fiji for annual refit. The ships of Fiji seldom nowadays go beyond the archipelago waters other than to Rotuma and very occasionally for the carriage of petroleum in drums to Tarawa.

In addition to the registered commercial vessels in Fiji there are many small craft engaged in the carriage of goods and passengers. Their owners claim that as neither freight nor passage money is charged the vessels are not trading. On the other hand it is well known that several of them carry cargoes belonging to other people; and indeed government servants utilize this form of transport at fixed charges. There are about fifty of these small craft based in the Yasawa Islands and at least half of them are plying between Lautoka and the Yasawas. They belong mainly to individual Fijians but a few are owned communally by some of the Yasawa villages. A similar trade is conducted between the island of Beqa and Suva, and also on a smaller scale between the Rewa delta area and Suva (sometimes through Wainibokasi), and along the Macuata coast to Labasa.

The ownership of large commercial vessels in Tonga is entirely in the hands of Government agencies. There are also about thirty small launches and cutters in this archipelago some of which are used by the missions and

1Up until November, 1963, the ships of the GEIC operated a service to the Phoenix Islands. Since then the people of the Phoenix have been evacuated to the Solomon Islands.
by individual Tongans for the transporting of cargo and passengers between the islands\(^1\). Similarly in the GEIC the main fleet is owned by the Colony Wholesale Society (CWS) and the government. In addition during 1965 the auxiliary ketch 'Kiakia' was owned by a part-European entrepreneur and was operating out of Tarawa for the purpose of private trading. Otherwise only lagoon craft were privately owned, plus a few canoes which were trading regularly between Abaiang and Tarawa and occasionally between Butaritari and Makin.

The small cutters in the Fiji fleet are, with very few exceptions, in poor condition. Many of them leak in rough weather, the passenger and crew accommodation is cramped, and the master's quarters on several vessels consists merely of a bunk behind the wheel. Life-saving equipment comprises life-jackets, the boats and punts used for working cargo, and occasionally a life-raft. On the majority of unregistered cutters there is no life-saving equipment whatsoever.

Some of the larger steel-hulled vessels in Fiji have also been known to leak in a rough sea, but generally they are better provided with pumps and life-saving

\(^1\)The 12-ton cutter 'Taufale' makes occasional trips to New Zealand. The vessel is owned by a part-Tongan and manned by a Tongan crew who usually find temporary, but lucrative, work during their sojourn of from one to three months in New Zealand. See Olaf Ruhén's 'Minerva Reef' for an account of an ill-fated voyage of a small vessel engaged on this 'trade'.
equipment. The tendency in this section of the industry has, since 1965, been to dispose of the oldest and less seaworthy of these vessels and purchase other 'second-hand' ships from Holland. The newer vessels in Tonga and the GEIC are, by contrast, of a high standard.

Manning of interinsular vessels

People in the islands are accustomed to travelling on boats and canoes but this does not necessarily make them good seamen on board commercial vessels. In Fiji the merchant companies hire their seamen at Suva and these men generally constitute a stable supply of professionals who are promoted on board the vessels as vacancies arise.

An assessment of the condition and economic life of the fleet as it was in 1964-5 is contained in an official report to the Fiji Government entitled 'Report on the Interinsular Shipping and Trade of Fiji, 1965' by A. D. Couper, Australian National University (see Appendix Three).

The only misgiving anyone could have about these new ships is in the case of Tonga a partial disregard for elementary safety measures on voyages between the islands. The landing craft 'Kao' for example is built entirely of steel, its only area of reserve buoyancy is the engine room which has swing doors facing aft and therefore vulnerable to 'pooping a sea'. In 1964 there were no life-rafts or boats carried - and there was nothing in the superstructure of the 'Kao' that could float. In the event of the engine room flooding and the forward part shipping water this vessel would sink. Even in fine weather should the 'Kao' become damaged on a reef many of the 60 or so people carried would probably drown, for the simple reason there is no alternative to swimming around until another vessel arrives on the scene. In all other respects Tonga's shipping, like that of the GEIC, observes the British Merchant Shipping Act with regard to safety.
and according to their ability. The small shipowners on the other hand often employ a regular turnover of relatives, or on various trips they hire inexperienced men and boys at Suva wharf.

In Tonga and in the GEIC it is less easy for someone without experience to obtain a position on board a vessel above the minor capacity of ship's boy or trainee. Here the supply of seamen is almost entirely in the hands of Government agencies other than for a few privately owned craft.

Wages vary widely in Fiji, on large craft from 60 cents to $2.80 per day for seamen and from $3 to $4 for officers. On small craft only the master has any formal qualifications and the supercargo has specialised trading experience, they are paid rates which may compare with those for officers on the larger vessels. On the other hand in spite of the apparently moderate per capita wages crew costs tend to be high in Fiji largely as a result of the numbers employed per vessel.

In total there would be about 500 seamen employed in Fiji at any one time, in the GEIC about 100 and in Tonga 90. The 'foreign-going' captains of the larger vessels operating in Tonga and the GEIC are expatriates – although in the GEIC one local man has obtained a foreign-going master's certificate and some others have a master's certificate issued by the Western Pacific High Commission authorities. This latter qualification does not reach the standards of a foreign-going certificate but it is far superior to any of the grades issued at Suva. Seamen's wages in the GEIC and Tonga are, apart from the highly paid expatriates, a little less than those paid on the
bigger vessels of the Fiji interinsular fleet.

**Infrastructure facilitating Interinsular Trade**

Arrangements provided for the berthing of local vessels comprise a 580 foot wharf at Suva, an old wharf and a 400 foot section of a new jetty at Lautoka, and wharfs at Levuka. Outside Viti Levu there is a wharf at Labasa and at Savusavu. Elsewhere in Fiji only a few small jetties are provided for the use of ships' workboats\(^1\) (Fig. 7.1). In Tonga there are wharfs at Neiafu in Vava'u, Pangai in Ha'apai, and at Nuku'alofa. Not only is space available at the main wharf at Nuku'alofa for the large Tongan vessels but Faua Harbour, which was constructed during the second world war by the Americans, is used by the landing craft 'Kao' and by small cutters, and Touliki Harbour, partly constructed by the Americans, has been extended as an oil terminal. Of the trading places in the GEIC only the centre at Betio has berthing facilities, but entry is at present restricted to vessels drawing less than ten feet of water and consequently most of the local and overseas shipping have to work cargo to and from barges at an anchorage in the lagoon about one mile.

\(^1\)Commenting on the Fiji Development Plan for 1965-70 Legislative Council member Mr. D. C. Aidney said that money had been overspent on ports and harbours but there were still no improved facilities in the outer islands and it was those facilities they must provide if their economic plan was not to come to a halt. *(Fiji Times, 4 December, 1965, p. 4).*
Sources: Fiji Government and Shipping Companies.
from the wharf area\(^1\).

Roads connect with the main wharfs at all these places, and in the GEIC there are coral gravel roads around most of the reef islands and atoll islets. In addition many of the lagoon islets have now been joined by causeways which provide inter-islet road contact at all states of the tide\(^2\). In Tonga the Produce Board and Copra Board own lorries for collecting and distributing to and from the wharfs. The boboti in the Gilbert Islands, and some of the fusi in the Ellice, also own vehicles which are used for the carriage of copra and stores - as well as for a number of unofficial social purposes.

By comparison the problem of linking the coastal villages and estates on the high islands of Fiji is made difficult by steep slopes, high rainfall, deep gullies and an indented coast line. Fig. 7.1 shows existing highways and main roads in Fiji, and Table 7.3 provides an additional regional break-down by road standards. Both show the emphasis which have been laid on Viti Levu in terms of roads and wharfs.

\(^1\)During late 1964 a suction dredger arrived at Betio for the purpose of deepening the fairway (CIN 44/64). Overseas ships will, however, continue to use the anchorage in the lagoon.

\(^2\)The construction of the sixth and last causeway linking all the islets around Tarawa lagoon commenced in September, 1965 (CIN 39/65) but the causeway link between Betio and Bairiki remains, at present, dependent on low tide.
TABLE 7.3: ROAD STANDARDS IN FIJI - 1965

<table>
<thead>
<tr>
<th>Standards</th>
<th>Roads in Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main roads</td>
<td>453</td>
</tr>
<tr>
<td>Secondary roads</td>
<td>102</td>
</tr>
<tr>
<td>Country roads</td>
<td>253</td>
</tr>
<tr>
<td>Residential roads</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>821</td>
</tr>
</tbody>
</table>

1 This does not include private estates such as Mago and Naitauba.

Sources: Central Planning Office, Suva, Field Survey.

The approaches to the main ports of Fiji have adequate navigational facilities and Fig. 7.1 shows that lights are also available along the principal shipping routes leading to Suva and Lautoka. The outer islands generally, and the inshore channels of most areas, are devoid of lights. There are day marks along some coastlines that can be recognised by local seamen. Similarly, in Tonga and the GEIC the overseas ports exhibit lights, but the outer islands are regions of darkness unless village people burn beach fires or show lanterns when a ships' lights are seen.

Finally, in the context of supporting facilities for the shipping industry, some reference must be made to
building and repair yards. Only small boat building facilities exist in Tonga and the GEIC, and likewise only minor engine repairs can be carried out on the large vessels employed in these territories. Consequently, for hull repairs, annual overhauls and surveys, ships from Tonga and the GEIC must proceed to Fiji, or even to Australia. This is a major disability which these islands have laboured under since the introduction of the steel-hulled power-driven vessel; but it is alleviated by employing good quality shipping and high standard officers.

At Suva the firm of Whippy builds and repairs wooden cutters, and so also do smaller yards and the government Public Works Department. In addition there are several marine engineering firms (one of the largest, Millers, is part of the Carpenter group) and the Public Works Department that also undertake the slipping and overhaul of commercial vessels of up to a thousand tons (CP 26/1964). Fiji has some obvious advantages for the maintenance of an interinsular fleet, but, as will be shown later, these are not always reflected in shipping economics.

Methods of Operating

The functions of the interinsular fleets are considered in detail in the other parts of this section but very briefly they will be outlined here. The main tasks of the ships are the carriage of general cargo outwards from the port towns, the carriage of copra inwards, and the transport of passengers in both directions. The size of the commercial fleet is geared to the average
annual production of copra. On most voyages under normal trading conditions vessels are light on cargo during the outward run since sufficient space must be provided for the much greater inward volume of copra. There are two exceptions. In Tonga the banana trade from Ha'apai to Nuku'alofa operates independently of copra transportation, and in Fiji the supply of shipping to Labasa is governed by the general cargo requirements of that region.

The interinsular vessels also, particularly in Fiji, provide transportation for people moving between villages along the island coastlines. In Tonga, special voyages are made by the large ships for the carriage of school children to and from Nuku'alofa on three occasions during the year. These and other social tasks of marine transport have become essential to the life of many islands.

The merchant companies in Fiji operate to areas where large quantities of copra can be obtained and where they have retail stores or company estates. The vessels of the small shipowners and those of the Provinces trade to Lau, Lomaiviti, Kadavu and parts of Vanua Levu. Fig. 7.2 shows the spheres of influence of the various operators and the zones of overlapping activities. In the case of Rotuma the merchant companies nowadays operate an infrequent service for the trade of that island has fallen to the ships of Tonga (see below).

The practice in Fiji is for the vessels to work from place to place around an island coastline as they unload small quantities of general cargo and empty copra sacks.
Fig. 7.2

Source: Suva Harbour Office Movement Book.
During 1964, interinsular vessels called at approximately 300 of the 340 coastal settlements in the regions outside Viti Levu (see Fig. 12.2). Frequently vessels made two calls at the one place. The first with the general cargo and empty sacks and the second to load copra. This practice eliminated the problem of the overcarriage of goods - which were often haphazardly stowed - and allowed villagers to bag their copra into the sacks which were then picked-up on the second call.

Discharging of cargo is normally done from an anchorage into the ship's workboats. On the smaller craft there is no mechanical means of handling the cargo. Crew members locate the consignments in the holds, hoist them to seamen on deck and they pass the bags, drums, and cases to others who are manning the workboats. The boats are rowed, or towed by launch, across the reef flat as far as possible, and the cargo is then carried by the crew to the recognised delivery zone above high water mark (at low water about one quarter to one half mile of carriage is often involved). It is checked by the ship's supercargo who also sees that there is sufficient cash or copra available to pay for it. The shipowner is supplying shipping, stevedoring, lighterage, towage and delivery to the consignee on the beach and he is normally fully responsible for the goods until they are landed above high water mark.

As a result of the reef encumbered and unlit nature of the island coastlines navigation between the many trading places is restricted to daylight hours. Even during the day wide fringing reefs, and shallow waters behind the barrier reefs, mean that a vessel must often
proceed well out from the coast as it moves between nearby villages. This, and the general practices of the Fiji trade, mean that voyages are often quite protracted for only small quantities of cargo.

In the archipelago of Tonga methods of operating are somewhat different from those of Fiji. Normally there are stationed in each of the three divisions of the Kingdom a 20 ton launch which acts as a feeder to the focal port. These launches, along with small cutters, concentrate village copra and fresh produce at the centres. This is then loaded directly on to overseas vessels; or in the case of bananas from Ha'apai collected by the landing barge 'Kao' which connects with overseas ships at Nuku'alofa. General cargo is delivered by the 'Kao' to Ha'apai, and by the larger vessels of the Tongan fleet to Vava'u and the islands of Niutoputapu and Niuafou. The ships of the USS Co., also deliver cargo to Vava'u on their way to Samoa.

The shipping of the GEIC is, like that of Tonga, under a unified control. Unlike Tonga, however, the rational utilisation of shipping resources is hindered by an exceptionally wide dispersion of islands and the concentration of overseas trade at a single centre. The small annual production of copra, even in favourable periods, and the need to make necessary but uneconomical medical and other runs from Tarawa adds to these difficulties.

The methods of working the Gilbert and Ellice island trading places differ on two accounts from the practice in Fiji. In the first place there are many more 'outside
anchorages' in the GEIC and loaded workboats must cross dangerous surf as they enter and leave reef passes. The seamen are remarkably skilled at this, and on entering reef studded lagoons at night the boat quarter-masters can also pick their way between coral heads with the aid of powerful searchlights. These skills greatly facilitate the working of the islands. The second contrast with Fiji lies in the fewer places at which the GEIC interinsular vessels are required to call nowadays. In this connection it is necessary to expand the general description of the Fiji trade with some comparative details, for the number of stops that a vessel makes in a voyage, and the degree to which it co-ordinates its activities with those of other transport media has an important bearing on the economics of the island shipping industries.

It has already been stated that many of the roads in the low coral islands link the villages and focus on ports or central loading places. In the GEIC the co-operatives are encouraged to transport their produce to these central points. They are paid a bonus of £1.50 per ton for so doing, but should the trading vessel have to send its workboats to villages for the cargo then this money is credited to the ship as additional freight. With the trend towards bigger vessels this system has become even more necessary as ships cannot manoeuvre extensively in the lagoons and workboats would consequently be involved in lagoon trips of several hours for a few tons of copra. During 1962, about 62 per cent of all copra in the GEIC was loaded at central trading places (Co-operative Records Tarawa).
On the main island of Viti Levu in Fiji coastal shipping has largely been superseded by road transport except for the carriage of cement and milled sugar. Most of the internal hinterland activities of this island centres by road (and sugar railway to a small degree) on the port of Suva and Lautoka and to this extent road and sea transport are integrated.

At Savusavu on Vanua Levu there is also a wharf at which the biggest interinsular vessel can berth. The wharf is connected by coastal road for a distance of 36 miles eastwards and 14 miles northwards along the coast of Buca Bay (see Fig. 7.1). About 5,000 tons of copra are handled across the wharf annually and this is drawn from a hinterland 23 miles to the eastwards along the road, and from around and as far westwards as 22 miles across Savusavu Bay. Occasionally copra is trucked from greater distances eastwards to Savusavu by estate vehicles which are calling there for stores. Copra from west of Savusavu is carried by small launches to the wharf. Along the Buca Bay section of the Hibiscus Highway to the northeast of Savusavu there is also a little movement of copra. Trading stores and a few big estates are licensed buyers and will purchase Fijian copra up to a distance of ten miles from their property. Estates frequently provide the trucks for this purpose and copra is shipped from about nine estate loading places. By contrast with the Savusavu district the good road which runs the length of Taveuni Island (on the leeward and northern side) is only used to a very limited extent for the transport of copra. Generally vessels call off at least 16 of the estates landing
places along the 30 miles of Taveuni coast and unload stores and load copra.

The 30 or so coastal and river settlements between Nabouwalu and Labasa in western and northern Vanua Levu are also in places paralleled by a road. This again is used to bring very small quantities of copra to trade stores for sale but the bulk of the copra is collected by ship and, as elsewhere, cargo is delivered along the coast from place to place.

The conclusion is, even where there are roads in Fiji they are not, outside of Viti Levu, used to any great extent for the delivery of copra to a place of loading, and small feeder coastal craft are not normally utilized for this purpose either. Hinterland developments are therefore limited. Only at Savusavu is there a clearly defined copra hinterland (Fig. 7.2). This has emerged as a result of two factors, first copra can be shipped at $2.20 per ton less from Savusavu than from any other place on Vanua Levu, second the township of Savusavu contains a relatively large number of well stocked and competing retail stores. These factors act as inducements to people in the adjoining areas; equally, it should be noted, in an eastwards direction along the road and westwards around the bay without a road. Savusavu, like Levuka, Lautoka, Vava'u and Pangai, is a regional market centre to which people bring their copra and fresh produce for sale.

Some rather variable hinterlands do appear around Chinese and Indian trade stores (see Chapter 8). These traders usually buy copra, or barter store goods, at prices $20 to $24 below the Suva price. On the other
hand as most trading vessels will, except in very remote areas, pay cash or supply goods at a little below the Suva price less freight and handling charges the villagers nowadays prefer to ship their copra directly off the beach. However, as spot cash and goods are often urgently required many people still rely on the resident traders, and with the thinning-out of these individuals in recent years villagers must now travel with small quantities of copra beyond their villages to distant trade stores during periods between ships.

**Time Spent on Voyages**

One effect of the number of trading places and methods of work is to increase time spent on voyages, and in shipping 'time' is synonymous with 'costs'. How long a vessel takes to perform a simple transport task may be judged from the fact that a large ship in Fiji using three workboats and two motor boats took four days to unload 60 tons of general cargo and load 170 tons of copra around Natewa Bay; and a small cutter spent four days on the 20 mile coast of Koro Island discharging 10 tons of general cargo and loading less than 30 tons of copra.

In order to establish approximately what proportion of ship's time was actually taken-up by waiting for tides and daylight and moving between nearby villages and estates an exercise was carried out on the movement records of several vessels in Fiji. It was first theoretically assumed that a vessel called at one place only on each island, or at two or three places along a coastline of 50 to 70 miles. Steaming time was
calculated at the average speed for each particular vessel and cargo handling was also estimated at a rate corresponding with the ship types. The results were then compared with the actual voyages, this comparison confirmed observations made during trips on board various craft — that is about half of the voyage time was taken-up waiting off islands and moving between villages.

Some of the results of the voyage/time analysis are tabulated in Appendix Four. It should be pointed out that there were two exceptions to these results. In one case a vessel of large tonnage was running directly between Suva and Lautoka, in another case a merchant vessel showed a remarkable degree of efficiency, under the circumstances, by covering many trading places in a short time. This was achieved by the use of several workboats and launches, a large experienced crew, efficient officers, and a certain amount of risk-taking during night navigation.

One effect of protracted voyage times, in addition to reduced earnings, should also be noted; this is the inability to carry safely fresh produce loaded at villages and this has been particularly damaging for the island banana trade. Similarly, the fact that vessels call at each village must necessarily mean that in some areas the craft are kept small, and hence there is a difficulty in shipping island livestock (see also Chapter 9).

Load Factors

It will be noted from Appendix Four an assumption was made that vessels were obtaining a 75 per cent load.
This is in fact rather a high load factor and a reduction to a more realistic figure would increase the proportion of the voyages devoted to 'non-productive' activities. However, the point now to be considered is the loss of earnings due directly to low load to capacity ratios.

The fact that vessels unload and load at so many places and tend to make two calls at the one place means, in itself, that shipping space is not being adequately utilized. Cargo is not normally received to fill a space left by the unloaded consignment and the haulage of empty space around the coast is therefore cumulative. In addition there is usually excess space on outward voyages with general cargo; and, mainly as a result of competition in some areas, during inward voyages ships are seldom fully loaded unless there are copra peaks. A calculation made to determine some typical inward load factors is summarized by Table 7.4. In particular the areas of Labasa, Natewa Bay, Lomaiviti (Gau and Koro Is.) and Western Lau should be noted as places from which the load to capacity ratio is light.

In the archipelago of Tonga the same form of analysis cannot be done for here many overseas cargoes are being delivered directly to regional ports and redistributed by launches and small craft. On the other hand the powered landing barge 'Kao' operates under conditions similar to those in Fiji. It receives no effective competition however, carries fuller loads, and frequently tows a loaded barge which can be left at intermediate ports to be unloaded and loaded while the 'Kao' works some other areas. This is a more efficient arrangement, and a more efficient vessel inasmuch as it
**TABLE 7.4: LOAD FACTORS ON INWARD CARGOES FOR SUVA THROUGHOUT JULY AND AUGUST 1964 (EXCLUDING CARGOES FROM LEVUKA AND ROTUMA)**

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Calls made by Vessels</th>
<th>Actual Loads (tons)</th>
<th>Possible Loads (tons)</th>
<th>Load Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savusavu and Taveuni</td>
<td>11</td>
<td>1249</td>
<td>1665</td>
<td>75</td>
</tr>
<tr>
<td>Bua</td>
<td>17</td>
<td>760</td>
<td>1225</td>
<td>59</td>
</tr>
<tr>
<td>Macuata</td>
<td>6</td>
<td>655</td>
<td>1238</td>
<td>52</td>
</tr>
<tr>
<td>Labasa</td>
<td>12</td>
<td>119</td>
<td>170</td>
<td>70</td>
</tr>
<tr>
<td>Natewa Bay</td>
<td>10</td>
<td>170</td>
<td>294</td>
<td>58</td>
</tr>
<tr>
<td>Wianunu Bay</td>
<td>21</td>
<td>172</td>
<td>301</td>
<td>57</td>
</tr>
<tr>
<td>Gau Island</td>
<td>9</td>
<td>552</td>
<td>797</td>
<td>70</td>
</tr>
<tr>
<td>Northern Lau</td>
<td>9</td>
<td>472</td>
<td>638</td>
<td>70</td>
</tr>
<tr>
<td>Central Lau</td>
<td>3</td>
<td>124</td>
<td>159</td>
<td>77</td>
</tr>
<tr>
<td>Southern Lau (inc. Ono i Lau)</td>
<td>17</td>
<td>273</td>
<td>425</td>
<td>64</td>
</tr>
<tr>
<td>Western Lau</td>
<td>36</td>
<td>460</td>
<td>1085</td>
<td>42</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>151</strong></td>
<td><strong>506</strong></td>
<td><strong>7997</strong></td>
<td><strong>62</strong></td>
</tr>
</tbody>
</table>

Sources: Copra Weigh Bridge Returns, Suva. Inward and Outward Books, Harbour Office, Suva.

can lie close in on the reef flat and the cargo is worked at almost any state of the tide.

Time on voyages in the Gilbert Islands has been reduced by adopting central trading places. However, in this region distance is a more important factor and newer faster vessels than are employed in Fiji have been introduced to minimise this. But there is no real
economic solution within the framework of interinsular transport to the problem of small islands which produce (and demand) very little cargo and lie at such distance from a single port of overseas export. There may be a solution in the wider context of Pacific trade and this will be discussed in a later section. At present only subsidies and a manipulation of freight rates allow place distant from the port town in the GEIC to receive a shipping service.

Marine Casualties

Damages to vessels and cargo, total losses, and loss of life are common occurrences in island shipping. Not all the details are available relating to the frequency and cause of marine accidents, but Fig. 7.3 shows the distribution and occurrences in Fiji, and Table 7.5 summarises some of the main causes of these which were the subject of marine inquiries at Suva between 1956 and 1964.

Such cases are very relevant to any discussion of shipping economics and they are also interesting for light which they show on some of the more subtle aspects of the industry. For instance, moving along a dangerous unlit coast during the hours of darkness is a practice common to the ships of both large and small shipowners, and three of the vessels which stranded as a result of this during the period under review belonged to the merchant companies. The incidence of stranding due to the captain falling asleep or as a result of employing an incompetent officer were also shared equally between the small freight earning and merchant company vessels.
Fig. 7.3
Source: Records of the Fiji Marine Board.
There is some evidence to suggest that captains who moved their vessels in dangerous waters at night did so under pressure from owners to save time; and on at least two occasions it has been recorded by the Marine Board that captains did so at the request of influential passengers who wished to reach their destinations quickly. In cases where the masters have fallen asleep, or handed over the watch to an incompetent seaman, they have pleaded in their defence pressure of work. For example, one captain stated after the loss of his vessel on a reef in the Koro Sea:

1This is not a new occurrence. The Marine Board Report of 1910 states 'Several instances came before the Board of Native Masters losing their vessels through being influenced by their owners to proceed on the voyage during bad weather, or to proceed in dangerous waters against their better judgement'. (F.R.G. 1911, p. 438).
I would like to point out that when working on the boat...we have not been given the chance of a break for at least 14 hours in ports in a month. We have been working more or less like slaves (Fiji Marine Board Records, 11 May 1963).

This captain also made the point that his crew was young and inexperienced - a point borne out for Fiji generally by the Suva harbourmaster before the 'Safety at Sea Commission' during April 1964. Captain James said:

Many of the young boys who go to sea sailed merely for 'the trip' and had no idea what a compass looked like. It was often said that a helmsman steered merely by a mark pointed out to him on a compass (Submission 162).

Some captains are admittedly careless, a few drink too much and for too long while on shore¹, but in many cases accidents would appear to have their root cause in a lack of alternative watch-keepers who could be trusted to relieve the captains during a voyage. As a final example of this two cases are cited. First a small vessel which was sailing from Kadavu to Suva with bananas when it ran across a reef. The visibility was poor and the captain who was 73 years of age was at the top of the mast looking for the reefs when the vessel struck. At the enquiry it was found the old man could not see well enough to read a chart placed in front of him (Marine Board Records, May 1962). Second, a large company vessel was proceeding from Suva to Savusavu when it went on a

¹Vessels have sailed with the master and engineer drunk. It was stated at the Safety at Sea Commission that the harbourmaster had never held anyone under these circumstances as it was too dangerous to do so (Submission 149).
reef; here it is sufficient to quote the statement of the Marine Board:

We, the members of the Fiji Marine Board, are appalled to discover that the largest vessel in the Fiji Inter Insular trade, when underway at night in main shipping routes, in poor visibility and proceeding at an unknown full speed, has an uncertificated ship's clerk as officer of the watch (9 October, 1964).

Usually more serious in terms of loss of life is the capsizing and foundering of local vessels. This is related to the poor condition of the ships and to overloading of cargo and passengers. Once again it has been common to both the shipping fleets of the small owners and the merchant companies. Three cases taken from Marine Board Records may serve to illustrate the factors operating. First the case of the 'Vasu' a 298 ton merchant company vessel. This vessel sank some days after leaving Suva on 10 June 1956. At the enquiry three points were made:

a) The company shipping manager knew that the ship was leaking and did nothing about it nor did he intend to

b) There had never been adequate surveys, and repairs had merely consisted of patching to allow the vessel to sail on her next voyage without delay.

c) The master thought the ship would sink at any time, and when the time came there was nothing he nor anyone else could do about it. (Notes taken from Marine Board Records, September, 1956 and January, 1957).

Second the case of the 'Kadavulevu' an auxilliary schooner of 32 tons gross, built in 1920; at the time of its loss

1This case was also reported in Pacific Islands Monthly, January 1957, pp. 105-6.
the vessel belonged to a part-Chinese owner. The 'Kadavulevu' was on a voyage from Narai Island to Suva on the night of 29 March 1964 when it capsized and foundered near Nasalai Point. The vessel was licensed to carry 22 passengers and crew but on this voyage there were at least 90 people on board, plus cargo, and only two women and a boy were saved (see also Chapter 13):

The primary cause of the capsizing and foundering was the gross overloading with passengers which seriously affected the stability of the vessel through the fact that a large number were on the cabin top as well as in the main cabin and on the main deck, this condition rendered the vessel unseaworthy for this particular voyage from Nairai (Marine Board Records 20/21 April 1964).

Finally, the 'Fiji Princess' of 50 tons net which on 13 August 1964 began to founder in rough seas as it left the shelter of Suva harbour. Three witnesses, including the captain, said the vessel was overloaded with cargo and that this had been pointed out to the owner before sailing. The Marine Board found:

As there are no regulations on loading in Fiji, Fiji is not a signatory to the International Loadline Convention there were insufficient grounds for finding that the ship was overloaded... (PIM, Nov. 1964, p. 99).

Before commenting further on the causes of shipping casualties in Fiji the situations in the GEIC and Tonga are considered. On the whole the GEIC has been fortunate in recent years. In 1951 they lost two of their large vessels - the 'Nimanoa' which went aground on a reef off Funafuti and became a total wreck (PIM, February 1951, p. 27) and the 'Margaret' which was lost on a reef at
Nanumea during September. During February 1955 the 'Santa Teretia' was lost at Nikanau (PIM March 1955, p. 107) and in 1956 the 'Arakarimoa' drifted to the Solomon Islands (see Chapter 1); but since then there have been no serious casualties. Tonga has also been relatively free from shipping losses. The cutter 'Lupe' capsized and sank on the 20 November 1958 on a voyage to Namuka Island. The inquiry showed that there were 17 excess passengers but the master claimed that 'the owner insisted he carried extra' (TSA Records, 1958). During March 1960 the new Tongan tuna fishing vessel 'Teiko' was lost with all hands in a hurricane. It had almost no life-saving equipment and does not appear to have received sufficient warning of the approaching storm.

The frequency of shipping casualties is not surprising, particularly in Fiji, when account is taken of the marine environment, methods of working, condition of the ships, overworked captains and inexperienced crews. One of the most obvious contributory causes to capsizing and foundering is the overloading of vessels. In the first place ships purchased for the island trade are often made less stable by the heightening of superstructure, the erection of awnings, and the addition of water tanks (all to facilitate the carriage of extra passengers), and also by the carriage of workboats and punts on deck, the stowage of deck cargo, and the practice of sailing with derricks topped. When large numbers of deck passengers and luggage are put on board these small ships the effect can be to raise the centre of gravity to a dangerous degree, and thereby reduce the power of
the vessel to right itself even in a moderate swell\(^1\).

It is extremely difficult to control overloading if the owner and master intend to do it. The Suva authorities have attempted this but it was reported "...'nothing was gained because ship owners simply loaded their passengers beyond the checking area...'" (Safety at Sea Commission, Sub. 80); and on the inward voyage excess passengers were 'dropped off' at various points before arriving at the berth (Safety at Sea Commission, Sub. 649).

In the case of unregistered cutters there are no controls on numbers carried. Field sample surveys at Lautoka have frequent entries such as 'cutter...28 ft long 17 passengers and three crew on sailing; cutter...30 ft long 31 passengers on arrival; cutter...23 ft long 21 passengers on sailing'. Most of these craft were also heavily laden with cargo. There are remarkably few accidents in this area for the Yasawa operators generally 'pick their weather' and there has been no serious loss of life since 1944 when the 'Dalitiucama' a 24 ft cutter from Naviti island capsized and 15 of the 26 persons on board were drowned (Fiji Marine Board Records, 1944).

More will be said about the economic consequences of marine casualties but clearly this is a burden on the industry. Even minor groundings mean nowadays that the vessel must be surveyed, for it is no longer legal for a small ship owner to beach his boat and merely 'put in a plank' as he could at one time.

\(^1\)See Appendix Six for the situation in other Pacific territories.
Monopoly, Competition, and Freight Rates

Competition for interinsular cargoes has been eliminated in the GEIC, and it has been reduced in Tonga to a contest between Tongan shipping and those of the USS Co. for overseas cargoes trans-shipped from Fiji. These cargoes are re-distributed in the Tongan archipelago by the vessels that load them at Suva. This latter competition will be referred to again: as far as the bulk of internal trade is concerned it is carried out almost entirely by the government shipping monopoly. The situation in most parts of Fiji is quite different.

Since the amalgamation of commercial interests in Fiji during 1956 only two of the large merchant companies operate competing vessels. They compete on a non-freight rate basis; mainly by regularity of services to certain areas, and by retaining customers who have opened accounts with their Suva wholesale or retail departments.

By contrast the competition between the smaller companies in Fiji is far more intensive and it takes the form of cutting freight and passage rates. The small companies attempt to create favourable relationships with villages by carrying passengers and their luggage and produce along the island coastlines free of charge; and they frequently reduce cargo and passage charges on the Islands/Suva run.

The existence of the small shipping companies has, however, had a salutary effect on the freight charges of the large merchant companies, especially where the small operators have entered large company spheres of influence. One example of this will be cited from a few overt instances. During 1960/61 the merchant companies
simultaneously raised their freight rates from $8.80 to $9.85 per ton on the Suva-Vanua Levu trade. Some of the smaller companies continued to operate at the old rate and began attracting a greater proportion of the available cargo. After a few months the merchant companies were forced to combat this and they reduced their freight rates from $9.85 to $7.65 per ton. A truce was soon afterwards declared in this minor freight war and rates were once more stabilized at $8.80 per ton.

The above example is a fair indication that the companies engaged in interinsular shipping do not, as is frequently alleged, operate under conditions of oligopoly, but this is largely due to the existence of the small operators. On the other hand in the Rotuma trade, from which small shipowners were excluded by their inability to provide large enough vessels and foreign-going masters, the allegation was until recently perfectly valid.

The Fiji merchant companies had absolute control over the trade of Rotuma until 1957 - when the island co-operatives began to offer effective opposition (see Chapter 8). The freight rates on the Suva-Rotuma trade (400 miles) were $17.60 per ton plus $3.50 lighterage and some smaller charges (approximately the same as Suva-United Kingdom). The Rotuma Co-operatives increased their mercantile activities and also succeeded in chartering outside tonnage; first the old New Zealand owned vessel 'Kurimarau' and then the new Tongan owned ship 'Aoniu'. By 1964 freight charges by the 'Aoniu' were reduced to $5.70 plus $2.20 lighterage. The merchant companies, despite their lower earnings and fewer cargoes, were forced to reduce their total charges from $21 to $12
per ton, but the 'Aoniu' secured the bulk of non-company cargoes.

The increased charges which have been mentioned in connection with the Vanua Levu and Rotuma trades were made, according to shipping interests, in response to rising expenditure on maintenance, repairs, and crew costs. In view of the methods of work and all the difficulties which combine to increase the economic distance of the islands from the ports one would expect freight rates to be high, and they would tend to rise as the fleet aged. Fig. 7.1 shows that for Fiji even quite geographically short distance voyages incur high freight rates - but not to the same extent as the GEIC. Here charges on short-distance runs are based on a policy of the nearer islands subsidising the more geographically distant and thus equating economic distances. Table 7.6 compares freight rates per ton and per ton mile in the three territories.

**TABLE 7.6: FREIGHT CHARGES ON GENERAL CARGO - 1964**

<table>
<thead>
<tr>
<th>Distance nautical miles</th>
<th>FIJI Per ton</th>
<th>TONGA Per ton</th>
<th>GEIC Per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£/ton</td>
<td>£/ton</td>
<td>£/ton</td>
</tr>
<tr>
<td></td>
<td>cents</td>
<td>cents</td>
<td>cents</td>
</tr>
<tr>
<td>30</td>
<td>3.80</td>
<td>12.7</td>
<td>13</td>
</tr>
<tr>
<td>60</td>
<td>6.60</td>
<td>11.0</td>
<td>13</td>
</tr>
<tr>
<td>100</td>
<td>8.60</td>
<td>8.8</td>
<td>13</td>
</tr>
<tr>
<td>200</td>
<td>12.36</td>
<td>6.2</td>
<td>17</td>
</tr>
<tr>
<td>400</td>
<td>12.00*</td>
<td>3.0</td>
<td>17</td>
</tr>
<tr>
<td>600</td>
<td>-</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>800</td>
<td>-</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>900</td>
<td>-</td>
<td>-</td>
<td>17</td>
</tr>
</tbody>
</table>

*Rotuma trade.

Sources: Shipping companies and agencies.
Transhipment Costs

Finally in this outline of operating conditions a brief reference must be made to the overseas cargoes which Tongan and GEIC vessels must collect from distant or extra-territorial transhipment points. This work can often be costly and time consuming for shipping operators and it increases the landed prices of imported goods for consumers.

Suva is particularly well favoured by cross-Pacific shipping and about 15 per cent (by value) of the total cargoes landed at Suva during 1963 were re-exported. The distribution of some of these re-exports (and domestic exports) to other Pacific territories are shown by Table 7.7.

For Tonga the Suva transhipments add about $10 per ton to the landed price of goods at Nuku'alofa when they are delivered there by foreign ships. It was partly as a result of this that in 1959 the Tongan vessel 'Aoniu' entered the trade between Tonga, Fiji and Samoa and began to handle many of the transhipments for both Tonga and Samoa. The ship sailed from Suva and delivered cargoes to Nuku'alofa, Ha'apai, Vava'u, Niutoputapu, Niuafo'ou and Apia.

The 'Aoniu' earned profits from transhipments and some of the transport costs were lowered for Tonga (Suva-Tonga to $7.20 per ton). By 1962 it was reported:

As this vessel runs in direct competition with ships trading regularly between the Kingdom, Fiji and Samoa, she is constantly under pressure from overseas shipping interests. Freight rates have become very competitive and with rising costs it becomes increasingly difficult to operate the vessel at a profit (Report of the Premier...1962, p. 23, T).
**TABLE 7.7: RE-EXPORTS AND DOMESTIC EXPORTS FROM FIJI TO OTHER PACIFIC TERRITORIES, 1963 (IN $)**

<table>
<thead>
<tr>
<th>Total Imports</th>
<th>Total Re-Exports</th>
<th>Total Domestic Exports</th>
<th>Destinations In the Pacific</th>
<th>General Cargo Re-Exports</th>
<th>Domestic Exports</th>
<th>Petroleum Re-Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>$44,455,622</td>
<td>$6,105,324</td>
<td>$799,224</td>
<td>W. Samoa</td>
<td>$473,214</td>
<td>$403,806</td>
<td>$126,516</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tonga</td>
<td>$295,774</td>
<td>$112,450</td>
<td>$107,208</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amer. Samoa</td>
<td>$220,022</td>
<td>$55,870</td>
<td>$36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GEIC*</td>
<td>$104,954</td>
<td>$169,954</td>
<td>$48,884</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nuie Island</td>
<td>$31,354</td>
<td>$7,400</td>
<td>$12,832</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other Is. Territories</td>
<td>$200,050</td>
<td>$49,750</td>
<td>$29,946</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,325,368</strong></td>
<td><strong>799,230</strong></td>
<td><strong>325,422</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Does not include Phoenix and Line Islands or Ocean Island.

Source: CP 14/1964.
The following year the 'Aoniu' ceased operating to Western Samoa and the only transhipments it received at Suva were those specifically for the government of Tonga. Other cargoes were despatched from the United Kingdom and Australia by conference vessels on 'a through Bill of lading'. Under this arrangement transhipment could be done only by another conference ship - usually one belonging to the Union Steamship Company. As a result the transhipment trade in general cargo became over-tonnaged and added to the difficulties of making Tongan shipping pay by reducing their load factors.

A more stable venture in terms of cheapening transhipments from Fiji to Tonga was the introduction in 1960 of the 'Lomomaanaia'. This oil barge capable of carrying 75,000 gallons of petroleum began making eight trips per year to Suva towed by the Tongan tug and cargo vessels 'Hifofua'. As a result petroleum prices were lowered in Tonga and additional revenue was earned.

Finally, in a bid to, amongst other things, remove the burden of transhipment entirely a new wharf is being constructed at Nuku'alofa. It is hoped that many of the vessels from Europe which now by-pass Tonga will be induced to call and unload with more favourable despatch at the new installation. However, the trend in conference shipping is towards 'stream-lining' main services and reducing the number of ports of call even further. From the transhipment point of view there is therefore no guarantee of success for the new project - although it will certainly attract Pacific cruising liners and the tourist trade of Tonga will benefit.

The transhipment problems of the GEIC have dogged the
administration of that territory since the days when direct links with Australia were severed. Up until 1965 most of the general cargo from Australia and the United Kingdom was transshipped at Ocean Island. Handling and warehousing charges were expensive and there were frequent losses and breakages. Colony vessels normally made about 20 voyages in ballast per year to Ocean Island to take delivery of approximately 2,000 tons of cargo (CWS Records, Tarawa). This was carried to Tarawa at a subsidized freight rate of $10 per ton.

The transhipment tasks of the GEIC vessels meant that for at least twelve days out of every month a ship was withdrawn from the essential services to the islands, and the distant Ellice Islands in particular tended to be neglected. The burden would have been even greater had not the Bank Line ships, which came every four months from Suva to load copra at Tarawa, been able to carry about 1000 tons of cargo from that port annually.

Attempts have been made to solve the problem of transhipments in the GEIC. Since 1964 some of the United Kingdom cargoes have been delivered directly by the Rotterdam Lloyd/Nederland Line and the Australian cargoes (at $32 per ton) by the Norwegian Karlander Line. The latter charter proved unreliable and the German Columbus Company took over the Australian/Tarawa links en route for North American ports; but changes in the world shipping situation could easily alter the routing of these companies and isolate the GEIC once more.

There is also a transhipment problem in Fiji which affects people in the Labasa region. This is not a port of entry and consequently of the 20,000 tons of general
cargo carried from Suva to Labasa annually the greatest proportion is overseas transhipments which have been landed at Suva. Only the CSR Co. vessel 'Rona' discharges regular quantities of overseas cargoes at Labasa, but these are confined to CSR consignments. Freight rates from Suva to Labasa are $8.80 per ton so that any attempt to give port of entry status to Labasa is likely to be resisted by Suva shipping interests, who find this general cargo run profitable in a region where profits are not always made from shipping.

**Economic Consequences**

It is fairly clear from this outline of the island shipping industries that an optimum combination of factors - crew costs, vessel types, etc. - which are in line with the economic situation and the pattern of trading places in the islands cannot be easily achieved. In Fiji crew costs are high mainly because of the numbers of seamen employed for purposes other than navigation. Most of the vessels have been purchased second-hand at a time when they were due for major surveys or repairs, and, in the case of the smaller craft, they are now old and have deteriorated in tropical waters. But surveys are reasonably strict in Fiji, strandings are common, spare parts have to be imported, repair costs are expensive, and many essential repairs which would normally be carried out by experienced ship's engineers have to be done by shore labor. On the other hand there is a chronic shortage of capital for the adequate maintenance and replacement of ships in the small freight-earning sector of the industry.

Some small ship owners have attempted to remedy the
situation by operating without office premises\(^1\), by employing cheaper poor quality crews, avoiding costly repairs unless absolutely vital, neglecting safety equipment, and overloading whenever the opportunity arises. Several of their vessels are mortgaged, and between 1961 and 1963 owners obtained loans totalling $52,000 from the Agricultural and Industrial Loans Board (Interviews). These remedies no doubt increase the risks and economic uncertainties in the industry, and they thus make it even less attractive to local entrepreneurs who find safer investments in shops and land transport; however, under the circumstances the small shipowners are probably making the best use of their limited financial resources.

The merchant companies are also faced with high expenditure on wages and repairs but they have other remedies. In the first place their vessels are simply appendages to their merchandise trade and any loss can be borne by this latter sector. Secondly the main group owns one of the principal ship repair yards, and thirdly they have tacitly agreed between themselves to limit freight rate competition. The merchant companies thus make every attempt to operate a shipping sector of their businesses which pays for itself. This is extremely difficult to achieve and only the present levels of freight rates allow them to break even over a number of years.

An analysis of the operating accounts of six different classes of vessels in Fiji shows just how marginal shipping is as a source of direct profits. The first two vessels listed in Table 7.8 have not only to meet overheads and survey costs but must earn sufficiently well over a period to pay for replacement. For the replacement of these small

\(^{1}\) One small company has premises in a warehouse loft which it shares with a barber and a sailmaker.
wooden vessels this means an accumulation of at least $30,000 - it is significant that there have been no new craft built by the main commercial yards in Fiji since 1953. The remaining ships shown in Table 7.8 will most likely be replaced by profits derived from the merchandising activities of the companies, for a 150 net ton vessel of this class would cost somewhere in the region of $160,000 if purchased new in Europe, but it is unlikely that a new vessel would in fact be contemplated.

Fig. 7.4 is even more revealing from the point of view of company ship earnings, for it shows that despite the relatively high and sustained earnings from freights over a period of years there was a continuous decline in the profitability of the company fleet. This decline was clearly the result of increasing overheads and ageing ships. It is important to note that this was the situation for a merchant company which, while its standard were below those on the British or Australian coasts, did maintain vessels and crew conditions well above the standards existing on small cutters.

The small freight-earning operators must exist without a merchandising sector to support financial losses. Their vessels must pay, and pay sufficiently well to allow for replacement. It seems fairly certain that improved standards on these craft would, under the present conditions of competition and methods of work, bring the margin of profits to such a low level that the ships would be unable to operate. The disappearance of these small craft would create a serious situation in many island areas. How serious may be judged from the statement of policy made by the shipping manager of one of the major
Fiji Company Ships Profit and Loss

Tonga Ship Profit and Loss

Figs. 7.4 and 7.5
Source: Personal Interviews.
TABLE 7.8: SHIP OPERATING COSTS IN FIJI, 1962.
(Expressed as a percentage of total annual costs)

<table>
<thead>
<tr>
<th>Vessel/type</th>
<th>Net Tons</th>
<th>Crew (number)</th>
<th>Crew Costs</th>
<th>Repairs</th>
<th>Maintenance and Ship's Gear</th>
<th>Fuel</th>
<th>Insurance</th>
<th>Port Expenses</th>
<th>Other Expenses</th>
<th>Profit</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Wooden/with sails and engine</td>
<td>30</td>
<td>9</td>
<td>43</td>
<td>23</td>
<td>14</td>
<td>8</td>
<td>4</td>
<td>5</td>
<td>17</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>II Wooden/with sails and engine</td>
<td>40</td>
<td>14</td>
<td>32</td>
<td>15</td>
<td>3</td>
<td>16</td>
<td>7</td>
<td>4</td>
<td>24</td>
<td>5000</td>
<td></td>
</tr>
<tr>
<td>III Steel/engine</td>
<td>60</td>
<td>19</td>
<td>44</td>
<td>17</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>12</td>
<td>10</td>
<td>9000</td>
<td></td>
</tr>
<tr>
<td>IV Steel/engine</td>
<td>100</td>
<td>21</td>
<td>40</td>
<td>27</td>
<td>6</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>4</td>
<td>7000</td>
<td></td>
</tr>
<tr>
<td>V Steel/engine</td>
<td>125</td>
<td>23</td>
<td>36</td>
<td>21</td>
<td>7</td>
<td>10</td>
<td>3</td>
<td>11</td>
<td>12</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>VI Steel/engine</td>
<td>140</td>
<td>25</td>
<td>33</td>
<td>40</td>
<td>9</td>
<td>7</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>19000</td>
<td></td>
</tr>
</tbody>
</table>

1Wages and victualling; 2Including surveys; 3Wharf labour and port dues; 4Derived from information not presented in the table.

Sources: Shipping companies and agencies.
merchant companies before the Safety at Sea Commission. The manager maintained that:

...if small ships were required to carry radios they would cease to operate. He added that his firm's ships would not be prepared to go out to some of the places served by these small ships, because it would be uneconomic (Submission 576).

The trends in Fiji (especially since the 'Kadavulevu' disaster) have been to propose and introduce legislation to control the overloading of passengers and cargo, to improve safety equipment, introduce marine training for seamen, improve the pay and conditions of seamen and masters, raise the status of captains, and enforce stricter surveys (CP 35/1964). These and other desirable measures designed to give the people of the islands more safety on voyages must also bring with them substantial increases in freight and passage rates, and consequently penalise the islands still further by increasing their economic distances from markets. The alternatives are subsidies; or the rationalization of shipping in order to eliminate some of the more wasteful practices that are reducing ship earnings. This latter point will be returned to in Chapter 12 after other aspects of present day trade have been discussed.

In Tonga they have found one 'solution' to the problems which beset island transport services. The government has established a national merchant marine and has taken over the work with new ships operated either directly by them or through agencies. The capital cost of this has amounted to about $1¼ million since 1958. These new Tongan-owned vessels have been specially designed for the tasks they have to perform. In addition
to providing interinsular services two of the ships now operate on periodic charters in other parts of the Pacific, while the largest vessel in the fleet also carries cargoes from Australia to Fiji and Tonga. But the directional imbalance of trade in the Pacific\(^1\) (copra to Europe, general cargo from Australia and New Zealand), which increases unit costs of ship operating, the high costs of surveys and repairs, and the present need to employ expatriate masters and engineers, offsets some of the advantages which these new vessels could derive in the Pacific trade from their lower crew costs. However, in the case of the Rotuma charter these advantages vis-a-vis Fiji vessels are clear enough.

The distribution of costs for one Tongan ship over two successive years illustrate the above points. Table 7.9 shows that crew costs (despite the employment of highly paid expatriates) account for a smaller proportion of expenditure than on Fiji operated vessels (compare Table 7.8). The Tongan ship in this example is twice the size of the largest vessel in Fiji but employs 40 per cent fewer crew. The year 1961 shown in the Table exemplifies a normal distribution of operating costs for this vessel, but 1962 gives some idea of what occurs during a period of survey when the ship is also out of commission for 30 to 40 days. In this survey year expenditure stood 15 per cent above the 1961 level but earnings were reduced by 17 per cent below the 1961 levels.

\(^1\)In 1966 there were prospects of timber back-loads to Australia from Vanua Levu which would reduce some of the 'dead freight'. 
level.

**TABLE 7.9: SHIP OPERATING COSTS IN TONGA, 1961-62**

<table>
<thead>
<tr>
<th></th>
<th>1961 %</th>
<th>1962 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crew Costs</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>Repairs and Survey</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Maintenance and Ship's Gear</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Fuel</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Insurance</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Depreciation</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Tonga Copra Board Accounts.

The very narrow margins between earnings and expenditure are further emphasised by Fig. 7.5 for the same Tongan ship over a longer period. One can see how earnings dropped rapidly in 1962 (partly as a result of the 1961 hurricane) and accentuated even further losses resulting from a period when it was not earning and it had incurred expenditure on survey and repairs. In the long run Tongan vessels may be expected to break even, and if Pacific charters continue to be obtained they may also make substantial profits, but the financial risks are great. In any event Tongan shipping is a basic industry with so many other activities depending on it; and the ships are providing a safe scheduled service in the group while they promote economic development — and these are two of the main purposes for which they were purchased.

It is even less possible to assess the efficiency of shipping in the GEIC by ship-earning standards. Freight rates are equalised throughout the groups in
such a way that islands nearer to Tarawa are paying higher for services than they would need do if the more distant islands did not require a service. In addition the ships are subsidised out of merchandising and other profits of the Colony Wholesale Society, and at least one of the larger Government vessels was purchased by a grant from the Colonial Welfare and Development Fund. All the ships can be expected to incur a loss in an average year. The operating losses for four of these vessels employed in the carriage of cargo and passengers during 1962 are shown in Table 7.10. Shipping in this region must consequently be recognised as a non-profit-making service to the people of the distant islands.

**TABLE 7.10: SHIP OPERATING LOSSES IN THE GEIC, 1961**

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Net tons</th>
<th>Owner</th>
<th>Loss - £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moana Raci</td>
<td>253</td>
<td>Colony Wholesale Society</td>
<td>34,414</td>
</tr>
<tr>
<td>Tungaru</td>
<td>120</td>
<td>&quot;</td>
<td>16,358</td>
</tr>
<tr>
<td>Kiakia</td>
<td>63</td>
<td>Winimeang Tangitang</td>
<td>470</td>
</tr>
<tr>
<td>Aratoba</td>
<td>40</td>
<td>Botani Bobotin Tangitang</td>
<td>762</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>52,004</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Colony Wholesale Society, Tarawa, Department of Co-operatives.

In conclusion it should be pointed out that shipping developments in one Pacific territory are always viewed with interest in another. The fact that the Tongans have integrated the interinsular and interterritorial transport systems using their own vessels has been noted in the GEIC. Here in fact may be the solution to the GEI transhipment problem - the purchase of a vessel which could operate between Fiji and Tarawa and redistribute cargoes throughout the group. A point which will be returned to later.
Chapter 8
MARKETING AND RETAILING CHANNELS

Many aspects of island shipping appear from the previous chapter to be uneconomic. There would, however, be little point in suggesting a more rational shipping pattern in order to reduce costs in sea transport if by so doing costs on the land side were to be excessively increased.

The pattern of shipping is closely related to the network of marketing channels in the island hinterlands, and the type of market outlets (government buyers, Chinese storekeepers, etc.) are important determinants of the amount of money returned to producers, while in turn the costs of retailed goods affect the real incomes of producers. For these reasons the methods and organisations for the disposing of island produce and retailing store goods are considered in some detail. It may be that both the patterns of shipping and marketing could, in a simple model, be moved in directions which would yield increased returns to the producers at reduced costs to the shipping industry.

Basic Factors Affecting Marketing and Retailing

Three of the most important factors affecting the commercial systems in the islands are the way in which people live, their mode of production and social relationships; the amount of money which they have available for purchasing goods; and the size and distribution of the communities in which they live. The broad hierarchy that exists in this latter factor is, in
brief; a) the port towns, b) the regional marketing centres, c) the villages, d) the estates and individual settlements.

The way in which village people live in the outer islands is remarkably similar in general economic terms. They grow subsistence and cash crops, fish, make copra, engage in house building, boat construction and the routine tasks of maintenance and repairs in and around the villages. Their main cash resource is copra, with in addition the marketing of bananas, fresh vegetables and yagona (piper methysticum) from parts of Fiji and Tonga, some roofing thatch from the islands in proximity to Tarawa in the GEIC - plus a few small diverse items from more distant islands.

Commercial and subsistence agriculture and the gathering of coconuts is usually carried on not too far distant from the villages. The more remote lands owned by the people are often nowadays neglected for villagers may find sufficient coconuts nearby with which to make copra, and it is easier to do this and purchase imported manufactured foods than it is to work in distant food gardens. The modern economic relationships have tended to stabilize population distributions in and around nucleated village settlements (although villages have been moved in some areas to facilitate commercial farming) and it is now unusual for people to absent themselves from the villages and spend long periods in bush hamlets. Further development of the commercial economy in Fiji may, however, bring a redistribution of population if a discernible trend towards individual farmers separated from the villages is accelerated in
the future (see Ward, 1964).  

Land tenure systems differ in form between the three archipelagoes, and they are all in some ways changing. The effects of these on the volume of commercial production has yet to be studied in detail, but Spate (CP 13/1959 paras. 64-73) shows for Fiji that the Matagali system (which nowadays has land divisions which bear little relationship to the number of people they support) is an inhibiting one in this respect. In the GEIO land is owned by peasant proprietors and on death is often subdivided between the next of kin. As a result each household frequently has access to several small scattered patches. In Tonga there are mainly individual land holdings and each taxable person is normally allotted an 8½ acre bush api (allotment) other than in areas of over-population.

1 During Mariner's time in Tonga the people lived in scattered dwellings (1818 Vol. 2, p. 287) and A. Maude (1965, p. 27) cites additional documentary evidence to support this. Sahlins in his study of an island in Fiji recognises a former dispersed pattern of temporary bush hamlets and brings out some interesting relationships between the present distribution of population, its suitability to the new market-orientated economy, and the demise of the extended family in the villages in favour of independent nuclear forms (1962, pp. 71-73 and pp. 87-90). In the Gilbert Is. concentration into villages is likewise of recent origin (see H.E. Maude 1963, pp. 28-40) and in the Ellice Is. this took place about 1908 (Kennedy 1931, p. 26

2 Crocombe is engaged in this (1966 pers. com.). Land tenure in Fiji has been described by Spate (1959 para 54-91) and Ward (1965 pp. 9-10 and 203-206). A. Maude has made a comprehensive study of tenure in Tonga (1965 pp. 95-120) and in less detail Twomey (1961 unpub.) for the Gilbert Is and Crocombe (1965 unpub.) for Tarawa. Other information on land tenure in the Gilbert Is. is contained in Maude, H (1963 pp. 34-36).
People travel daily from their villages to the bush in order to cultivate gardens or gather coconuts. In Fiji copra is normally cut amongst the coconut groves which grow along the coastlines and on the gentler slopes behind the villages. After it is cut the green copra (undried flesh of the coconut) is carried to the villages by pack horse or punt to be dried in a hot-air drier, or in a 'smoker'. The Tongan farmers usually carry the whole coconuts to be nusked near their driers - which are often located at the api, and in some cases the drier will serve several families. In the GEIC most of the copra is sun dried in the villages to which it has been carried (often by bicycle) either as unhusked nuts or green copra, but some people do have shelters in their remoter lands where they camp for a few days during copra cutting, the partially dried copra is then assembled to be picked-up by canoe or co-operative truck.

The Fijian producer will sometimes sell his green copra to a Fijian village storekeeper (or co-operative) who will dry it and then either carry the produce to a trader for re-sale or await the arrival of a ship and consign the copra for re-sale at Suva. Alternatively, and more usually, the producer will take his dried copra by basket, horseback, or punt to a trade store (for sale or barter) at distances of anything up to ten miles from the village. The proceeds from the sales generally go to the individual but the cess\(^1\) is often credited.

\(^{1}\)This is a form of compulsory saving for Fijians. From each ton of copra sold $22 is deducted and credited to the seller or his village with the Fijian Development Fund Board. The money can then be drawn on for specific purposes laid down by the Board.
to a village communal fund. In contrast with Fiji
the village copra in Tonga and the Gilbert and Ellice
Islands is sold to one buyer only - in Tonga to Copra
Board depots or to itinerant buyers from the Copra Board,
and in the GEIC to the village co-operatives.

Earnings from the sale of copra and other produce
are occasionally (often in the GEIC) supplemented by
money received from members of a family working away
from the island as wage-labourers. The regional
variations in incomes are quite appreciable and this is
dealt with and documented in Chapter 10. For outer
island communities, however, the range of per capita
incomes obtained from cash crops would, in an average
year, be somewhere in the vicinity of $15 to $50 in Fiji,
$10 to $30 in Tonga, and $3 to $20 in the GEIC.

Cash incomes per head are small and they set a limit
to the amount and range of store goods purchased. Preferences are generally well known throughout the region,
even down to specific brands, and seasonal variations in
demand are equally predictable. People spend their
money (often overspend it if credit is available) from
day to day on very small quantities of some basic store
goods such as flour, rice, sugar, tea, tinned milk,
tinned meat, tinned fish, hard biscuits, dripping, soap,
cigarettes, tobacco, matches and kerosene, and at inter-
vals on a few durable household items, tools, fishing
gear and clothing. They have usually to meet from their
cash incomes annual demands for taxes (paid in kind in
the GEIC), Mission donations, and school fees; as well
as additional periodic demands for foodstuffs for weddings
deaths, and other social occasions.
Under the various conditions of supply and demand which have been outlined elaborate commercial arrangement would not be anticipated. The marketing and retailing channels will now be described taking each territory in turn. Then a brief comparison will be made between the three territories with particular emphasis on the costs of the systems - (for producers and consumers) and the way in which they link with island shipping.

Co-operative, Copra Board, and Wholesale Society in the GEIC

There are 191 villages in the GEIC outside of the administrative and commercial area in the southern part of Tarawa. These villages are served by 71 trade stores belonging to the Co-operative Consumer Marketing Society. The co-operatives are the only authorised buyers of copra and they are sufficiently widespread in the islands that producers are never required to carry their copra for more than three miles in order to sell it; for the majority of producers selling may be done at or close to their own villages. The co-operatives also purchase roofing thatch, sennit cord, handicrafts, shells, shark fins and dried fish.

People usually bring their copra to the co-operative store in quantities of from 5 to 20 lbs. This is graded and weighed and is paid for on the basis of a minimum price fixed by the Copra Board for each grade. The co-operative supplies villagers with the bulk of their consumer goods, which are sold at prices determined by the Colony Wholesale Society (CWS). The Copra Board arranges with the CWS for shipping to collect the copra and it is then stored at Tarawa prior to overseas export.
Any copra which is delivered to the overseas port of Betic by producers will be purchased by the Copra Board, but only a few tons per year are obtained in this way.

The village co-operative stores were for several years short of liquid assets for they had to invest in stock that had a slow turnover, at the same time they were required to retain sufficient money to buy copra. In order to overcome this difficulty the co-operatives can now receive interest-free loans, and in addition the Copra Board pays to the CWS a sum of money to the value of copra that is likely to be at an island when a ship is due to sail. This enables merchandise to be sent ahead of the receipt of money. There is also an arrangement whereby cargo to the value of cash deposited at an island post office will be sent to the society.

Clearly, the co-operatives, Copra Board and CWS are in a position where they can exercise several controls over the island cash economies. In addition to the arrangements already mentioned they do this by a 'Standard Price, Freight, and Fare Policy'. Until recently (1964) all imported goods landed at Betio for the CWS had $13 per ton costed into them to cover distributional costs in the archipelago. To this was added a 12½ per cent margin, so that the selling price for all commodities was the same throughout the GEIC irrespective of distance from the main port. Similarly for the inward carriage of copra there was an overall charge of $17 per ton, other than from Tarawa lagoon where the charge was $12 per ton.

Through the standard price policy the people of Taraw and the islands in proximity to Tarawa were subsidising
the people in the more distant islands. An economic freight rate (based on GEIC ship operating costs) for the haulage of copra from Maiana (30 miles), for example, would be $6 per ton but $17 was charged. On the other hand an economic freight rate on copra from Niulakita in the Ellice (635 miles) would be about $40 per ton, not $17 the standard charge. An even greater anomaly resulted from the standard price policy when at Betio people were purchasing goods which carried a freight charge of $13, a cost they had never in fact incurred.

The one price policy was modified on two occasions. First was at Betio in 1961 to meet the competition of private traders who were undercutting the CWS. Second in late 1964 it was decided to raise the freight rates on consumer goods to $10 for the southern Gilberts and the Ellice Islands, and reduce freight rates to $13 for the northern and central Gilberts. The charge on copra was left at $17 for the whole archipelago (GEIC Public Notice No. 28/65). The general principle of the nearer islands subsidising the further remained unchanged.

As well as influencing freight rates the Copra Board controls prices paid to producers. Initially the price is set by Unilevers to whom all GEIC copra is sold. This company base their prices on the world price of copra - which tends to fluctuate. The Copra Board attempts to

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1When the Phoenix Islands were inhabited the subsidy was greater. These islands lie about 900 miles from Tarawa and they produced only 80 tons of copra per year. Unsubsidised their freight rates would have been about $60 per ton, but under the one price policy this was reduced to $17 for copra and $13 for general cargo.
control undue fluctuations in local prices by gradually building up the returns to producers during a rise in world prices; but only to a predetermined level at which point the surplus goes into reserve. During a fall in world copra prices the Board pays a subsidy from the reserve. The Copra Board is influenced in pursuing this policy by observations that when prices are high in the GEIC additional increments do not produce concomitant increases in production, but when very low prices are reached production tends to fall off (GEIC Copra Board Report, 1958, p. 19). The GEIC copra supply becomes, in other words, increasingly inelastic with rises in price.

Private Traders and Village Groups in the GEIC

There are two private trade stores in Betio. Both of these are operated by part-European families who have been associated with island trading for several generations. At Abemama two part-Chinese residents import goods for very small private enterprises, and at Abaiang a local group has also from time to time imported from overseas. These private traders are prohibited from buying copra but they sell store goods for cash or credit to local customers. The traders on Betio have in addition built up a network of village middlemen in the islands to whom they wholesale small quantities of goods.

Private traders on Betio import all their stock from Fiji and Australia. They have a decided advantage over the CWS on two counts. First there is no need for them to add nominal island freight charges to the goods they sell in Betio, second they do not have to meet any of the $34,000 to $48,000 loss which the CWS vessel incurs.
annually. The CWS has to meet this and does so by increasing the price of some merchandise and by reducing overall profit margins. As a result of these financial advantages the private traders are able to undercut the co-operatives on Tarawa. They also gain from being able to use the CWS vessel for deliveries of cargoes to small island retailing groups known as mronrons, and when cargoes have to be transhipped through Ocean Island the private traders obtain the added advantages of a subsidised service. In many ways the CWS and co-operatives are subsidising their only competitors.

The mronrons which receive goods from the traders are mainly family groups, but in the northern islands one or two Roman Catholic mronrons are large and have a proper trade store on Butaritari. At Nanumea in the Ellice a prosperous women's mronron purchases cargo from the Betio traders and from the local fusi. This group as well as selling consumer goods makes copra and handicrafts which they sell to the fusi. Generally, however, mronron stores are small, often consisting of only a few items which are kept in a dwelling. In some villages they extend to a small hut which opens late at night for the sale of tobacco, cigarettes (one at a time), matches, tins of meat and fish, chewing gum, and possibly the odd comb or tin of talc. This description would also fit a

A certain amount of beer is also traded in this way. There is no longer (since January 1964) any legal restrictions against the consumption of beer by islanders but before a co-operative can stock this it must provide a concrete walled store secure against pillage. There will always be an economic restriction on beer for the price of a can is around 60 cents whereas local sour toddy, a more potent intoxicant, costs about 5 cents a bottle when it is sold.
great many of the so called village shops in Fiji and Tonga.

A number of relatively well stocked mronrons come into existence when labourers return from Nauru and Ocean Island. They bring with them a total of anything from $10,000 to $20,000 worth of goods and canoe timbers on each bi-annual repatriation. The trading groups which appear at such times do not normally last for long but they tend to give over-generous credit to relatives. Tebao of Arorae said at a colony conference, for example, that goods brought into Arorae by labourers for this purpose only valued about £100 ($200), the mronron buys the goods but they are sold within a month and the mronron buys again from the co-operative\(^2\) (GEIC Proceedings, Fourth Colony Conference, 1962, p. 47).

**General Comments on GEIC Marketing and Retailing**

The main marketing and retailing channels are highly integrated through three semi-government organisations. The most interesting aspect of the trade is the uniform price system. This attempts to achieve some sort of regional equalisation - a policy which Myrdal might call an attempt at 'created harmony' on the part of the State (1963, p. 47). By manipulating the freight system in this way some counteraction of a trend towards even greater inequalities between the distant islands and the main port is made.

\(^1\) A suggestion that these goods (mainly sewing machines, bicycles, household equipment and foodstuffs) should be taxed caused a one-day strike on Ocean Island during 1961 and the government withdrew the idea (GEIC Proceedings, Fourth Colony Conference, 1962, p. 42).
There is an obvious egalitarian factor in the marketing arrangements of the GEIC. But Bauer (who studied West African trade) says of such systems in general that while they may encourage cultivation in distant areas they make expansion of cultivation less attractive in more favourably placed regions, and the increased transport costs represent an additional reduction of incomes to producers as a whole. He goes on to predict:

The enthusiasm for uniform price systems may be less pronounced if it is realized that they result in the use of greater amounts of scarce resources to yield a given total output of the crop, and that they bring about a penalization of some producers for the benefit of others (1954, p. 363).

In less sophisticated terms several Gilbertese have expressed similar views. The Ellice Islanders, they say produce very little but we have to pay for their shipping. Some of the supporters of the Tangitang Shipping Unions also held these views and this was one reason why they wanted a ship of their own to run only to their own islands. Bauer is of the opinion that in cases where outlying areas need support for development this can be done more efficiently by direct subsidy (1954, p. 364). While this is true it would not remove the basic criticism, for the one-price system in the GEIC is 'welfare' orientated rather than a stimulus to development.

On the second aspect of price policy - the stabilization of copra payments - the government agencies may be on surer grounds in terms of created harmony. When, for example, the 'Beaverbank' loaded at Tarawa in June 1959 the Copra Board received $215 per ton fob. When the saw
ship loaded in December 1960 the fob price was $122.75 per ton - a drop of 43 per cent in eighteen months (Copra Board Records Tarawa). In spite of subsidy payments of $8 to $10 a ton people's incomes in 1960 were reduced by more than a quarter of what they had been in 1959. This brought protests, and from August to December 1960 people around Tarawa lagoon refused to make any more copra. The boycott also spread to Abaian and Maiana for a shorter period. While this boycott could not affect the world price of copra it was an indication that the causes of price fluctuations were not clearly understood. But it was also a manifestation of dissatisfaction with the general policy on prices, freights, and taxes on the islands in the vicinity of the port where they did feel they were being penalized.

It is difficult to find any favourable economic functions in the role of the private traders. Possibly their encouragement of mronrons in islands desperately short of avenues of non-agricultural employment for a literate people may be counted - but duplications of some of the work of local co-operatives probably negates this from an economic point of view. These private traders are assisted by the freight policy of the CWS but it is unlikely that they could ever become strong enough to undermine the co-operative movement.

The Tonga Copra and Produce Boards

The Tonga Copra Board (TCB) and Produce Board (TPB) have statutory marketing monopolies similar to those of the GEIC. The differences are, first the Tongan boards
purchase the products directly from the producers without the intermediary of a co-operative society, second they do not engage in consumer services to any appreciable extent at the present time.

There are 70 villages on Tongatapu outside of Nuku'alofa. Nine copra buying stations are located on that island and buyers are at these stations at various times during the week. The 25 villages at Ha'apai are served by five buying stations, and the 34 villages in the Vava'u district have nine stations. The copra buyers pay the people on the spot and the buyers are then responsible for bagging the copra, storing it, and arranging shipment to the nearest regional place of overseas loading.

As in the GEIC the Copra board in Tonga follows a price equalisation policy. The price paid for copra is standard throughout the archipelago but on the remote islands of Niuatoputapu and Niufo'ou it is reduced by $5 per ton to cover part of the extra handling and carriage involved (an economic freight charge from these islands would be about $11 per ton). The Copra Board also deducts $8 per ton from the price paid to producers as a contribution to a price stabilization fund. A third feature of the financial policy of the TCB is the non-retention of profits when all expenses have been met. These are distributed as an annual deferred payment which is known locally as the 'copra bonus'. This bonus is usually paid on the basis of

\[1\] It is not clear if this fund is the same as that of the GEIC, for so far there have been no direct payments made from it to the producers.
copra produced by each individual, but this again may be manipulated in the interests of regional equalisation. When for instance the people of Vava'u fell on hard times after the 1961 hurricane the bonus in that year was distributed as shown in Table 8.1. The implication is that like the authorities in the GEIC the government of Tonga has a strong control over local copra marketing and therefore on the money available to the people.

**TABLE 8.1: DEFERRED PAYMENTS MADE TO COPRA PRODUCERS IN TONGA DURING 1962.**

<table>
<thead>
<tr>
<th>District</th>
<th>Copra Produced 1961 (tons)</th>
<th>Deferred payment per ton $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuku'alofa</td>
<td>8481</td>
<td>4.00</td>
</tr>
<tr>
<td>Ha'apai</td>
<td>594</td>
<td>24.50</td>
</tr>
<tr>
<td>Vava'u</td>
<td>151</td>
<td>125.00</td>
</tr>
<tr>
<td>Niutoputapu</td>
<td>309</td>
<td>4.25</td>
</tr>
</tbody>
</table>

Source: Tonga Copra Board Accounts.

Other activities of the TCB include housebuilding and the operating of a small dessicated coconut plant near Nuku'alofa. The Board has retail stores on Niutoputapu and Niuafo'ou, as the merchant companies and other traders have withdrawn from these islands. The TCB has also opened a small retail store at Vava'u. These activities, when taken in conjunction with the new Tungi Shopping Arcade in Nuku'alofa, indicate increased government sponsored interest in island retailing and only a shortage of capital would appear to be curtailing this process.

Banana marketing is the main function of the Tonga
Produce Board, it has a monopoly in this and in the purchasing of other fresh produce (melons and pineapples) for export. There are banana packing areas in all villages of the main producing islands. The ports for overseas shipments are Nuku'alofa and Neiafu, any bananas collected by road from places outside these centres have a charge of 6d per case made for transport. The Board also arranges for the shipment of bananas from the Ha'apai group. They give notice of packing to the Ha'apai growers by Radio Tonga and the landing barge 'Kao' collects the fruit and brings it to Nuku'alofa at a charge of 2/6d per case. The island of 'Eua has a similar arrangement with a Produce Board launch.

Bananas are shipped mainly to New Zealand and, as in Fiji, the maximum quantity marketed is governed by a quota set by that country. Payment to growers is not made until the produce has been shipped on board the overseas vessel. Some people can obtain credit from local stores on the basis of their bananas before shipments are made; and many others get credit while they are awaiting payment after shipments. The TPB like the TCB usually pays a bonus at the end of the year to banana growers.

Private Traders in Tonga

The merchant companies of Burns Philp and Morris Hedstrom have stores at Nuku'alofa, Pangai in Ha'apai and Neiafu in Vava'u. All their outstations have been closed. At these regional centres they compete with a number of local resident traders who have also closed their stations in the outer islands. The local traders are mainly the
part-Tongan descendents of Wolgramm, Sanft, Guttenbeil and Zuckschwendt and they continue to operate under these old German names. In addition Schaumkel at Vava'u, and the Richelmanns of Nuku'alofa and 'Eua are direct descendents of German traders.

Most of the trade stores belonging to the resident traders are of a size approaching those of the merchant companies, and as a result there is at the centres far more stores than can be adequately supported from the money available. At Vava'u in particular a feature of these trade stores is the amount of old stock on display. However, the resident traders appear to adopt a live and let live attitude and are able to retain their own customers by the extension of credit and lack of aggressive sales techniques. When for example the manager of one of the merchant companies painted the outside of his trade store the resident traders in the main street of Neiafu protested that he was trying to ruin them by attracting their customers.

The many competing village shops in Tonga are small and each carries a stock of between $40 and $80 in value. This they have usually purchased wholesale (often on credit) from the resident traders or merchant companies at the regional centres. There are also many small Tongan shops at the centres which deal in trifling

---

1 Generally the merchant companies have not gone in for the modernisation or expansion of their stores in Tonga. They are on twenty year leases and this plus the interest which the government appears to be taking in trading has caused them to feel some uncertainty as to their future.
quantities during the period when the bigger stores are closed. They are, like the village stores, able to charge a little above the government controlled price for some goods and in this way make their microscopic profits.

Individual Tongans sell produce at markets in Nuku'alofa and Vava'u. People say that not many years ago the sale of yams, kepe, kumala, taro, bananas, and fish by Tongans to other Tongans would have been unusual, but now it is common, particularly in Nuku'alofa. Similarly Koch (1955, p. 340) writing of 1954 reported that when a steamer comes to Nuku'alofa and Neifu not even the people of these 'urbanised settlements' offer their handicrafts for sale. By contrast in 1964 a feature of 'boat days' in both of these centres was the numbers of people who travelled in from the surrounding areas with handicrafts to sell to passengers.

It is usual nowadays for village people to sell their copra at local depots to the touring buyers, and travel to the regional centres by boat on shopping excursions and to sell produce. Some of them carry their copra to the regional centres for sale although the prices they receive at the centres are the same as in the villages. Prices for store goods, however, vary throughout the islands for as Table 8.2 shows unlike copra the freights on general cargo increase with distance from Nuku'alofa to the regional centres, and prices are higher still in the villages.

1In the four Tongatapu villages studied by A. Maude (1965, p. 144) 16 per cent of the total cash incomes were derived from the sale of fresh produce at the market in Nuku'alofa.
### TABLE 8.2: GENERAL/CARGO FREIGHT RATES IN TONGA, 1964.

<table>
<thead>
<tr>
<th>From Nuku'alofa</th>
<th>Distance miles</th>
<th>Charge per ton, £</th>
<th>Charge per ton mil Cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nomuka</td>
<td>60</td>
<td>4.20</td>
<td>7.00</td>
</tr>
<tr>
<td>Lifuka</td>
<td>100</td>
<td>4.20</td>
<td>4.20</td>
</tr>
<tr>
<td>Vava'u</td>
<td>170</td>
<td>6.00</td>
<td>3.52</td>
</tr>
<tr>
<td>Niuatoputapu</td>
<td>340</td>
<td>10.00</td>
<td>2.90</td>
</tr>
<tr>
<td>Niuafo'ou</td>
<td>380</td>
<td>12.75</td>
<td>3.33</td>
</tr>
</tbody>
</table>

Source: Tonga Shipping Agency

**General Comments on Marketing and Retailing in Tonga**

Tongan producers have only one marketing channel for export products but unlike most of the people in the GEIC they have several alternate sources for consumer goods. Basic day to day commodities can usually be purchased at village stores. If they require clothing or other more diverse consumer goods they can normally travel to a regional centre and buy these - with a choice of several traders. For rather special products such as radios or furniture then a trip to Nuku'alofa may be made. The Tongan villages have thus a 'two-stepped' relationship with the principal centre for purposes of obtaining goods and services.

The merchant companies and resident traders have lost very little by their withdrawal from the outer islan of Tonga for most of the village shops purchase their stock wholesale from these bigger traders. In fact the companies are certain to have gained from this arrangement since the cost of maintaining and supervising
outstations would, these days, have proved extremely expensive. About half the profits of the merchant companies in Tonga are now made from wholesaling.

The European-owned Merchant Companies in Fiji

There is now a Copra Board in Fiji which has powers over the local price paid to producers for various grades of copra; but this is a new development (Fiji Government Ordinance No. 12 of 1965) and at the time of writing it had little influence on the commercial structure. Considerable commercial power rests with the big companies whose headquarters are at Suva. They have branches elsewhere in Viti Levu and at Levuka, Labasa, Savusavu, and Somosomo, plus one very small store in Natewa Bay and two on Rotuma (Fig. 8.1). The branches at the regional centres purchase copra and sell basic store goods and they stock a variety of other merchandise. They compete at the centres with Chinese and Indian traders most of whom are licensed copra buyers.

In addition to operating their regional branches the companies wholesale goods to other island storekeepers. They also supply these traders with petroleum products - for the major oil companies when they came to the islands found the merchant companies had a trading network eminently suited to the distribution of oils. The merchant companies are likewise the wholesalers of cement produced by Fiji Industries Ltd. (large shareholders in this enterprise are W. R. Carpenter, Burns Philp and the Colonial Sugar Refining Co.). In turn the small traders act as copra purchasing agents for Island Industries Ltd. (W. R. Carpenter) to whose mill at Suva goes over 80 per
Fig. 8.1

Source: Fiji Government.
cent of all copra produced in Fiji\(^1\) (Table 8.3). It is this company that announces each week the ruling price of copra which it arrives at on the basis of the world price.

**TABLE 8.3: DESTINATION OF COPRA PRODUCED IN FIJI, 1964.**

<table>
<thead>
<tr>
<th>Destination</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Island Industries Ltd Suva</td>
<td>34,065</td>
</tr>
<tr>
<td>Buyers for Japan</td>
<td>5,067</td>
</tr>
<tr>
<td>Buyers for South America</td>
<td>1,671</td>
</tr>
<tr>
<td></td>
<td>40,803</td>
</tr>
</tbody>
</table>

Source: Island Industries Ltd.

The merchant companies are highly integrated organizations. The Carpenter group, for example, obtains most of its merchandise from Australia through the parent company in that country. Some of the merchandise is carried by their own vessel 'Lakemba' or by the conference, to which they belong. The cargo is discharged at Suva for the wholesale section of the business. It is then redistributed to their island stores and estate customers by company vessels. Part of the imported merchandise is also wholesaled to co-operatives and

\(^1\)One of the first acts of the Copra Board was to introduce a limit on the quantity of copra which could be exported from Fiji. This was in accordance with the 'Report of the Fiji Coconut Survey 1963', the limit was set at 2,000 tons, but not without some opposition from planters on Vanua Levu (see Fiji Times 11th Feb. 1965, p. 2).
other stores for retail sales. Copra is collected from all these sources by company and other vessels. This passes over the company weighbridge at Suva, it is processed at their oil mill, and the oil is exported overseas by vessels chartered by the buyers with whom the company has a contract.

Burns Philp has a similar integrated organisation up to the point of copra sales at Suva. The bulk of copra brought in from the islands by the vessels of Burns Philp goes to the Carpenter mill. Like W. R. Carpenter this company has now to meet competition from other merchants (mainly Indian) in the importing and wholesaling of goods. Some idea of the extent of this competition may be obtained from the fact that in 1945 the Europeans had eleven wholesale licenses but were the dominant group in this activity. By 1964 they held 32 licenses, while Chinese had 12 and Indians 62 (Whitelaw, 1965, p. 126). In terms of the volume of merchandise dealt with, however, the Australian companies are still dominant.

**Chinese Merchants and Traders in Fiji**

The Chinese community in Fiji is small but has been commercially significant particularly for places outside of Viti Levu. Some reasons for the withdrawal of the Chinese from the outer islands have already been given.

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1 Only 4,207 'Chinese and part-Chinese' were listed in the 1956 census. Of these 3325 were resident in Suva and other parts of Viti Levu (CP 1/1958 pp 216-218). In 1963 Chinese were estimated as numbering 5294 (CP 10/1964, p. 6).
(Chapter 6). To these extrinsic factors some local Chinese merchants add intrinsic community difficulties which might still have diminished their role as traders in remote islands had there not been problems of leases and the competition from co-operatives. The old client-relationship which bound the outer island manager to his Suva patron is difficult to re-establish when a trader retires, for nowadays there are no impoverished relatives arriving from overseas who would be prepared to lead such a life. The Fiji born Chinese are often fairly well educated and they have no desire to leave the community and work alone in some remote island, and the part-Fijian progeny of the village traders who have not as yet come to the towns are bound more to relatives in the villages than they are to Suva businessmen.

If Figs. 8.2 and 8.3 are compared it will be seen that since 1956 the Chinese stores have declined significantly in the islands. However, Chinese traders

1 Wong (1963, p. 19) says of this system 'Besides helping one's fellow kinsmen by bringing them from China to work in the shop, the introduction of family ties into business has the advantage of increasing its unity and minimising conflicts among the shareholders. Very often the shareholders and workers refer to each other as brothers'.

2 The latest report on non-Fijian traders in the islands was made to the writer by T. Rotan, co-operative officer in charge of the maritime district. In May, 1966 he reported only three Chinese and two Indians were left in Lau, and added ...'The above traders are now making arrangements to leave the islands so you won't be surprised to hear before the end of the year that they have all quit.'
Fig. 8.2
Sources: Wong, 1963 and Chinese Informants, Suva.
are still fairly common in some areas of Vanua Levu, and on Kadavu, but they no longer have the monopoly advantage which they once derived from remoteness, for in many cases people can now obtain goods more easily from Suva and elsewhere (radio contact has greatly contributed to this). On the other hand because of their less secure footing in the islands the Chinese are more vulnerable to the pressures put on them for credit. Sahlins noted this while on Moala; he said that the local part-Chinese storekeeper... 'considers his position on the island - indeed even his person - is secure only while he continues to hold the chief's friendship. In turn the buli Moalas' credit with the storekeeper is apparently bottomless' (1962, p. 411).

The Suva Chinese entrepreneurs prefer to invest in modernized establishments in Suva and at the regional centres. They also wholesale goods to some Fijian village stores and unregistered co-operatives, especially on the island of Kadavu. They will send these supplies by a cutter owned by Chinese and if cash is not on hand to pay for them the goods are normally returned to Suva.

**Indian and Part-European Middlemen**

Much of what has been said about Chinese traders applies equally well to Indian shops, but the Indians were later in the retail field than the Chinese and never spread quite so extensively as traders. Their base in the sugar districts was, however, more secure; and in the areas adjacent to these (as well as at all the regional centres) there are many Indian trade stores (see Fig. 8.4).
Fig. 8.3

Sources: Chinese Informants, and Dept. Co-operatives, Suva.
Part-Europeans have a few trade stores in Eastern Vanua Levu. Some of the copra estates owned by this section of the population are also buying places for Fijian copra and will supply a certain amount of trade goods to villagers. But in general part-Europeans do not play an important role as trade store owners as distinct from managers in the employment of the companies.

**Fijian Traders**

The Fijians themselves own village shops of the type already described. Frequently there are several of these competing for custom in a village; they are part-time businesses and yield few returns to their owners. These shops have the convenience value of a village location but many people still travel with copra for sale to the remaining Chinese or Indian stores on the outskirts, or a few miles away, for the village shops can seldom purchase copra due to a shortage of capital.

Only in the Yasawa Islands are there Fijian middle-men who are part of an organised copra-buying and trading network extending over several villages. The small shops in this system work in conjunction with three trading vessels belonging to the same Fijian owner; however, as these vessels are engaged primarily in itinerant trading the enterprise is included under that heading.

**Fijian Co-operatives**

During 1964 there were 227 co-operative societies and groups in Fiji. The most important types for this study are listed in Table 8.4. The majority of
Sources: Indian Traders and Dept. Co-operatives, Suva.
co-operatives were operated by Fijian copra producers and it is these only that will be considered in this section.

**TABLE 8.4: CO-OPERATIVE SOCIETIES AND GROUPS IN FIJI, 1964.**

<table>
<thead>
<tr>
<th>Type of Society</th>
<th>Number Registered</th>
<th>Number Probationary</th>
<th>No. of Unregistered Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing</td>
<td>12</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Consumer</td>
<td>21</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Marketing</td>
<td>35</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>consumer</td>
<td></td>
<td></td>
<td>93</td>
</tr>
</tbody>
</table>

Source: CP 37/1965 Appendix VI

By far the most important type of society is the 'Marketing Consumer', this buys members' produce and provides consumer services through a store. The other societies are single-purpose organisations which either market produce or run a trade store. The distribution of the various types of societies and groups are shown in Fig. 8.5. It will be noted from this that the number of societies exceed those of villages on some islands for people still occasionally prefer to adhere to traditional social groupings rather than federate into more economic units. On the island of Nayau for example it is reported that the ...'high proportion of societies to villages (one village has no less than four co-operatives) is due to inter tribal rivalry' (CP 5/1965, p. 7).

The desire to have a co-operative consumer store in the village for prestige and convenience has been
Registered Society

+ Probationary
- Groups
• Settlement

Fig. 8.5
Source: Dept. Co-operatives, Suva.
partly responsible for the popularity of the dual-purpose societies. Also, in areas where the non-Fijian traders have declined it is argued that these shops are now necessary adjuncts for all village societies; and in areas where the commercial traders are widespread and entrenched (Macuata and Bua) the argument is that a consumer sector to the co-operative is essential in order to successfully compete with the traders (Fiji Cooperatives, General Report, 1964, p. 5). Despite, therefore, the discouragement by the Department of Cooperatives of consumer sectors (on the good grounds that they frequently fail due to credit) it seems clear that the trend apparent in Table 8.4 will continue.

The most successful of the Marketing Consumer societies are those on the island of Rotuma. Because of the importance of the Rotuma societies a brief outline of their achievements is given - this account is based on a discussion with Mr. Wilson Inia one of the founders of the Rotuma movement:

Up until the late 1940s all the copra made on Rotuma went to the merchant company trade stores of Burns Philp and Morris Hedstrom. Most of the people were in debt to these merchants and due to uncontrolled credit, especially during weddings and funerals, the stores obtained a lien on much of the copra.

Sometime in 1948 a small group of Rotumans decided to form a co-operative. One of their difficulties was lack of capital, but people supported the movement and gave it one basket of copra per month on the understanding that when this was sold in Suva they would receive payment (in tins of corned beef) about three months later.

Gradually the one basket of copra was increased to one day's copra per month, and five years later
this had become three to four day's copra each month - and so it went on. In 1957 the organisation became part of the Fiji Co-operative movement, and with the help of the Suva registrar an economic shipping charter was arranged in order to circumvent the merchant companies and their high freights.

The struggle against credit was a long one in Rotuma\(^1\), the companies gave it generously but the co-operatives had to resist. This was difficult to do since they were competing with the merchants, and credit was in any case a tradition on the island\(^2\). An educational programme was arranged to combat this. In the schools bookkeeping was taught and at evening classes the people learned about co-operative procedure \(^2\)Wilson Inia is the school head-master\(^2\). And so they won.

About a quarter of the copra produced on Rotuma goes to the stores of the merchant companies, and they still have a lien on some copra. The Rotuman funeral is partly responsible for this, for it is an impressive affair for which vast supplies of consumer goods are purchased and people thereby get themselves into debt. To overcome this the co-operative has introduced a 12\(\frac{1}{2}\) per cent compulsory deduction from the

---

\(^1\)The Co-operative Report for 1958 states \(\ldots\) 'the European merchant houses striving to regain the trade they have lost to the societies, offer credit as a means of obtaining the copra of their debtors...the societies, in self defence, are obliged to offer the same inducement' (CP 3/1959).

\(^2\)The commercial milieu created by the old resident trade in every part of the Pacific had its bases in the credit system, but borrowing in itself was a traditional aspect of island society. Only the co-operative of Ellice women on Kioa Island in Fiji has \(\ldots\)'never broken the no-credit rule, and to preserve its prosperity the members ruthlessly exclude all men, including their husbands, from membership' (CP 5/1965, p. 4).
sales of copra until each member has sufficient to cover these occasions. This will free the people from debts; and the old folk in particular are pleased for they are assured of a good send-off (Field notes, December, 1964).

The Association made up of nine societies on Rotuma has now been amalgamated into one society with branches, and the administrative overheads thus reduced (CP 37/1965, p. 10). The society has bulk storage sheds at a place of central loading, work boats for ship to shore lighterage, lorries to carry the copra, and vatas (copra drying trays on rollers) at central points on the island to which whole coconuts are transported for drying. This latter arrangement allows copra quality to be improved for the meat has the minimum degree of contact with air and dirt (CP 37/1965, p. 10). Table 8.5 summarises the progress of the Rotuman co-operative movement.

TABLE 8.5: COPRA MARKETED AND GOODS SOLD BY THE ROTUMAN CO-OPERATIVES.

<table>
<thead>
<tr>
<th>Year</th>
<th>Copra in Tons</th>
<th>Copra by Value $</th>
<th>Turnover by Co-op Store $</th>
<th>Distributed Profits $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td>231</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1957</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1958</td>
<td>na</td>
<td>127,600</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1959</td>
<td>na</td>
<td>129,726</td>
<td>48,656</td>
<td>na</td>
</tr>
<tr>
<td>1960</td>
<td>847</td>
<td>104,984</td>
<td>94,072</td>
<td>19,984</td>
</tr>
<tr>
<td>1961</td>
<td>825</td>
<td>104,848</td>
<td>101,120</td>
<td>13,710</td>
</tr>
<tr>
<td>1962</td>
<td>1,473</td>
<td>136,052</td>
<td>110,232</td>
<td>22,466</td>
</tr>
<tr>
<td>1963</td>
<td>1,357</td>
<td>156,212</td>
<td>176,062</td>
<td>6,726</td>
</tr>
<tr>
<td>1964</td>
<td>1,620</td>
<td>105,450</td>
<td>184,362</td>
<td>11,300</td>
</tr>
</tbody>
</table>

Sources: Co-operative Department Suva CP 37/1956, p. 11
Fijian Marketing Unions

Most of the buying activities of village co-operatives are devoted to copra. A number of societies handle yagona, trochus shells, and fresh produce; but because of the risks involved there is a general reluctance to enter this latter enterprise. Some of the islands with ten hours run from Suva have a potential for the growing and transporting of fresh produce to market; and the realization of this latent source of cash incomes has given rise to the idea of integrated Marketing Unions.

A few village co-operative societies on the islands of Koro and Gau have formed Unions for the purpose of sending their yagona, voivoi, and root crops to Suva. The two island Unions also retain sellers in Suva in order to by-pass the market middleman. But these marketing organisations have proved a financial failure, for... 'poor shipping facilities resulted in overlong storage, and losses through deterioration added to high handling costs'... (CP 5/1965, p. 5). A proportion of the high 'handling costs' were the result of committee members accompanying the produce to Suva (one of the attractions of the Unions) and through expenses incurred by maintaining a seller at Suva. The overheads of the Marketing Unions were out of proportion to the volume of their business - as is clearly shown by Table 8.6 which is a copy of the accounts of the Gau Marketing Union.
**TABLE 8.6: ACCOUNTS OF THE GAU MARKETING UNION,**
8.11.63 to 30.10.64.

<table>
<thead>
<tr>
<th>EXPENSES</th>
<th>£P</th>
<th>Purchases</th>
<th>Sales</th>
<th>Closing Stock</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freight &amp; Insurance</td>
<td>£59.14.0</td>
<td>1819</td>
<td>2238</td>
<td>102.1</td>
<td>495.58</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>14.10.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of pounding</td>
<td>119.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yqonya</td>
<td>119.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cartage</td>
<td>29.18.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationery</td>
<td>1.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travelling</td>
<td>16.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market fees</td>
<td>68.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>407.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent</td>
<td>183.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Expenses</td>
<td>4.129</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Rates</td>
<td>20.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>18.411</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>£2835.74</td>
<td>1819</td>
<td>2238</td>
<td>102.1</td>
<td>495.58</td>
</tr>
</tbody>
</table>

Source: Co-operative Inspectors' Records Suva.

**Itinerant Traders in Fiji**

A certain amount of itinerant trading is done by almost every vessel in Fiji. At least one of the merchant company ships in 1964 had a trade 'chest' on board which stocked goods not normally carried by village shops; the sales of these averaged about £660 on each trip of ten days duration. Some smaller vessels carry cargo 'on spec' which the supercargoes sell to individuals, village shops, and unregistered co-operatives. The stores occasionally pay for the cargoes by cheque and the supercargoes are relied on to judge just how solvent they are - the experienced supercargo has general idea of this.
On the buying side the most popular commodity purchased by itinerants is yagona. Supercargoes will buy this in the villages as they move around the coast on foot or by 'putt-putt' (launch with outboard motor) ahead of the trading vessels. Indian peddlers from Suva also take passages on board cutters for this purpose, but they generally come into conflict with the captain and supercargo who will often refuse to carry them. Other Indian and part-European traders operate out of Levuka; from this port they can easily reach Koro and other Lomaiviti islands by large open boats fitted with outboard motors. The village people are usually paid about 20c to 30c per estimated lb for yagona root by the shipboard traders, who then sell yagona to market middlemen in Suva (usually Indians) for 35c to 45c per lb. After pounding the root the market vendors retail the powder at 45c to 60c per lb and also export it to some non-producing islands in the drier zones.

There are only a few places in Fiji which are so completely devoid of any form of trade store that they are entirely dependent on itinerant traders. One of these is the island of Qelelevu which lies 50 miles north east of Taveuni and well off the interinsular trade routes (see Fig. 7.1). There were 40 inhabitants in April 1964 and they produced about 100 tons of copra per annum. A co-operative inspector wrote of it:

Qelelevu has been badly exploited by a private trader who brings in goods from his boat and buys off their copra on the beach. The boat visits every 6 weeks, and it is the only way of contact with the rest of the colony. There is no radio
transmitter there. (Fiji Co-operative Survey, April, 1964).

Yanuca Island in the same region has similar problems. There are no trade stores and trading is done on the beach with itinerants. Both of these islands possess small boats but few people would risk crossing the open reef-studded sea between Qelelevu and the mainland other than in an emergency.

Vessels belonging to a Fijian trader call at most of the Yasawa islands and exchange store goods for copra. During the periods when copra prices are low this trader and other Fijian middlemen may offer producers higher than the Lautoka prices for copra on the spot. They can do this by paying an extra $4 to $6 per ton to the producers in lieu of the cess deductions they have made, and crediting the deductions of $22 on the ton to themselves; in this way they build up financial reserves with the Fiji Development Fund.

Direct Marketing by Fijians

The people on the island of Beqa 25 miles from Suva can market their bananas, yams, tomatoes and other fresh produce a few hours after collecting these from their food gardens. About a dozen launches operate between Beqa and Suva; the growers travel in with their produce and sell it to market stall holders who meet the launches at Nubukalou Creek opposite Suva Municipal Market.

By far the most extensive system of direct marketing by Fijians is the Yasawa-Lautoka trade. What is called the 'Yasawas' for convenience comprises the island chain of the Yasawa Islands, Mamanuca Islands, and Malolo Island.
off Western Viti Levu. They are mainly small islands of volcanic origin and lie at distances from 14 to 60 miles from Lautoka. There are few non-Fijians among the people on these islands (a Chinese planter leases freehold property on Malolo Lailai) and only one non-Fijian trader - a Scotsman on the island of Tavewa. But there are four to six Fijian middlemen who purchase copra on behalf of Indian merchants in Lautoka and for the Fijian entrepreneur already referred to above. Otherwise marketing is direct to Lautoka and to a lesser extent to Ba.

Contact with Lautoka is maintained¹ by a fleet of locally built cutters, many of which are now fitted with outboard engines. People travel in with the cutters in order to sell copra, coconuts, yams, breadfruit, bananas, lai ros (land crabs), dried fish, fowls, goats, mats, and voivoi. The cutters are overloaded with passengers and produce on the way to Lautoka, and are equally so on the return trip to the islands, when they contain quantities of building material, benzine, store goods, second-hand furniture, and yagona. Passengers pay a fare of from $1.50 to $3 for the round trip and copra is charged at a rate of 60 cents per bag. Most of these boats arrive towards the end of the week and sail again on Sunday or Monday. While they are in Lautoka the majority of passengers appear to find accommodation with relatives.

Marketing at Lautoka takes several forms. Fresh produce, fowls and goats are often sold to Indian market middlemen on the beach, or the fresh produce is bought by

¹About 2,400 calls were made at Lautoka by Yasawa cutters during 1964 (Rhinoceros Beetle Inspector's Records).
Fijians who meet the boats (often stevedores loading sugar ships). Some people carry the products they have brought in from the islands to the municipal market and there sell them to a stall-holder. Others, almost invariably women, will sit on the ground in a group at the market to sell fresh produce, crabs and coconuts.

Copra is seldom sold on the beach at Lautoka. Usually the buyers at that port will pay a man to watch for the arrival of the boats during the early morning and evening. His duty is to telephone the buyer who will send a truck to the wharf and transport the sellers and their copra to his weighing shed (one buyer reported fourteen sellers accompanying fifteen bags of copra). Prices paid by the two main buyers at Lautoka vary, to the cutter traders, from five to ten dollars below the Suva price, but the money is always paid on the spot ¹.

¹There are a number of Fijian boat builders in the Yasawas. When one of these boats is required people will send for a builder and they will equip him with the building materials, assist him in the work, and provide his food. The carpenter is paid in cash and by the presentation of mats, yagona and store goods when the boat is built. Now that so much of the boat building material is obtained from Lautoka a number of cutters have been constructed at Vio Island in that port. When for example the people of Yanuia Island wanted a boat they sent a message to Naisisili in the northern Yasawas for Wisaki one of the sons of Tavila a well known boat builder. He came and lived on Vio for three months with some people from Yanui while the boat 'Marama ni Yanuia' (lady of Yanuia) was under construction. This boat (see Plate 13) of 28 feet in length, broad beamed, shallow drafted, and with a transom stern, is typical of the Yasawa type (Field Notes
General comments on marketing and retailing in Fiji

The choice of marketing channels in some areas of Fiji are comparatively diverse. People can either sell to a trader or co-operative at or near their village, await the arrival of a ship and send their produce for sale to a main centre or travel with their products to a regional centre on a village boat. In more remote areas of Fiji people have to take whatever opportunity offers in the way of itinerant traders. Table 8.7 shows the proportions of copra marketed by the various classes of producers through the main marketing channels in Fiji.

**TABLE 8.7: COPRA MARKETING IN FIJI, JULY, 1963 TO JUNE, 1964**

<table>
<thead>
<tr>
<th>Marketing Channel</th>
<th>Estate Copra Tons</th>
<th>Fijian Copra Tons</th>
<th>Rotuman Copra Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consigned direct to Suva</td>
<td>7941 47.3</td>
<td>2359 10.4</td>
<td>-</td>
</tr>
<tr>
<td>Sold to Island Trade Stores</td>
<td>4600 27.2</td>
<td>12541 54.8</td>
<td>560 25.0</td>
</tr>
<tr>
<td>Sold to Island Co-operatives</td>
<td>-</td>
<td>6200 27.0</td>
<td>1640 75.0</td>
</tr>
<tr>
<td>Consigned direct to overseas Agents</td>
<td>4300 25.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Carried by producers to ports</td>
<td>-</td>
<td>1800 7.8</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>16841 100</td>
<td>22900 100</td>
<td>2200 100</td>
</tr>
</tbody>
</table>

1 The twelve month period adopted by FDFB.
2 A proportion of 'Fijian' copra consigned directly to Suva was from unregistered co-operatives.

Sources: Copra Weighbridge Analysis, Fiji Development Fund Board Records, Department of Co-operatives Suva, Punja & Sons Lautoka, Viti Oils Ltd. Lautoka.
It will be noted from Table 8.7 that Fijians sell a little over half their copra to private traders. As the co-operative movement grows Fijians may be expected to market a greater proportion of their copra through this channel. The Department of Co-operatives in turn would be expected to become more active in wholesaling consumer goods to the societies, and in purchasing more of these goods directly from overseas instead of from company importers. The co-operative movement may therefore in the future represent the 'countervailing power' against the highly integrated companies - a balance which the Burns Commission felt was needed in Fiji (CP1/1960 para 1).

On the other end of the scale from the integrated marketing and retailing organisations are the direct marketing channels of the Fijians. This system is characterised by the carriage of small quantities of produce for sale by the growers and by the use of many small craft - each with a set of sails, almost all with outboard engines, and nearly all crewed by two to three seamen. Purely on technical grounds this transport system is over-capitalized in the provision of equipment and power, under-capitalized in the provision of safety standards, and overmanned. One of the difficulties in assessing direct marketing systems however lies in the social roles which they perform, and hence in the incentives which they may have for production. A general proposition could be adopted for an assessment such as:

If manpower or capital is used in marketing when it would yield a higher real return in some other employment, the community is by so much the poorer from this misuse of resources (Galbraith and Holton, 1955, p. 1).
It is possible, by the above standard, to object at least to the overduplication of capital resources in the Yasawa trade. But Bauer warns against the confusion of technical and economic efficiency, and goes on to point out that:

The criticism of a multiplicity of traders may also partly stem from a widespread and influential desire for tidy and controllable economic arrangements; those who share this desire regard the existing unorganised and seemingly chaotic arrangements as irrational (1954, p. 27).

People in the Yasawa villages and informants on board the cutters have stated frankly that they prefer to travel directly by small boat rather than send produce to market on a larger vessel. The main reason they give is that store goods are cheaper in Lautoka than they are in the villages. This argument is rather circular however, for many of the people who sell the store goods in the villages have purchased these at Lautoka and have added high mark-ups to help cover their boat fares and freights. The high costs of these goods, in turn, appear to induce other villagers to make the trip to the port. In actual fact many of the reasons given for the preference for direct marketing from the Yasawa Islands

1A comparison of a few items gives some idea of this:

<table>
<thead>
<tr>
<th>Items</th>
<th>Price in Lautoka</th>
<th>Price in Northern Yasawa Islands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes (10)</td>
<td>1/1d.</td>
<td>1/3d.</td>
</tr>
<tr>
<td>Matches (box)</td>
<td>1/2d.</td>
<td>3d.</td>
</tr>
<tr>
<td>Tea (½ lb.)</td>
<td>1/7d.</td>
<td>3/3d.</td>
</tr>
<tr>
<td>Dripping (½ lb.)</td>
<td>1/9d.</td>
<td>3/1d.</td>
</tr>
</tbody>
</table>

Sources: Department of Co-operatives, Western Division Survey.

Field observations.
seem to be partial rationalizations of a desire to visit the port town as often as possible, but this desire may in turn be an important incentive to production. The following extract from field notes illustrates this and the individualistic character of direct marketing in the area:

An old man named Raiqau from the island of Nacula was on board the 'Adi Beti' on Sunday morning. He had 2 lbs of tea, a half sack of rice, and a quarter sack of brown sugar; he was now waiting for the other passengers and crew to arrive in order to return home.

Raiqau said he had arrived at Lautoka on Friday evening and slept on the boat. On Saturday morning he took a bus to the market with one Fijian boy who helped him carry three baskets of dried fish (about 30 fish). The fish were sold at 2/6d to 3/- each and with the money he bought the stuff and some tobacco. On Saturday night he slept with relatives.

He would come again in about three weeks time and by any boat that was leaving. He said he did not want anyone to bring his fish for sale because it was a good change to come (January, 1964).

Compared with the other two territories there is apparently laissez-faire in the island trade of Fiji. However there is a feature of indirect governmental influence on marketing which has been mentioned in various parts of this chapter and is worth further comment; this is the compulsory deduction of $22 from each ton of copra sold by Fijians. The accumulated money may be drawn on annually by the people either individually or collectively (depending on what basis the deductions were made) for approved purchases or projects, and one of the most popular uses of the cess
is for housebuilding. This accounts for a large proportion of the building materials which leave Suva and Lautoka for the islands (see Chapter 10). Once people have built a 'European' (semi-European) styled house they usually aspire to having some 'European' furniture; hence the trips to the second-hand furniture dealers in Suva. Another item of expenditure from cess savings made on boat building, especially in the Yasawas, and to this people add an outboard engine also from the cess. Table 8.8 shows the main uses of cess money affecting interinsular trade during the year ending 31st July, 1963.

**TABLE 8.8: SOME PURPOSES FOR WHICH CESS WITHDRAWALS WERE USED DURING 1963.**

<table>
<thead>
<tr>
<th>Purpose of Withdrawal</th>
<th>Amount $</th>
<th>% of Total Cess</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Houses (258)</td>
<td>209,422</td>
<td>48.25</td>
</tr>
<tr>
<td>Timber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Launches and vessels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repairs to houses</td>
<td>99,000</td>
<td>20.00</td>
</tr>
<tr>
<td>Outboard engines (49)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Store buildings and fittings</td>
<td>10,958</td>
<td>2.20</td>
</tr>
<tr>
<td>Shares in co-op. societies</td>
<td>10,482</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Source: Fijian Development Fund Records

**Conclusion**

There is a gradation of Government participation in trade between the three territories. In the GEIC an integrated and apparently paternalistic triumvir of seven government agencies directs almost all aspects of overseas and island trading. Tonga functions commercially as a...
mixed economy with the marketing and transport sectors the hands of the state and the consumer supply sector under private enterprise. In Fiji on the other hand the Australian merchant companies are as important as they were in the 19th century.

The alternatives for producers which the Fiji system of privately controlled marketing offers, in contrast with Tonga and the GEIC, are more apparent than real; for, as the Burns Commission observed:

...producers find themselves faced by a group of buyers of copra closely connected with one another through agreements with Island Industries Ltd., a subsidiary of the large Carpenter Group of companies (CP1/960, p. 93).

Large monopsonistic marketing organisations are in fact common to all three archipelagoes. It will be recalled that with the centralisation at ports of entry there was little opportunity for overseas channels of trade to develop from the island regions and use of existing out island places of overseas loading declined. Even the independent trader, in modern times, inevitably lost control of exports at the point where they were loaded for transportation to the port town. He had also to rely on the port merchants to organise import distribution channels. At a certain stage of development a need would seem to have existed in all three territories for types of marketing organisation which would control shipments at the port towns. It was the merchant companies, followed in Tonga and the GEIC by Government agencies, that met this need.

Given the inevitable growth of centralised port town control over importing, exporting and distribution
the question remains as to what form of ownership of marketing and retailing channels are best suited to the outer islands as a whole. This might be answered simply and pragmatically as that which pays best from the point of view of the producers is the most efficient. Table 8.9 compares the returns to producers from island based buyers in the three territories during January, 1962 and by one example of copra consignments to Suva based buyers. The direct marketing of copra cannot be assessed in this way for the total costs involved are uncertain and price returns are in any case not the only factors involved.

From Table 8.9 columns a, b and c it could be concluded that the marketing system of the GEIC was wasteful since more than 50 per cent of the fob value of the copra disappears by the time the producers are paid. This, however, arises mainly from an export duty of 25 per cent on each ton of copra which has nothing to do with marketing 1. In Tonga there is likewise a 10 per cent export duty on copra, plus additional charges of 20 cents per ton as an 'export and wharfage tax', a levy of $1.50 per ton for ship replacement, and a 'working account reserve fund' charge of $1 per ton. Fiji with its greater resources is free from any revenue raising by direct taxation of copra exports. Only therefore when these Government deductions are

1The private copra estates on Fanning and Washington Islands also pay a 25 per cent tax on copra exports, but these company plantations arrange their own marketing.
<table>
<thead>
<tr>
<th>Place</th>
<th>a Fob price for Grade I at Export Port</th>
<th>b Price to Producers</th>
<th>c % Loss</th>
<th>d Price to Producers plus Govt. deductions</th>
<th>e % Loss due to marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEIC (throughout)1</td>
<td>117.00</td>
<td>51.30</td>
<td>56</td>
<td>80.50</td>
<td>31</td>
</tr>
<tr>
<td>Tonga (archipelago)2</td>
<td>112.75</td>
<td>80.80</td>
<td>30</td>
<td>84.60</td>
<td>25</td>
</tr>
<tr>
<td>Tonga Niuatopatapu</td>
<td>112.75</td>
<td>75.80</td>
<td>33</td>
<td>79.60</td>
<td>30</td>
</tr>
<tr>
<td>Fiji3 Central and Southern Lau</td>
<td>99.524</td>
<td>59.90</td>
<td>40</td>
<td>59.90</td>
<td>40</td>
</tr>
<tr>
<td>Fiji Savusavu</td>
<td>&quot;</td>
<td>84.10</td>
<td>15</td>
<td>84.10</td>
<td>15</td>
</tr>
<tr>
<td>Fiji Taveuni</td>
<td>&quot;</td>
<td>75.30</td>
<td>24</td>
<td>75.30</td>
<td>24</td>
</tr>
<tr>
<td>Fiji Taveuni (Consigned direct to mill)</td>
<td>&quot;</td>
<td>90.00</td>
<td>10</td>
<td>90.00</td>
<td>10</td>
</tr>
</tbody>
</table>

1 The prices shown were paid by 80 per cent of the cooperatives, the others paid slightly less. 2 The Tonga price includes the average 1962 deferred payment of $7 per ton. 3 Fiji prices have not had the $22 compulsory cess deducted. 4 This is the Suva mill price but it approximates to the price which Fiji copra would fetch fob. 5 Under marketing comes, in this case, transport costs, bags and twine, and middlemen charges. There is a corresponding percentage loss to islanders in the provision of consumer goods to these areas.

added to the price paid to producers can the marketing system *per se* be assessed with some approximation to accuracy. The adjusted returns are shown in column d and the percentage of losses to producers due to marketing are expressed in e.

Columns d and e show the GEIC in a better light, for were it not for Government deductions the returns to all producers throughout this vast area would compare favourably with the most accessible parts of Fiji and Tonga, and would be far superior to the returns receive by most producers in the remoter islands of Fiji. Marketing through Tarawa must nevertheless (at a 31 per cent loss to producers) be recognised as expensive, and it is partly the high quality of copra in the GEIC, reflected in the fob price (column a), which maintains the level of returns to the producers. This is also true of Tonga, but until recently there has been little real centralised action to improve the quality of Fijian copra.

In both Tonga and the GEIC the central authorities have for several years induced people to make better copra and hence improve their financial returns. Under the private traders all Tongan copra was poor, but in 1962 the bulk of the copra was of good quality and more than half the export was of the highest world standards (Table 8.10).

**TABLE 8.10: COPRA GRADES EXPORTED FROM TONGA DURING 196**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Source</th>
</tr>
</thead>
</table>
| I First Grade    | 64.17%     | (considered the world's best)  
| II Second Grade  | 2.74%      | see Silsoe 1962, p. 12 |
| III Fair Marketable | 32.79%  | (sun dried)             |

The authorities in the GEIC likewise introduced a campa
for improved copra in 1957 and Table 8.11 shows the
success of this.

**TABLE 8.11: COPRA GRADES EXPORTED FROM THE GEIC
1957-1962.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>17</td>
<td>29</td>
<td>61%</td>
<td>70%</td>
<td>79%</td>
<td>80</td>
</tr>
<tr>
<td>II</td>
<td>58</td>
<td>58</td>
<td>31</td>
<td>29</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>III</td>
<td>25</td>
<td>13</td>
<td>7%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>


By contrast the various grades from Fiji were in 1962 as
in Table 8.12.

**TABLE 8.12: COPRA GRADES MARKETED IN FIJI DURING
1962.**

<table>
<thead>
<tr>
<th>Grade</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>16.5% (Hot Air, poorer than Tonga and GEIC grade I).</td>
</tr>
<tr>
<td>II</td>
<td>36.0% (Sun dried, poorer than GEIC grade II).</td>
</tr>
<tr>
<td>III</td>
<td>47.5% (Smoke dried, very poor).</td>
</tr>
</tbody>
</table>

Source: Copra weighbridge analysis.

There are significant differences in the marketing
results of the three territories and in the quality of
copra marketed. Fiji is, relatively speaking, the mos
geographically compact of the archipelagoes but its
outer island marketing arrangements have the appearance
of extreme fragmentation. The most profitable arrange-
ment in Fiji is obviously to consign copra direct to th
mill at Suva, or to an overseas buyer. Usually only
the large producers can do this, for the others sell in
small quantities and require the money or consumer goods on the spot. The co-operatives are attempting to overcome this problem by purchasing members' copra in the islands. Unfortunately, losses incurred by the co-operatives in retailing consumer commodities (mainly due to secret credit) are often made good by transferring money from the profitable copra marketing sector of the business. This, and the duplication of co-operative societies on small islands, makes it difficult, at present, for some co-operatives to buy copra at prices appreciably above those which the island traders would give.

The development of an integrated co-operative system would, in spite of these organisational difficulties, appear to be the solution to marketing in the Fiji Islands from the point of view of the indigenous producers. Returns to producers may also be expected to increase as a result of the activities of the Copra Board acting on the recommendations of the Silsoe report. These developments, it will be noted, are in the direction of more Government influence in the island trade of Fiji.

On the retailing side it is more difficult to obtain reliable figures which are valid for more than one village at a certain time of day. However, there are a few conclusions which may be arrived at on prima facie grounds. In the first place where several fairly large traders coexist prices tend to be lower, and goods more varied, than are found in the villages or isolated
trade stores\textsuperscript{1}. This was clear in the case of Tonga where people would often sell their copra in the village and travel to the regional centres to spend their money. Regional centres are accessible to only a few producers in Fiji, namely those in the vicinity of the estate areas with their townships of Savusavu and Somosomo, or near the sugar districts and ports of Labasa and Lautoka. For the majority of people in the islands there are only small village shops or co-operatives, each stocking similar goods and, in the case of co-operatives, each incurring high overheads from a lack of economies of scale. The alternative for these village people is an expensive and protracted trip to Suva.

Fiji could be reaching a further stage in development when for some areas an island (or regional) centre may have become a necessity. Such places would, among other things, offer to the more enterprising traders and co-operatives a wider market for consumer goods, and to the people a better bargaining position, a more extensive range of goods, and the possibilities of improved services and facilities. This, after all, is one important criteria of economic development ... 'the widening of the range of alternatives open to people as consumers and producers' (Bauer and Yamey, 1959, p. 151).

\textsuperscript{1}This rather self-evident, but important, conclusion applies also to copra buying. Silsce pointed out in his report that the price differences between Suva and Savusavu were lowered in 1961 owing to the competition of new traders at Savusavu (1963, p. 84).
It was also pointed out in a previous chapter that under the present trading arrangements vessels called at almost all points along an island coastline, and because of the costs arising from this the point was made that there was a need for some sort of centralisation of cargo-working in certain areas. The two needs of marketing and shipping would appear to be reconcilable and to be in the direction of economic development - a point which will be discussed further below.
Chapter 9

PATTERNS OF SHIPPING AND TRADE INWARDS

Island Services

It is likely that under both the laissez faire and controlled conditions of trade that have been outlined, the most productive islands will obtain good services and thereby secure the most favourable marketing opportunities. It is also reasonable to assume that good services will further stimulate production for the market in such areas.

In spite of the apparent relationship between services and marketing there is some difficulty in making quantitative correlations between the actual volume of island production for the market and the frequency and regularity of services. One of the problems in attempting this is the virtual impossibility of finding islands which could safely be compared as similar in every significant way other than in the services they receive. Even in the atoll environments of the GEIC the variables are normally too numerous to allow the factor of services to be causally related to variations in island production. Only in the cases where there have been changes in the type of carriers used or drastic alterations to the pattern of shipping movements can this be done. Even here, however, in the absence of detailed information on many aspects of environmental or socio-economic conditions there is the danger of interpreting cause for effect and vice versa.

With the above reservations in mind it is possible
to cite only one instance when bad services appear to have resulted in a falling off in the volume of copra production. The Report of the GEIC Copra Board for 1958 (p. 3) points out that shipping connections were poor in that year and copra in the Ellice Islands had to await collection for considerable periods, at the same time the distributions of consumer goods were also disrupted. This, the Report says, caused production to languish due to a lack of incentives to the native producer.

Conversely, with well stocked trade stores and with capital available to purchase copra then shipping services should not appear to be critical as far as the volume of production is concerned. On the other hand, when the type of production is considered then the frequency and regularity of services are among the most important factors to be considered.

There are many islands in the Fiji archipelago with conditions of terrain, soils, and climate which would make feasible a trade in fruit, vegetables and livestock, but transport inadequacies confine their cash production to the relatively non-perishable trade in copra. Services in Fiji during 1964 are shown in Fig. 9.1. Places in most frequent contact with Suva are the port of Labasa and coastal areas en route, the estate regions of Eastern Viti Levu, and the island of Kadavu. Services are less frequent to the outer islands but of these northern Lau and the Moala Group are the most favoured. It will be seen also from Fig. 9.1 that while shipping is fairly well distributed there is a tendency for vessels to move around together.
Fig. 9.1
Sources: Suva Harbour Office Movement Book and Tonga Shipping Agency.
in the main regions and even in those trading areas that have a paucity of shipping.

These patterns of services in Fiji are affected not only by the productive capacity of the islands but also by freight rates. Many vessels prefer to make several trips from Suva to Kadavu (60 miles) and earn $8 per ton rather than face a voyage of 200 miles (often in bad weather) to the southern Lau Islands for a freight of $11.85. This is one reason for the high frequency of calls at Kadavu. In turn, the existence of this regular service undoubtedly encourages people to travel to and from Suva so that this has also become the busiest sea passenger route in Fiji (see Table 9.19).

In the case of Tonga frequent contact with the capital is important but less essential than it is in Fiji for there are outer island regional ports of entr Fig. 9.1 indicates that services from Nuku'alofa to the main ports in the central and northern regions average about one per week, but services to Niuatoputapu and Niufao'ou only averaged one per month.

The islands of the GEIC have no real market potential for anything other than copra. There are nevertheless economic advantages to be derived from lying in the zone of frequent contact with Tarawa. Fig. 9.2 shows that the frequency of services fall off to the south of Abemama. It will be seen later that people on some islands in the zone of more frequent services are able to increase their cash incomes through the sales of roofing thatch to Tarawa, and it is also from the nearer islands that labour is sometimes obtai
GEIC
FREQUENCY OF SERVICES
1963

BUTARITARI
MAIANA
ABEMAMA
NONOUTI
ONOTOA
ARORAE
NANUMEA
NIU
FUNAFUTI
NUKULAELAE

☑ ONE OR MORE SHIPS IN A MONTH
☐ NO SHIPS

Fig. 9.2
Source: Marine Dept., Tarawa.
of overseas vessels at Betio. The passenger flows inward from all these port towns are now considered in detail.

The exports of Fiji's domestic exports are made up copra products. In Tonga the export of unextracted coconut normally amounts to 80 per cent of the total value of imports. In the GEIC, if phosphates from Ocean Island are included, copra is the only significant export. A comparison of copra production in each of the islands is given by Table 9.1.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{Coconut Production} )</td>
<td>38.3</td>
<td>30.3</td>
<td>28.9</td>
<td>31.5</td>
<td>34.6</td>
<td>39.5</td>
<td>41.2</td>
</tr>
<tr>
<td>( \text{Phosphates} )</td>
<td>22.1</td>
<td>22.1</td>
<td>16.0</td>
<td>16.1</td>
<td>17.4</td>
<td>8.8</td>
<td>10.0</td>
</tr>
<tr>
<td>( \text{Rattan} )</td>
<td>2.4</td>
<td>4.0</td>
<td>7.8</td>
<td>5.5</td>
<td>5.8</td>
<td>5.9</td>
<td>4.0</td>
</tr>
</tbody>
</table>

\( \text{Copra Production in '000 Tons for the Three Archipelagoes.} \)

\( \text{f of the copra in Fiji comes from the eastern coasts of Vanua Levu and the island of this latter proportion close on 65 per cent are} \) exported to Suva by the main vessel of the \( \text{p of companies and most of the balance is loaded on the cargo ship belonging to Burns Philp.} \)
Fig. 9.3

Sources: Island Industries, Ltd., UNO Company,
TABLE 9.2: COPRA TO EACH PORT IN FIJI BY MONTHS, 1963
(IN TONS)

<table>
<thead>
<tr>
<th></th>
<th>Suva</th>
<th>Levuka</th>
<th>Lautoka</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>2,104</td>
<td>396</td>
<td>160</td>
<td>2,660</td>
</tr>
<tr>
<td>February</td>
<td>2,405</td>
<td>246</td>
<td>90</td>
<td>2,741</td>
</tr>
<tr>
<td>March</td>
<td>2,200</td>
<td>305</td>
<td>100</td>
<td>2,605</td>
</tr>
<tr>
<td>April</td>
<td>2,793</td>
<td>210</td>
<td>120</td>
<td>3,123</td>
</tr>
<tr>
<td>May</td>
<td>3,404</td>
<td>273</td>
<td>260</td>
<td>3,937</td>
</tr>
<tr>
<td>June</td>
<td>3,402</td>
<td>571</td>
<td>220</td>
<td>4,193</td>
</tr>
<tr>
<td>July</td>
<td>3,776</td>
<td>299</td>
<td>120</td>
<td>4,195</td>
</tr>
<tr>
<td>August</td>
<td>3,402</td>
<td>310</td>
<td>130</td>
<td>3,842</td>
</tr>
<tr>
<td>September</td>
<td>3,293</td>
<td>318</td>
<td>140</td>
<td>3,751</td>
</tr>
<tr>
<td>October</td>
<td>3,081</td>
<td>487</td>
<td>140</td>
<td>3,698</td>
</tr>
<tr>
<td>November</td>
<td>2,691</td>
<td>208</td>
<td>150</td>
<td>3,049</td>
</tr>
<tr>
<td>December</td>
<td>2,732</td>
<td>298</td>
<td>270</td>
<td>3,300</td>
</tr>
<tr>
<td></td>
<td>35,283</td>
<td>3,921</td>
<td>1,900</td>
<td>41,104</td>
</tr>
</tbody>
</table>

Sources: Island Industries Ltd. Suva
Uno Co. "
Viti Oil Ltd. Lautoka "
Punja Bros. "
Custom Collector's Record Book. Levuka

The month to month variations in the supply of copra in Fiji are always superimposed on the overall potential yield of the archipelago. Table 9.3 indicates that this varies annually mainly as a consequence of drought and hurricanes.

The general pattern of copra trading shows Suva as the main copra port (Fig. 9.3). Levuka has, nowadays, only a minor role in this trade. Copra from Rotuma is often transhipped overseas from Levuka and a certain amount of copra is unloaded there from the islands. Table 9.4 gives a sample of this latter copra trade.
### TABLE 9.3: FLUCTUATIONS IN THE ANNUAL SUPPLY OF COPRA IN FIJI

<table>
<thead>
<tr>
<th>Year</th>
<th>Tons</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>34,637</td>
<td>(Hurricane)</td>
</tr>
<tr>
<td>1949</td>
<td>32,723</td>
<td>(Hurricane effects)</td>
</tr>
<tr>
<td>1950</td>
<td>28,197</td>
<td>&quot;</td>
</tr>
<tr>
<td>1951</td>
<td>35,832</td>
<td>&quot;</td>
</tr>
<tr>
<td>1952</td>
<td>40,095</td>
<td>(Recovery)</td>
</tr>
<tr>
<td>1953</td>
<td>33,040</td>
<td>(Hurricane)</td>
</tr>
<tr>
<td>1954</td>
<td>37,584</td>
<td>(Hurricane effects)</td>
</tr>
<tr>
<td>1955</td>
<td>39,734</td>
<td>(Recovery)</td>
</tr>
<tr>
<td>1956</td>
<td>41,164</td>
<td>(Low rainfall)</td>
</tr>
<tr>
<td>1957</td>
<td>38,300</td>
<td>(Low rainfall effects)</td>
</tr>
<tr>
<td>1958</td>
<td>30,296</td>
<td>(Hurricane)</td>
</tr>
<tr>
<td>1959</td>
<td>28,932</td>
<td>(Hurricane effects)</td>
</tr>
<tr>
<td>1960</td>
<td>34,055</td>
<td>&quot;</td>
</tr>
<tr>
<td>1961</td>
<td>40,577</td>
<td>(Recovery)</td>
</tr>
<tr>
<td>1962</td>
<td>39,474</td>
<td>&quot;</td>
</tr>
<tr>
<td>1963</td>
<td>41,110</td>
<td>&quot;</td>
</tr>
<tr>
<td>1964</td>
<td>40,803</td>
<td>&quot;</td>
</tr>
</tbody>
</table>


Some of the copra unloaded at Levuka from small local launches trading to Lomaiviti is loaded again on to vessels for Suva. The tonnages shown from Taveuni and Savusavu are, however, for export. This latter trade may soon suffer a decline, for, in accordance with the recommendations of the Silsoe Report, copra exports will be restricted in favour of more 'end products' from local industries. It was, in fact, proposed in the Fiji Legislative Assembly during February, 1966 that maximum copra exports from Fiji should be fixed at 2,000 tons per annum (Fiji Times, 11 February, 1966, p. 2).
The copra trade of Tonga is affected by many of the factors which have been outlined for Fiji. If the year before the 1961 hurricane is taken then the 'normal' seasonal pattern of supply will be seen from Table 9.5 to be similar to that of Fiji. The annual fluctuations, on the other hand, are even more marked (Table 9.6). Fig. 9.4 shows a typical pattern of copra flows in the Tonga archipelago.

The monthly supply of copra in Tonga may be influenced to a slight degree by short term price changes. A rising price, for example, may induce some people to hold their copra back in the hope of even better returns later. Prices change weekly in Fiji and small traders in particular occasionally attempt to 'play the market' in this way before they sell to merchants. In Tonga there is a monthly price change but by listening to Radio Fiji the Tongans can discern the price trend and decide whether to sell at that time or wait for the monthly change announced by the Copra Board. This is always in the same direction as the price movements in Fiji since both prices depend on a common world base determined mainly by variations.
Fig. 9.4
Source: Tonga Copra Board.
### TABLE 9.5: SEASONAL COPRA DELIVERIES TO EACH PORT IN TONGA DURING 1960.

<table>
<thead>
<tr>
<th>Month</th>
<th>Vava'u</th>
<th>Ha'apai</th>
<th>Tongatapu</th>
<th>Total tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>1,168</td>
<td>562</td>
<td>1,666</td>
<td>3,396</td>
</tr>
<tr>
<td>February</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>1,539</td>
<td>669</td>
<td>2,070</td>
<td>4,474</td>
</tr>
<tr>
<td>April</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>1,230</td>
<td>791</td>
<td>2,412</td>
<td>4,433</td>
</tr>
<tr>
<td>July</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>826</td>
<td>622</td>
<td>2,435</td>
<td>3,883</td>
</tr>
<tr>
<td>October</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>4,763</td>
<td>2,844</td>
<td>8,588</td>
<td>16,190</td>
</tr>
</tbody>
</table>

Source: Tonga Copra Board Records.

### TABLE 9.6: FLUCTUATIONS IN THE ANNUAL SUPPLY OF COPRA IN TONGA.

<table>
<thead>
<tr>
<th>Year</th>
<th>Tons</th>
<th>Year</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>16,500</td>
<td>1959</td>
<td>15,901</td>
</tr>
<tr>
<td>1953</td>
<td>12,600</td>
<td>1960</td>
<td>16,209</td>
</tr>
<tr>
<td>1954</td>
<td>14,223</td>
<td>1961</td>
<td>17,411</td>
</tr>
<tr>
<td>1955</td>
<td>18,796</td>
<td>1962</td>
<td>8,690</td>
</tr>
<tr>
<td>1956</td>
<td>27,332</td>
<td>1963</td>
<td>9,900</td>
</tr>
<tr>
<td>1958</td>
<td>13,834</td>
<td>1964</td>
<td>10,823</td>
</tr>
</tbody>
</table>

Source: Annual Statements of Trade and Navigation.
in the price of Philippine copra.

In the GEIC almost 75 per cent of the copra produc
ing in the main chain of islands comes from the region
Abemama to Little Makin (see Fig. 9.5). In other word
it comes from within 120 miles of Tarawa. The favourable location of the port of Betio may therefore be
appreciated from the point of view of minimising the
ton/miles of work to be done in the copra trade.

Fig. 9.6 shows the great range of copra production
which occurs in the GEIC; especially in the central
and southern Gilberts, and this represents one of the
main economic and shipping problems of the archipelago
trade. Fig. 9.6 also gives the variations in rainfall
and the copra price trend over a seven year period.
It will be seen that improved rainfall following severe
droughts during 1955/56 brought increased production
throughout the period 1957/59. There was also at this
time a steep rise in the world price of copra (expresse
by fob value); these two factors certainly seem to
have been the basis for the exceptionally high output
shown in the Fig. 9.6 for the central and southern
islands.

A marked fall in copra production occurred in the
Gilbert Islands in 1960, rainfall also decreased during
1959/60, and so did the price of copra. But these may
not have been the critical factors in that year, for
the Report of the GEIC Copra Board for 1961 states:

The reduction of copra output by 31.6 per cent is not easily explainable as the weather was
favourable. It was generally felt that heavy
cutting in 1959 caused a temporary shortage of
ripe nuts during the middle months of 1960 (p.5).
Fig. 9.5
Source: Copra Board, Tarawa.
Why the copra production in the northern group remained below average until 1961 is unknown. Possibly more stringent grading from 1957 onwards may account for some decrease, for people who could not make good copra may have decided not to make any, and the higher than average rainfall would, in any case, have created difficult drying conditions for producers without hot air driers.

Copra production in the Ellice has presented a problem for several years as the ships have been required to make long voyages for what have been very small quantities of copra. According to the Colony Conference Report of 1962 (p. 41, para. 22) annual production in the Ellice has fallen by 200 tons since a period after the Second World War, however it was not possible to substantiate this from Copra Board figures. It has been suggested earlier in this chapter that poor shipping services and the running down of stock in island stores may have had something to do with the decline. Other factors may also have contributed, such for instance as the general increase in population and concomitant increases in the drinking of green nuts the destruction of coconuts by rats, the availability of money from Ocean and Nauru, and the employment of people in the building of an airport and hotel at Funafuti.

There is little doubt that the poor showing on the part of the Ellice islanders in the copra trade has bee the cause of some bitterness amongst the Gilbertese, and a European informant wrote:
The Ellice are suffering economic decline mainly because they are too lazy to work copra and also drink most of the coconuts instead of waiting for them to mature when they can be used to produce copra. The drinking of the nuts is a real problem in the Ellice and is not necessary as there is plenty of rain. (Pers. com., 1964).

This type of criticism has had some effect, or so it would seem, for without any overt changes in the physical environment, transport, or socio-economic conditions in the Ellice Islands production suddenly soared during 1964. The inset in Fig. 9.6 shows what happened to copra output on the island of Viatupu between 1963 and 1964.

While there is often a correlation between climatic conditions and the volume of copra trade in the GEIC it has nevertheless been emphasised in this description that social factors ('target income occasions') which are not always predictable or even discernible, are also at work and they affect the seasonality of supply. As a final indication of this the 1962 Report of the GEIC Copra Board shows the extra production made to finance the Queen's Birthday celebrations in June (an important and ostentatious occasion in the GEIC), and to meet the payment of landowner's tax due in July. There is a deep trough from October to November while nuts are being conserved, and then a sudden rise to a maximum monthly production for Christmas. This is followed by a fall in production during the holiday period.
GEIC
COPRA PRODUCTION RAINFALL AND PRICE

North

Central

South

Ellice

F.O.B. # A

Copra Tons

Rainfall Inches

Fig. 9.6
Sources: Copra Board and Dept. Co-operatives, Tarawa.
Effects of variations in the supply of copra

Most of the shipping movements in the archipelago are geared to the supply of copra. During the low producing months in Fiji a vessel will extend its trading areas and range widely over a group of islands. Several vessels may then be competing for cargoes along the same island coastline. For the islanders of Lomaviti and Lau this often means improved contact within their group. In months of high copra production vessels tend to run to more limited areas and islands or villages where delays may be expected are often neglected. Under these circumstances travellers who wish to move from one part of their group to another must often come first to Suva and go out again on a different vessel. Table 9.7 shows diagramatically the effect of seasonal changes in copra production on the routing of vessels trading to the Lau islands.


<table>
<thead>
<tr>
<th></th>
<th>Northern Lau</th>
<th>Central Lau</th>
<th>Southern Lau</th>
</tr>
</thead>
<tbody>
<tr>
<td>June July</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>19</td>
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<td>November</td>
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<td>December</td>
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<tr>
<td>January</td>
<td></td>
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<tr>
<td>February</td>
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<td>2</td>
</tr>
<tr>
<td>March</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Inward and outward books, Harbour Office, Suva

Copa production in Tonga has not as yet recovered
from the 1961 hurricane and in the interim period there have been seasons of minor destruction. When peaks do again occur it is likely that the new Tongan foreign-going vessels will be available for additional runs throughout the islands - although the whole structure of the trade in coconut products is likely to be altered in the near future (see Chapter 11).

The problem of meeting copra peaks is much more complex and acute in the GEIC. Usually the Wholesale Society will obtain the assistance of Government and Mission vessels. Table 9.8 shows this type of arrangement during one high and two slightly above average years.

**TABLE 9.8: CARRIAGE OF ABOVE AVERAGE COPRA PRODUCTION IN THE GEIC.**

<table>
<thead>
<tr>
<th>Ships</th>
<th>1959</th>
<th>1960</th>
<th>1961</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale Society</td>
<td>3,838</td>
<td>3,078</td>
<td>3,415</td>
</tr>
<tr>
<td>Tangitang and Co-op.</td>
<td>1,995</td>
<td>2,207</td>
<td>2,136</td>
</tr>
<tr>
<td>Government</td>
<td>1,345</td>
<td>180</td>
<td>159</td>
</tr>
<tr>
<td>Mission</td>
<td>413</td>
<td>170</td>
<td>104</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>7,591</strong></td>
<td><strong>5,572</strong></td>
<td><strong>5,814</strong></td>
</tr>
</tbody>
</table>

*Includes sailing craft and barges on Tarawa Lagoon.*

*Source: Annual Reports GEIC Copra Board, 1960-6;

Despite the availability of some additional shipping resources it does not follow that the efficient collection of copra can be carried out in the scattered GEIC. Efficiency frequently depends on where the peak production has occurred; in 1959, for example, this was concentrated in the central and southern islands of the Gilberts while the northern islands and the Ellice
Islands were below average, collecting was therefore relatively easy. During 1961 the slightly above average output was spread throughout the archipelago and shipping was hard pressed to bring all the copra to Tarawa in order to connect with the overseas vessel.

Fig. 9.7 shows that when overseas ships came to load at Tarawa during 1961, there were always 600 to 800 tons still awaiting collection in the outer islands. Unfortunately, statistics are not available to show the situation in the even more productive year of 1959. However, after 1961 production fell in the southern Gilberts and in most of the Ellice Islands and ships could concentrate in the central and northern groups. As a result cargoes in the outer islands only on one occasion stood above 450 tons while copra was actually being loaded at Betio for overseas.

It would appear that the GEIC policy is to supply sufficient tonnage to meet normal conditions throughout the group. If so, it is fairly certain that should production remain above the current average in the Ellice the greatly increased ton/miles capacity required in the copra trade will lead to a demand for more shipping space. If this is met by the purchase of another vessel then when low producing years come around there will be excess capacity. This is a difficult problem for it is always wasteful of transport resources to provide for peaks. On the other hand if shipping in the GEIC has a 'welfare' rather than a purely economic orientation then periodic excess shipping tonnage may be preferable to the frustrating situations which appear to have arisen in the Ellice
Fig. 9.7


(note: solid line peaks indicate that an overseas ship has loaded.)
due to a shortage of shipping in the immediate past. There is yet another alternative to simply increasing the number of vessels in the GEIC which will be discussed in a subsequent chapter.

**The Banana Trade**

The patterns of trade in bananas have altered on several occasions in Fiji and to a lesser extent in Tonga. Before the 1914-18 war bananas were grown for export on Viti Levu and to a lesser extent on Kadavu, mainly by Chinese and European planters, but occasionally as far back as 1911 a Union Steamship Co. vessel would load bananas at Savusavu (Cd 6007-27, 1911, p. 8, F). However, as a result of the high tariffs imposed by Australia on banana imports during 1919, and the later depressed conditions in the trade, many planters withdrew from this activity. By 1932 Fijians were producing 64 per cent of the banana crop and by 1936 their share had risen to 90 per cent (Ackland, 1937, pp. 25-6). There was by then a quota agreement with New Zealand and the export crop had spread to Cakaundrove, Koro, Gau, Nairai, Ovalau, Vatulele and Moala, and had continued to extend in eastern and southern Viti Levu and on Kadavu. This distribution of bananas remained almost unchanged until after the Second World War when it was recommended by Paterson and Dodds that the export industry be reconcentrated in south eastern Viti Levu (CP 29/1945, pp. 23-5).

In addition to unsatisfactory banana trading conditions, which were discouraging island growers, the high post-war demand for copra was also occupying the
attention of Fijians in the outer islands so that the reconcentration of bananas in Viti Levu was made easy. After a hurricane in 1952, however, it was decided to again encourage the dispersion of the crop (CP 52/1951). As most of the islands of the 'wet zone' and eastern Vanua Levu offered good growing conditions the only obstacle was transportation. This was never adequately solved.

The cumbersome methods of collecting the produce have already been described (Chapter 7) and the small cutters were furthermore unsuited to the task. The records of the Produce Inspectors at Suva from 1955 to 1963 have many references to losses of shipments as a result of inadequate and unreliable shipping. The main causes were delays through engine failures, poor ventilation which caused gases to form and the subsequent deterioration of the fruit, the inability to keep to schedules, and bad weather on the coasts. The Inspector recorded in August, 1960, for example, that... 'rough weather on the windward side of Koro prevented cutters getting in to lift fruit from the best area of production.'

Freights were high in the banana trade\(^1\) and when

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\(^1\) Growers in proximity to Suva could, in 1964, expect $2 to $2.40 per case, those in the upper valleys who transported their fruit by bilibili (bamboo rafts) and trucks would have had a return of about $1.50 per case, whereas the growers on Moala island who shipped by sea alone would only receive 87 cents per case when freights and other overheads were deducted (Fiji Banana Venture, Report, 1963).
losses of shipments or rejections of fruit took place the returns to growers amounted to very little and some of them incurred debts (Fiji Banana Venture, Report, 1963, p. 3). In June, 1961 the island of Moala withdrew from shipments and in August of that year producers on Ovalau, Koro and Kadavu refused to pack and some cutters returned empty to Suva. Table 9.9 shows the rapid decline of the banana trade from places outside Viti Levu.

**TABLE 9.9: SOURCES OF BANANAS EXPORTED FROM SUVA.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage from Viti Levu</th>
<th>Percentage from elsewhere in Fiji</th>
</tr>
</thead>
<tbody>
<tr>
<td>1932</td>
<td>49.4%</td>
<td>50.6%</td>
</tr>
<tr>
<td>1936</td>
<td>66.7%</td>
<td>33.3%</td>
</tr>
<tr>
<td>1957</td>
<td>90.55%</td>
<td>9.45%</td>
</tr>
<tr>
<td>1959</td>
<td>71.0%</td>
<td>29.0%</td>
</tr>
<tr>
<td>1960</td>
<td>92.95%</td>
<td>7.05%</td>
</tr>
<tr>
<td>1961</td>
<td>89.90%</td>
<td>10.10%</td>
</tr>
<tr>
<td>1962</td>
<td>98.60%</td>
<td>1.40%</td>
</tr>
<tr>
<td>1963</td>
<td>98.62%</td>
<td>1.38%</td>
</tr>
</tbody>
</table>

1 A hurricane in December, 1958 destroyed bananas in part of Viti Levu.

2 The proportions were Beqa 0.2, Moala 0.6, Kadavu 1.0 per cent.


Banana growing for export in Fiji is now tending to concentrate into even more limited areas of Viti Levu

1 During 1963 a total of 5055 cases of bananas were rejected for export. Of these 1447 came from Kadavu and Moala (CP 17/1963), this was about one quarter of their total shipments in that year.
A virus which has spread amongst the crop can only be effectively controlled under estate conditions (CP 41/1964, p. 3) and so the small producers scattered along the upper river valleys of southeast Viti Levu may in turn be entering a period of decline if this estate project is successful.

Export figures show that the banana trade in Tonga remained desultory until 1932 when a quota arrangement was made with New Zealand and scheduled shipping connections with that country improved. Bananas for export were then grown in Vava'u, Ha'apai, 'Eua and Tongatapu. There were difficulties of transport from Ha'apai. Also, due to food shortages as a result of droughts there were, occasionally, no Ha'apai bananas to spare for the export market (Report of the Premier, 1938, p.3).

From the late 1940s onwards the Trade Returns in Tonga do not record any shipments of bananas from Ha'apai. Largely as a result of improved transportation, however, this trade was resumed in 1963. Tonga now shows a trend very different from Fiji as production is spread over many islands in the Ha'apai Group. The following extract from field notes gives some idea of the revived trade:

The 'Kao' left Nuku'alofa at 0930 on Monday and delivered empty banana cases, a little cargo, and some passengers to selected villages on the way to northern Ha'apai. At the northernmost island of Ha'anga loading commenced and the 'Kao' then called at one village in each of the main islands on the way south. At these places cased bananas had been assembled by truck and launch. At 1000 on Wednesday the 'Kao' arrived at Nuku'alofa with 1202 cases of
bananas to connect with the 'Matua' which was loading for New Zealand (February, 1964).

The quantity of bananas exported from Tonga and Fiji to New Zealand is determined by a quota agreement of about 180,000 cases per annum from both places, but they are occasionally allowed to exceed this. The actual export figures are given in Table 9.10. The main fluctuations are due to hurricanes in both archipelagoes.

**Table 9.10: Banana Exports from Fiji and Tonga (in cases)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Fiji</th>
<th>Tonga</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958</td>
<td>148,604</td>
<td>70,461</td>
</tr>
<tr>
<td>1959</td>
<td>73,831</td>
<td>170,869</td>
</tr>
<tr>
<td>1960</td>
<td>201,075</td>
<td>186,606</td>
</tr>
<tr>
<td>1961</td>
<td>201,879</td>
<td>119,645</td>
</tr>
<tr>
<td>1962</td>
<td>149,934</td>
<td>152,778</td>
</tr>
<tr>
<td>1963</td>
<td>196,299</td>
<td>92,927</td>
</tr>
</tbody>
</table>

*Cases produced for export, by regions, were: 72,000 Tongatapu, 20,438 Vava'u, and 1,000 Ha'apai.*

Sources: Statements of Trade and Navigation, Tonga. Trade Reports, Fiji.

**Trade in Foodstuffs and Other Products**

Most of the foodstuffs grown in bush gardens are used for subsistence purposes, but a great demand exists for local foods in some of the port towns and to a lesser extent in New Zealand and American Samoa. When marketing opportunities exist and surpluses can be produced there is usually a trade in foodstuffs.

In the Gilbert Islands the only ground vegetable is *babai*, also known as *pulaka* in the Ellice (*cryosophyllum*)
chamissonis) and apart from coconuts the only important tree crops are breadfruit, pandanus, and to a lesser extent te bero (Ficus indoria). All of these can be in short supply on drought islands, and there is very little commercial trade done in this type of product anywhere in the GEIC - with the possible exception of an irregular commerce in fowls from the northern Gilberts to Tarawa for sale and the marketing of dried fish from the central and southern islands.

The Tongans, even those in the towns, usually have access to bush or town apis. It is therefore only where regional scarcities arise as a result of hurricanes and droughts that there is an appreciable inter-regional commerce in foodstuffs. There is always a certain amount of export produce carried to the port towns of Tonga from their local and island hinterlands, and on every voyage through the archipelago ships have baskets of island foodstuffs on board (see Table 9.11) but this is largely a non-commercial trade and will be considered more fully under that heading. There is also a considerable non-commercial trade in Fiji, but in addition there is a greater trade in local produce in order to supply the town markets and for export. The export sector of the trade from Fiji and Tonga is given by Table 9.12.

The bulk of the produce for export and for sale in the towns of Fiji is transported by road. Some of the islands around Viti Levu send small quantities of fruit and vegetables to market by launch and cutter. Of these islands Beqa, about 25 miles from Suva, has established the most regular commerce. This is a high island with a wet and 'dry' side. Slopes are steep but
<table>
<thead>
<tr>
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<th>tars</th>
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<th>Figs</th>
<th>coconuts</th>
<th>brushing</th>
<th>bananas</th>
<th>bunches</th>
<th>breadfruit</th>
<th>chickens</th>
<th>kava</th>
<th>bales</th>
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</tr>
<tr>
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</tr>
<tr>
<td>V to H'p</td>
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<td>4</td>
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<td>16</td>
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<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>H'p to V</td>
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<td>4</td>
<td>3</td>
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<tr>
<td>V to N/tapu</td>
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<td></td>
</tr>
</tbody>
</table>

1 Non-export; 2 See Chapter 13.

Source: Tonga Shipping Agency Bills of Lading

Key: Nk = Nuku'alofa; V = Vava'u; H'p = Ha'apai; N'ou = Niuafo'ou; N/tapu = Niuatoputapu.

<table>
<thead>
<tr>
<th></th>
<th>Fiji</th>
<th>Tonga</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melons and watermelons</td>
<td>36,374</td>
<td>26,032</td>
</tr>
<tr>
<td>Fruit</td>
<td>2,646</td>
<td>2,308</td>
</tr>
<tr>
<td>Vegetables</td>
<td>56,782</td>
<td>43,054</td>
</tr>
<tr>
<td>Green ginger</td>
<td>59,080</td>
<td>1,320</td>
</tr>
<tr>
<td>Coconuts</td>
<td>-</td>
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<tr>
<td>Peanuts</td>
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<td>15,888</td>
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<tr>
<td>Rice bran</td>
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</tr>
<tr>
<td>Cocoa</td>
<td>4,596</td>
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</tr>
<tr>
<td>Tobacco (unmanufactured)</td>
<td>39,090</td>
<td>-</td>
</tr>
<tr>
<td>Edible fungus</td>
<td>-</td>
<td>26,000</td>
</tr>
<tr>
<td></td>
<td>205,362</td>
<td>137,242</td>
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</table>


The soils are considered fertile. The island has a good potential for the growing of vegetables and fruit, and on the higher slopes for the grazing of livestock.

A sample survey of Beqa launches arriving at Nabukalou Creek opposite Suva market is summarised by Table 9.13. A slightly greater range of foodstuffs was recorded from Beqa during a survey of market stallholders made by the Fiji Commerce and Industry Office during July, 1962. This listed melons, pumpkins, oranges, pineapples and tobacco in addition to the produce listed in Table 9.14. It is possible that the marketing arrangements for Beqa could be improved on, nevertheless the existing regular launch and cutter services operated by the people has allowed what is almost a market gardening sector of the local economy to emerge. The small craft are, however, inadequate
### Table 9.13: Beqa Trade to Suva During the Period 9-12 December, 1964 (Excluding Copra)

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<td>4</td>
<td>4</td>
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</tbody>
</table>

Source: Field Survey.
for the realization of the island's potential for livestock, most of them are so small as to be weather-bound on frequent occasions and there has been some loss of life while attempting this crossing in rough seas (see PIM July, 1966, pp. 107-108).

A less well developed relationship exists between the market at Lautoka and the Yasawa producers; but there is a trade in local produce which is of some importance for several of these islands. Very little was known in detail about the Yasawa pattern compared with the more easily observable trade from Beqa to Suva. This made a more valid sample of the movement of goods and passengers from the Yasawas essential. With the assistance of the Rhinoceros Beetle Inspectors at Lautoka the arrivals and departures of all Yasawa cutters were recorded for two separate months. Table 9.14 gives some of the results of this survey.

The Yasawas lie in a zone which has a marked dry season. They suffer from droughts and from the periodic hurricanes and gales which skirt the coast of Viti Levu. Most of the islands are high (Waya reaches 1874 feet) and with the exception of Yasawa Island all have steep slopes. There is often a problem on these islands of obtaining a sheltered location from winds and spray for the growing of food crops.

Table 9.14 shows that it is the two central islands of Naviti and Waya which are the main suppliers of market produce from this area, and these are followed in importance by Nacula — another relatively large and moderately fertile island. Naviti is the largest of the Yasawa islands and has about 235 acres under food
### TABLE 9.14: TOTAL INLAND GARES FROM THE YASAWA ISLANDS RECORDED AT LAUTOKA BETWEEN 14/2 - 17/2/63, AND 1/12 - 31/12/63

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</tbody>
</table>

*Source: Field Survey*
crops (Records, Coconut Subsidy officer, Lautoka, 1964). Soils are considered good on Naviti and the configuration of the land gives more shelter for winds than can be obtained on most of the other islands. Waya on the other hand has poorer soils, extremely steep slopes, and a rugged terrain. The people of Waya are nevertheless able to market large quantities of tapioca and the demand by the Indian community at Lautoka has led to goat rearing.

Other islands in the Yasawas have less food surpluses for sale, and the smaller ones, such as Tavua and Mana, appear seldom to send any agricultural produce to Lautoka other than a little copra and coconuts. Some of these islands market sea foods but the survey revealed that this activity is relatively unimportant. This is surprising since there is a ready market for fish at Lautoka and a fleet of power-driven cutters in the islands. The dry climate of the Yasawas is suited to voivoi (pandanus canicosus) growing for mat making, and as Table 9.14 shows, quite large quantities of mats are taken to Lautoka. The majority of mats, it will be noted, came also from Naviti.

Fresh produce and Yagona comes from Kadavu Island, and from the high fertile islands of Lomaiviti and the Moala Group. The trade is spasmodic however and in such small consignments (usually passengers and crew carrying stuff for sale) that a survey with any validity

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1Derrick (1957, p. 214) remarks that the Yasawas had a reputation for the making of sail mats and these were sought after by both Fijians and Tongans.
would have required the use of a team continually recording at various parts of Suva port. Attempts to establish the quantities arriving from these islands were made by interviewing market stallholders. This was abandoned because the method of buying produce at the wharf, and the number of middlemen involved, meant that a proportion of the vegetables which did reach the market had lost their precise identity of origin by the time they were retailed. Table 9.15 however gives some idea of the areas from which produce was drawn in 1964, and this is a fairly good index taken from co-operative sources since apart from Kadavu most islands have registered co-operative societies.

**TABLE 9.15: CO-OPERATIVE MARKETING OF ISLAND PRODUCE IN FIJI (OTHER THAN COPRA) DURING 1964 (IN £)**

<table>
<thead>
<tr>
<th>Island</th>
<th>Yaqona</th>
<th>Fresh Produce</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gau</td>
<td>3,950</td>
<td>1,760</td>
<td>5,710</td>
</tr>
<tr>
<td>Koro</td>
<td>11,736</td>
<td>992</td>
<td>12,728</td>
</tr>
<tr>
<td>Moala</td>
<td>2,997</td>
<td>418</td>
<td>3,415</td>
</tr>
<tr>
<td>Kabara</td>
<td>n.g.</td>
<td>n.g.</td>
<td>24</td>
</tr>
<tr>
<td>Vanua Belavu</td>
<td>n.g.</td>
<td>n.g.</td>
<td>326</td>
</tr>
</tbody>
</table>


It will be seen from Table 9.15 that yaqona is by far the most popular island produce in this class of trading. Yaqona is easily stored and transported and in the islands of the wet zone, in particular, is a profitable crop for which there is a guaranteed market. Spate (1959, p. 50) has estimated that gross returns from one acre of yaqona could be as high as £F3500 (S$7700).
Fig. 9.8
Source: Field Survey.
Tonga that it is extremely difficult to obtain even a synoptic view of it. Table 9.16 shows the shipments of kava on which freight was paid during the periods 14/2 - 13/3/1963 and 1/12 - 31/12/1963.

**TABLE 9.16: KAVA TRADE IN TONGA DURING FEBRUARY/MARCH AND DECEMBER, 1963**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Number of Bags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niūtoputapu</td>
<td>Vava'u</td>
<td>79</td>
</tr>
<tr>
<td>&quot;</td>
<td>Nuku'alofa</td>
<td>12</td>
</tr>
<tr>
<td>Vava'u</td>
<td>&quot;</td>
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</tr>
<tr>
<td>Nuku'alofa</td>
<td>Vava'u</td>
<td>6</td>
</tr>
<tr>
<td>&quot;</td>
<td>Niufou'ou</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Tonga Shipping Agency Bills of Lading.

The remote northern island of Niūtoputapu figures as an important supplier, but its nearest neighbour, the volcanic island of Niufou'ou, appears as an importer of kava from Nuku'alofa. As there is no formal marketing agency for kava it is impossible to say just what the proportions are moving under commercial and personal exchange. There are nevertheless several middlemen in Nuku'alofa who buy kava from the islands for sale.

1Niufou'ou was depopulated in 1946 during a volcanic eruption. Of the 1,300 former inhabitants only about 400 had returned to the island up until 1964. It may be that they have not re-established all their kava crop, or that they have now a preference for Tongatapu kava; this latter factor of taste is thought to be behind many of the kava cross- haulage trade flows in Tonga.
in the port town\(^1\) and for export to places such as Niufo'ou.

The port towns in Fiji have created a demand for fresh meat and there is a growing scarcity of this in the Colony. Imports in 1962 were \$263,132 and in 1963 \$875,434 (CP 17/1964, p. 22). The difficulty of island areas supplying meat has been referred to in connection with Beqa and this obstacle applies to many other places. The bigger vessels of the inter-insular fleet can carry cattle on deck. One of these ships has also a freezer for the storage of carcasses. With the exception of this latter vessel carriage is inadequate even from Vanua Levu and northern Lau where more stock could be grazed in the high areas and in the coconut groves were ships and loading facilities improved.

Fig. 9.9 shows the small GEIC trade in island products other than copra. The only foodstuffs sold commercially are dried fish and eels, but when overseas prices are favourable people will also be encouraged by the co-operatives to supply shark fins for export. The dried fish trade has not been altogether successful for supplies frequently deteriorated due to inadequate curing and producers became discouraged.

Thatch is obtained for the roofing of government houses from islets in Tarawa lagoon and from the nearer islands of the central group. While every island in the GEIC could supply thatch (from pandanus

\(^1\)Some of the main purchasers of kava in Nuku'alofa are the Fale kava clubs where Tongan men meet in the afternoon and evening and drink a few bowls.
Fig. 9.9

Source: Dept. Co-operatives, Tarawa.
leaves) it is obviously more convenient to obtain this from the most accessible areas. It will be noted that sennit string, mats and handicrafts are produced largely in the drought-prone islands of the central and southern Gilberts in an attempt to supplement basic incomes.

Handicrafts also enter into the trade of Fiji. They are sent from the Lau islands of Kabara, Fulaga, Oneata, and some of the other agriculturally poorer places, to Suva in the form of masi (barkcloth), tanoas (wooden vacona basins) and mats for sale at the market. Bales of voivoi for mat making also arrive at Suva from Lau and Lomaiviti. These go to Suva handicraft enterprises and are also 'put out' to home industries. From Vatulele Island weekly quantities of masi are taken by launch to Korolevu and after the sale of some of this at that tourist centre the rest goes by 'bus to Suva for the main tourist trade. Large quantities of tapa (barkcloth) are also made and sold in Tonga. Some of it is shipped to Suva to be turned into standardised

\[1\] An interim report by a South Pacific Commission handicraft expert stated: 'The difficulties facing the development of a flourishing handicraft industry in the Gilbert and Ellice Island Colony are great but all are created by one factor, lack of communications.' (McBean, 1959, p. 1). During 1963 handicrafts were exported to the following places with whom there was contact in that year: British Solomon Island Protectorate, $380; Fiji, $258; Australia, $234; Nauru, $66 and Ocean Island, $282. An additional factor which inhibits the development of this trade in all three archipelagoes is the high rate of duty charged in Australia on these goods.
tapa products at a small 'handicrafts factory' and then exported.

**Timber and Minerals**

The main interinsular trade in timber is from the island of Kadavu to Suva, and about 5,000 tons were transported during 1964 (Kadavu Timber Co., pers. com.) Some logs have been brought from the Dreketi region of Vanua Levu and exported to overseas markets under Government quota, but the government policy is now to restrict exports in the form of whole logs and encourage the purchasers and local exporters to semi-manufacture them in Fiji.

A trade in firewood is carried on to all port towns where there is a general shortage of this commodity. The forested Yasawa islands offer a good source of supply for Lautoka which lies in an area of predominantly treeless lands under sugar cane and short grass. Local boatbuilders also obtain *dilo* (*calophyllum inophyllum*) in the Yasawas for use as 'knees' of cutters.

The island of 'Eua in Tonga supplies timber and firewood to Nuku'alofa but otherwise there is little trade in local wood, although large quantities are imported. Timber imports to Tonga amounted in 1963 to 263,042 and included some from Fiji. This is also true of the GEIC where timber for churches, boats, and canoes is mainly imported ($39,708 in 1962). There are some good stands of *itai* (*calophyllum inophyllum*) on the island of Aranuka and one or two other places in the Gilberts and timber cutters will occasionally go
to these islands and ship the cut woods back to Tarawa for boat-building purposes.

Mineral deposits have been found in large quantities on Vanua Levu and phosphates have been surveyed in the Lau Islands but so far they have not been exploited. These will be referred to again in the next section. At Nayau in the Lau Islands there are manganese deposits and in 1962 about 50 tons were extracted. However, it was reported that... 'Production was restricted mainly on account of the high cost of freight from Nayau' (CP 14/1963, p. 14). Since then no manganese has been shipped. Another small mineral deposit at Moala has never been worked partly for the same reason and as a result of the depressed world price of manganese ore.

Tonga has no significant mineral resources and the main chain of the GEIC is likewise devoid of exploitable minerals. Ocean Island, however, is within the GEIC, and although the phosphates do not enter into local trade the cash earned does, and so also do goods purchased by phosphate labourers. In addition, phosphates are so important for the economy of the GEIC that some references to the deposits are necessary.

Ocean Island lies 245 nautical miles southwest of Tarawa. Since mining began there in 1900 about 14 million tons of phosphates have been extracted. There is around 6.75 million tons left on the island and at the present rate of extraction (340,000 tons per annum) these will be effectively worked out by 1985.

The phosphates are important to the GEIC for three main reasons. First for Government revenue, for a royalty which now stands at $2.50 per ton is paid on all
phosphate exports. In addition, it was agreed in 1965 that 40 cents per ton would also be paid in lieu of normal taxation (PIM March 1966, p. 15). Total payments by the British Phosphate Commissioners to the GEIC Government will give an annual income of about $900,000 - or an amount equal to half of ordinary Government expenditure during the year 1963. Second, there were in 1964 about 1430 people from the GEIC earning wages on Ocean Island and Nauru. Their average earnings would be about $26 per month giving a cash income of about $446,160 per annum. In addition they receive bonuses, rations, housing and lighting. There is no way of knowing precisely how much money is remitted by labourers to their home islands but clearly considerable sums are sent and taken back - a question which will be returned to in Chapter 10. The third point is simply that when the phosphates are worked out (Ocean Island by 1985 and Nauru 1995) there will be about 3,500 men, women and children who are normally resident for some time on Ocean Island and Nauru returned permanently to their home islands, and a major source of income for the GEIC islanders will come to an end.

**Passengers inwards**

All the port towns contain a non-resident, transient section of population which has come in from the islands, and this is continually turning over with the arrival and departure of local vessels. In the GEIC there are restrictions imposed on travelling to the port of Betio. People must show why they are going and
they require their local magistrate's permission to go. The reasons given for this are overcrowding on Betio Island (about 10.8 persons per acre), the pressure on the local water supply (Grundy, 1961, warned against allowing an excessive demand), a lack of available wage employment in Betio, and the shortage of subsistence foodstuffs. The Report of Tarawa Island Council for 1958 stated that these regulations limiting entry were based on:

...the high incidence of malnutrition and tuberculosis reported by the medical department at that time and by the large numbers of young children whom the schools could not admit. People in employment found themselves hosts, by custom, to numerous relations who, unemployed, contributed nothing to the household - with the result that families and their guests were subsisting on a sub-standard diet of koikoi, flour and water pancakes, and on an insufficient amount of toddy for the later part of the month. People arrived at Betio penniless and unemployable to become a burden on the community and on the Government which had to bear the costs of repatriating destitute persons to their home islands. (1958, p. 88).

Islanders now travel to Tarawa in order to leave children at school, to obtain hospital treatment, to attend court cases, and for marriages and other personal occasions. They must also frequently come to Betio in order to await a vessel as they travel from one part of the group to another. This is a burden on travelling and a missionary from the outer islands pointed out in reply to a questionnaire:

The need felt by the islanders is inter-island transport. Many islanders spend long periods
en route for although their destination is only a few hours away there is no direct ship and so they may need to go to Tarawa and wait for a few weeks before getting a ship going that way. This is a real problem to the people. (pers. com., 1964).

People are also attracted to Betio by the urban character of the island; especially the Nei Binobino (bar), the cafes, the dancing, and the two open-air cinemas. At Betio they are free of many of the restrictions of village life, and people from every part of the archipelago meet. During 1963 a little over 2,000 travellers from the main chain of the GEIC arrived at Betio and approximately the same number left. The islands of origin of these people are shown by Fig. 9.10.

The Tongan Government has never imposed restrictions on travelling to Nuku'alofa and since 1956 migrant have been arriving there at the average rate of 600 per annum (Walsh, 1964, p. 158). Temporary visitors exceed this and with the greatly improved shipping facilities in recent years they have been streaming to the port town\textsuperscript{1}. Table 9.17 gives monthly arrivals at Nuku'alofa during 1964, more than half of these passengers appear to have come directly from Vava'u.

\textsuperscript{1}The Government of Tonga believes that improved internal communications may have reduced the tendency for people to stay in Nuku'alofa by permitting more frequent visits, and may have encouraged some people to go back to their original settlements (GB Colonial Office Report, 1958-9, p. 10, T).
Fig. 9.10
Source: Voyage Records GEIC Vessels.
TABLE 9.17: ISLAND PASSENGERS ARRIVING AT NUKU'ALOFA EACH MONTH DURING 1964

<table>
<thead>
<tr>
<th>Month</th>
<th>Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>1,330</td>
</tr>
<tr>
<td>February</td>
<td>550</td>
</tr>
<tr>
<td>March</td>
<td>338</td>
</tr>
<tr>
<td>April</td>
<td>380</td>
</tr>
<tr>
<td>May</td>
<td>400</td>
</tr>
<tr>
<td>June</td>
<td>466</td>
</tr>
<tr>
<td>July</td>
<td>456</td>
</tr>
<tr>
<td>August</td>
<td>475</td>
</tr>
<tr>
<td>September</td>
<td>346</td>
</tr>
<tr>
<td>October</td>
<td>263</td>
</tr>
<tr>
<td>November</td>
<td>340</td>
</tr>
<tr>
<td>December</td>
<td>380</td>
</tr>
<tr>
<td>Total</td>
<td>5,724</td>
</tr>
</tbody>
</table>

Sources: Tonga Shipping Agency Passenger Receipts; Union Steamship Co., Nuku'alofa Office.

The majority of passengers to and from Nuku'alofa travel on the vessels operated by the Tonga Shipping Agency, but approximately 500 per annum also obtain passages on USS Co. vessels between Nuku'alofa and Vava'u. Quite large numbers of passengers are school children accompanied by members of their family. The January and February figures in Table 9.17 for example are undoubtedly high as a result of children returning to Nuku'alofa after spending Christmas at their home island. There are also many other reasons for people to come to the capital. In order to establish some of these (and to obtain some idea of the amount of island produce which passengers carry with them) a sample survey was done on board two vessels during voyages in Tonga and also at the port of Nuku'alofa on the arrival of four vessels during the period.
mid-January to mid-February, 1965. The results of the adult passenger surveys are summarised in Table 9.18.

**TABLE 9.18: MAIN REASONS GIVEN FOR TRAVELLING TO NUKU'ALOFA, mid-JANUARY to mid-FEBRUARY.**

<table>
<thead>
<tr>
<th>Reason</th>
<th>From Ha'apai</th>
<th>From Vava'u</th>
<th>From Niuatopatapu and Niuafo'ou</th>
</tr>
</thead>
<tbody>
<tr>
<td>To bring children to school</td>
<td>35</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td>For holiday in Tongatapu</td>
<td>12</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>To look for a job</td>
<td>6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>To buy goods and to buy yams for seedling</td>
<td>9</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>To get nagatu (tapa)</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>For medical reasons</td>
<td>8</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Marriages and deaths</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>On Mission business</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>On Government business</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>For a court case (divorce)</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>People returning after a visit to the islands</td>
<td>24</td>
<td>20</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Field survey.

Most of the people interviewed in these surveys intended to spend quite long periods in Nuku'alofa and other parts of Tongatapu. Those bringing children said they would stay from two weeks to four months. Holidays were from one to six months, and the purchasing of goods would involve a sojourn of one to three months.

Interviews of passengers were not attempted on board a third vessel, the MV 'Niuvakai', during a night passage from Vava'u to Nuku'alofa on 13 February, 1965, for there were between 500 and 600 people travelling on deck; of these about 50 per cent were school children (see Plate 19).
The inference is that most people had in fact come to Tongatapu for a number of purposes and not merely for those stated.

There are somewhat greater numbers involved in the sea passenger trade of Fiji and not all of the people coming to Suva do so directly. Some from Lomaiviti will land at Levuka and go by launch to Londoni and then by 'bus to Suva. People from Vatu-lele Island also land at Korolevu and Navau, and some small cutters from the islands may call at Wainibokasi landing on the Rewa river and put the people ashore (particularly if they are overloaded) before coming to Suva. Table 9.19 gives the passenger numbers reported by the captains on arrival at Suva and then recorded by the harbour office clerk in the Inward Book. Islands such as Nairai and Beqa, as well as Rotuma, have been omitted from the total because of ambiguity in the records. In the case of Nairai numbers may be included in the figures for other Lomaiviti Islands.

Of the 13,754 passengers recorded as arriving at Suva 37 per cent came from Kadavu. It is likely that many of these Kadavu passengers comprised the same people making regular trips to and from Suva for marketing and shopping purposes. For the inhabitants of Lau and parts of Lomaiviti Suva is also the most accessible marketing and shopping centre — for there are no alternative commercial centres between the village stores and the capital. Because of this commercial centralization it is likely that Suva may have even more important functions than has Nuku'alofa for island people.
TABLE 9.19: PASSENGER ARRIVALS AT SUVA, MAY, 1964 THROUGH APRIL, 1965
(COMMERCIAL CARGO VESSELS)\(^1\)

<table>
<thead>
<tr>
<th></th>
<th>N. Lau</th>
<th>C. Lau</th>
<th>S. Lau</th>
<th>W. Lau</th>
<th>Matuva Bay</th>
<th>Bua</th>
<th>Macuata</th>
<th>Labasa</th>
<th>Nakauadro</th>
<th>Wulanama</th>
<th>Koro</th>
<th>Gau</th>
<th>Etiku</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>400</td>
<td>57</td>
<td>28</td>
<td>12</td>
<td>75</td>
<td>115</td>
<td>90</td>
<td>9</td>
<td>36</td>
<td>90</td>
<td>10</td>
<td>922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>402</td>
<td>60</td>
<td>67</td>
<td>26</td>
<td>121</td>
<td>100</td>
<td>76</td>
<td>18</td>
<td>50</td>
<td>68</td>
<td>18</td>
<td>1006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>430</td>
<td>197</td>
<td>95</td>
<td>67</td>
<td>70</td>
<td>72</td>
<td>40</td>
<td>17</td>
<td>50</td>
<td>118</td>
<td>18</td>
<td>1174</td>
<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>370</td>
<td>72</td>
<td>40</td>
<td>27</td>
<td>105</td>
<td>100</td>
<td>130</td>
<td>31</td>
<td>43</td>
<td>89</td>
<td>24</td>
<td>1031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>340</td>
<td>48</td>
<td>72</td>
<td>50</td>
<td>146</td>
<td>70</td>
<td>65</td>
<td>21</td>
<td>35</td>
<td>103</td>
<td>23</td>
<td>973</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>420</td>
<td>60</td>
<td>71</td>
<td>32</td>
<td>59</td>
<td>150</td>
<td>60</td>
<td>40</td>
<td>88</td>
<td>34</td>
<td>14</td>
<td>1028</td>
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<td></td>
</tr>
<tr>
<td>November</td>
<td>305</td>
<td>56</td>
<td>85</td>
<td>28</td>
<td>58</td>
<td>110</td>
<td>90</td>
<td>28</td>
<td>31</td>
<td>96</td>
<td>16</td>
<td>903</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>890</td>
<td>166</td>
<td>102</td>
<td>28</td>
<td>267</td>
<td>240</td>
<td>290</td>
<td>23</td>
<td>112</td>
<td>146</td>
<td>46</td>
<td>2310</td>
<td></td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>430</td>
<td>88</td>
<td>82</td>
<td>18</td>
<td>122</td>
<td>280</td>
<td>240</td>
<td>16</td>
<td>73</td>
<td>94</td>
<td>4</td>
<td>1447</td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>380</td>
<td>105</td>
<td>30</td>
<td>13</td>
<td>128</td>
<td>142</td>
<td>220</td>
<td>28</td>
<td>34</td>
<td>60</td>
<td>7</td>
<td>1147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>351</td>
<td>135</td>
<td>69</td>
<td>21</td>
<td>60</td>
<td>174</td>
<td>154</td>
<td>21</td>
<td>37</td>
<td>38</td>
<td>8</td>
<td>1068</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>330</td>
<td>28</td>
<td>23</td>
<td>15</td>
<td>74</td>
<td>110</td>
<td>58</td>
<td>31</td>
<td>24</td>
<td>46</td>
<td>6</td>
<td>745</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Totals</th>
<th>Included In Labasa</th>
<th>and Nakauadro</th>
<th>Labasa</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>400</td>
<td>57</td>
<td>28</td>
<td>12</td>
<td>75</td>
<td>115</td>
<td>90</td>
<td>9</td>
<td>36</td>
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<tr>
<td>June</td>
<td>402</td>
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<td>70</td>
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<td>50</td>
</tr>
<tr>
<td>August</td>
<td>370</td>
<td>72</td>
<td>40</td>
<td>27</td>
<td>105</td>
<td>100</td>
<td>130</td>
<td>31</td>
<td>43</td>
</tr>
<tr>
<td>September</td>
<td>340</td>
<td>48</td>
<td>72</td>
<td>50</td>
<td>146</td>
<td>70</td>
<td>65</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>October</td>
<td>420</td>
<td>60</td>
<td>71</td>
<td>32</td>
<td>59</td>
<td>150</td>
<td>60</td>
<td>40</td>
<td>88</td>
</tr>
<tr>
<td>November</td>
<td>305</td>
<td>56</td>
<td>85</td>
<td>28</td>
<td>58</td>
<td>110</td>
<td>90</td>
<td>28</td>
<td>31</td>
</tr>
<tr>
<td>December</td>
<td>890</td>
<td>166</td>
<td>102</td>
<td>28</td>
<td>267</td>
<td>240</td>
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<td>March</td>
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<td>174</td>
<td>154</td>
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<td>37</td>
</tr>
<tr>
<td>April</td>
<td>330</td>
<td>28</td>
<td>23</td>
<td>15</td>
<td>74</td>
<td>110</td>
<td>58</td>
<td>31</td>
<td>24</td>
</tr>
</tbody>
</table>

\(^1\)Government craft and medical vessels are not included nor are cruising craft from Suva.

Unfortunately an adequate record of the purposes behind the movement of passengers could not be maintained at the wharf in Suva. However, during five voyages to different parts of the archipelago interviews were made amongst deck passengers. These indicate that people came to Suva for very much the same reasons as they did to the other port towns. Table 9.20 gives an example recorded on board the MV 'Altair' during a voyage from the Lau Islands in November, 1964.

**TABLE 9.20: REASONS WHICH PASSENGERS GAVE FOR TRAVELLING FROM LAU TO SUVA IN NOVEMBER, 1964.**

| One woman | To get a ship to Tonga. |
| " " | To meet my husband. |
| " " | My daughter will be (is) married in Suva. |
| " " | To get a boat to Lakeba. |
| Four women | To buy some furniture and other things. |
| Two women | For hospital. |
| " " | To visit for Christmas. |
| Three girls | To visit friends. |
| Two men | Going to Kadavu Island. |
| One man | Government official. |
| Two men | To be interviewed at hospital. |
| " " | To take some fowls and pigs and buy some stuff. |
| Five people | Returning from a vakabogidrau ceremony (100 nights since the death of their mother on Kanacea). |

Source: Field Survey.

In passing, the travelling habits of island people are worth mentioning for if reasons for travelling to the port towns are similar in the three archipelagoes the methods of travelling are virtually identical - and in this respect the size of a vessel matters little.
Passengers usually board at any time from four hours to a few minutes before sailing. They bring with them quantities of food, drinking nuts, and bottles of water for consumption on the voyage. Coconut leaf baskets of produce, bales of mats, suitcases and other articles are normally piled in sheltered parts of the vessel, and on the bigger craft crates of pigs and fowls are hung over the sides. Deck mats are then laid down under awnings and on top of the housing and after some initial confusion people settle down with their children.¹

When the vessel sets sail several young boys may dive off and swim ashore and this receives a little applause. Generally, however, there is not a great deal of activity after sailing and the women, especially, show immediate symptoms of sea-sickness and tend to sleep. If the voyage is over several days interminable card games are played in the Gilbert and Ellice, and in Tonga and Fiji some young men may strum guitars. Before the vessel arrives the women revive, roll up their mats, and comb and oil their hair. The baskets of produce which have not suffered too much damage are

¹Mrs. R. L. Stevenson was an acute observer and she described the loading of passengers at one of the Gilbert islands in the 1890s with the observation: 'The getting on board of the people was a wild affair of noise and confusion. Boat after boat was unladen, and piles of the most extraordinary household goods blocked up every space that should have been kept clear...' (1915, p. 163). Her last comment is, of course, particularly apposite in relation to the high loss of life which occurs in island marine accidents.
then sought out. This is a relatively cheap method of travel and is one which allows large numbers to move around the islands.

**Conclusion**

The copra trade reaches out to every inhabited island in the three archipelagoes and it determines to an overwhelming extent the pattern of shipping services. In the GEIC there is little inward movement of any other type of commodity to the port towns. This results directly from the poor agricultural environment of these islands, from their remoteness from markets for handicrafts, and their inability to market sea resources either internally or externally through inadequate curing and transportation arrangements.

In Tonga local self-sufficiency in foodstuffs normally exists and trade in fresh produce is usually a personal one, or for the New Zealand and American Samoa export markets. The situation in Fiji is different. Here a potential exists for the flow of many commodities in addition to copra, for there are fertile islands capable of producing these and there is a constant demand for them in the port towns. The limitation to this trade is definitely one of transportation.

Before any further conclusions on the trading patterns are produced the outward cargoes must need be considered, and also the non-commercial trade which is largely in the hands of passengers.
Chapter 10

THE SUPPLY OF CARGO TO THE ISLANDS

In 1960 about 19 per cent of the total imports to Fiji consisted of food and drink. The figures for Tonga and the GEIC for this category of imports were 17 and 35 per cent respectively. Fiji manufactures a certain amount of food and drink which meets local needs and provides an export to other Pacific Islands. The Tongans with their smaller internal market have no equivalent manufacturing industries; but the relatively low import of foodstuffs is due to the almost homogeneous character of the population and the large quantities of 'Tongan foods' grown and eaten by them. The high percentage of imported foodstuffs to the GEIC (excluding Ocean Island) is due partly to the demand by high income expatriates on Tarawa; but it also reflects the inadequacies of that archipelago as a food supplier by present day consumption standards.

When imported cargoes come to be transhipped at the port towns for the outer islands about 70 per cent of the goods are likely to consist of various foods. A description of the cargoes consigned to island trade stores and co-operative societies has already been given (Chapter 8) and to these timber, cement, and roofing iron could be added to complete the picture. It is, however, much more difficult to obtain a view of the regional patterns of outward cargoes, and of the factors which govern the demand for these, than it was to establish the inward flows.

In the case of inward cargoes it will be recalled
that their type and tonnage was determined very largely by edaphic and weather conditions, shipping services, and by many local reasons for increasing or curtailing production at certain times. It is, of course, basically true that the main motive for producing copra at all is to obtain consumer goods, and consequently the inward and outward cargoes should almost balance by value. They do in many cases; but not all money available in the islands is derived from the sale of island products. Other sources of income must therefore be taken into account for some regions if the effective regional demands are to be assessed.

In this chapter the distribution of cargo to the islands, as far as it is possible to establish this, is presented. Then the main factors which affect the regional demand for cargoes are discussed in some detail finally the question of how far each regional community is dependent on commercial trade for its existence is raised.

Types of outward cargoes

The cargoes supplied to each of the Gilbert and Ellice Islands\(^1\) during 1963 are shown by Fig. 10.1 according to their type and value. In each case flour,
**Fig. 10.1**

sugar, and rice made up about half of the total cargo values, and these commodities also accounted for the bulk of the tonnages carried. Tobacco, tea, and kerosene followed as the next most important items by value. The last mentioned cargo item was very often delivered on special benzine runs during which the island ships operated without deck passengers and carried mainly drums of petroleum products.

In Tonga during 1963 about $120,000 worth of general cargo was sent from Nuku'alofa to the Ha'apai region and $110,000 worth to Vava'u. In addition over $52,000 worth of general cargo was unloaded at Vava'u by vessels coming from overseas (Records TSA and Custom Returns). It was not possible to itemise this regional cargo distribution in Tonga, but the proportions would no doubt have followed total imports in their importance. These were by order of value as follows, meat, flour, clothing and drapery, cigarettes and tobacco, benzine and kerosene, soap and toilet requisites, sugar, hardware... (Statement of Trade and Navigation, 1963).

In the case of Fiji neither the value of outward cargoes nor the various items of cargo could be established with certainty, for the manifests were in the hands of a large number of suppliers. A very crude tonnage distribution is given in Fig. 10.2 for this archipelago, but it is necessary to say something about how this was derived. The practice in Fiji is for the master of each vessel to declare before sailing his destination and the amount of cargo he has on board. This is recorded in the harbour office 'outwards book'. Between mid April, 1964 and mid April, 1965 about 35,00
Fig. 10.2
Sources: Suva Harbour Office Movement Book and W.R. Carpenter, Ltd.
267 tons of cargo were so recorded. This would seem to be an underestimate\(^1\) when compared with data supplied by one of the major companies for one area of trade. Possibly around 45,000 tons would be a closer approximation, this figure has been used in the construction of Fig. 10.2 for the Suva outward cargo flow.

On the basis of sample cargoes it was evident that Fiji follows the well defined pattern of island purchasing with flour and sugar predominating. But there is also a fairly high proportion of building materials and some house furnishings carried. There are also more regional differences in Fiji compared with the GEIC and Tonga. Rice and sharps occupy an important place in the cargoes to the sugar districts of Vanua Levu and there is a much greater diversity of high value items sent to this area and to Savusavu and Taveuni than to elsewhere in the archipelago. The small island trade is fairly standard by contrast and Table 10.1 summarises a flow of basic goods recorded at Lautoka for the Yasawa islands.

There is one trend in Fiji and Tonga which is not evident in the GEIC and this is the use of bulk barges for the carriage of petroleum. Fig. 10.3 shows the distribution of bulk storage places in Fiji most of which are supplied by barges towed from

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\(^1\)Inward cargoes of copra, timber, empty oil drums, and miscellaneous items were recorded as 29,250 tons during this period. In actual fact around 33,000 tons of copra alone were delivered to Suva by the ships. Most of the errors are due to reporting inaccurately, failing to report, and confusion over tons weight and tons measure.
Fig. 10.3
Source: Fiji Government.
### TABLE 10.1: TOTAL OUTWARD CARGoes FOR THE YASAWA ISLANDS RECORDED AT LAUTOKA BETWEEN

**11/2 - 13/5/63 AND 1/12 - 31/12/63**

<table>
<thead>
<tr>
<th>Island</th>
<th>Super sacks</th>
<th>Flour sacks</th>
<th>Rice sacks</th>
<th>Biscuits</th>
<th>Cases of meat</th>
<th>Tin cases of milk</th>
<th>Cases of brandy</th>
<th>Cases of rice</th>
<th>Cases of sugar</th>
<th>Kerosene gallons</th>
<th>Benzine tons</th>
<th>Timber tons</th>
<th>Matting tons</th>
<th>Building materials</th>
<th>House-hold effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yasawa</td>
<td>24</td>
<td>11</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>280</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td>1 Bed</td>
</tr>
<tr>
<td>Nacula</td>
<td>12</td>
<td>12</td>
<td>6</td>
<td>12</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>196</td>
<td>217</td>
<td>0.25</td>
<td>3</td>
<td>Crate of metal plates</td>
<td></td>
</tr>
<tr>
<td>Viwa</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>156</td>
<td>24</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malacawa-Levu</td>
<td>6</td>
<td>8</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>56</td>
<td>132</td>
<td>0.25</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yaqeta</td>
<td>22</td>
<td>10</td>
<td>12</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>112</td>
<td>500</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naviti</td>
<td>30</td>
<td>39</td>
<td>25</td>
<td>38</td>
<td>20</td>
<td>14</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>366</td>
<td>400</td>
<td>4</td>
<td>7</td>
<td>1 Sewing machine</td>
<td>4 Hurricane lanterns</td>
</tr>
<tr>
<td>Waysa</td>
<td>16</td>
<td>13</td>
<td>5</td>
<td>15</td>
<td>10</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>28</td>
<td>84</td>
<td>-</td>
<td>-</td>
<td>Metal buckets</td>
<td>2 chairs</td>
</tr>
<tr>
<td>Yanuya</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>12</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>-</td>
<td>1</td>
<td>56</td>
<td>132</td>
<td>-</td>
<td>-</td>
<td>Metal basins</td>
<td></td>
</tr>
<tr>
<td>Tavua</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Mana</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malolo</td>
<td>13</td>
<td>8</td>
<td>2</td>
<td>24</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>56</td>
<td>55</td>
<td>0.25</td>
<td>-</td>
<td>One Radio</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong>*</td>
<td><strong>130</strong></td>
<td><strong>109</strong></td>
<td><strong>54</strong></td>
<td><strong>136</strong></td>
<td><strong>65</strong></td>
<td><strong>41</strong></td>
<td><strong>26</strong></td>
<td><strong>21</strong></td>
<td><strong>31</strong></td>
<td><strong>1304</strong></td>
<td><strong>1652</strong></td>
<td>7.5</td>
<td>15.25</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

*Part of this cargo flow was recorded during the busy Christmas period so that a higher than average monthly flow is shown.

** There are small refueling places in the central islands at which the northern cutters call on their way south; this is one reason for the large quantities of petroleum at these islands.

***Small parcels of tea and other items went unrecorded, but about 500 loaves of bread were noted during the survey period and 8 cartons of beer.

Source: Field Survey.
Suva¹. A barge is also used by the Tongans to transport oil from Suva to Nuku'alofa; and in both archipelagoes the construction of more storage tanks may be anticipated wherever there are regional concentrations of population. It is worth noting that in parts of Fiji this method of transport and storage has reduced the price of petrol by as much as 10 cents per gallon.

Factors affecting the supply of outward cargoes.

It has already been said that outward and inward regional cargoes should almost balance by value. However, from Fig. 10.4 it can be seen that in the GEIO they do not balance and a very large disparity actually exists between the value of goods purchased and the amount of island products marketed. This is worth examining further for it has some serious implications for the future.

¹ The activities of the 'Pacific Enterprise' should also be noted at this point. This is a small Australian tanker which operates from ocean terminal oil depots (i.e. where large overseas tankers unload) in New Guinea, New Caledonia, the Solomon Islands and Fiji, and redistributes the oil to smaller bulk storage installations in these territories and beyond. For example, ocean tankers will unload in Suva, the 'Pacific Enterprise' will re-load part of these cargoes for Labasa, Tarawa and (during the hurricane season when Apia harbour is unsafe for large tankers) for Apia in Western Samoa. From these points oil is again redistributed in 40 gallon drums carried on the deck of local vessels. The oil trade is, in fact, the one real interterritorial trade in the Pacific which has a rationalised chain of delivery and is not governed so completely by the political sub-divisions of the region.
Fig. 10.4
Sources: Wholesale Society and Dept. Co-operatives, Tarawa.
There are at least two trends evident from Fig. 10. First, there is the very steep rise in the cash returns from copra from 1958 to 1960 and this is accompanied by an increase in the total values of goods purchased. Second, a fall in the value of copra occurs from 1960 onwards but there is a continued high average rate in the purchasing of consumer goods. It would be expected that some excess of expenditure on goods over earnings from copra would exist for, on most islands, there are people such as missionaries, medical dressers, magistrates and retired government officials all of whom would be receiving an income, and the co-operative also pay bonuses on patronage and dividends on share capital. On the other hand there is an unknown quantity of trade goods purchased by people from private traders which would, could their value be added to the expenditure curve, raise this even further above earnings from copra.

When this disparity between earnings and expenditure is seen at regional levels the diagrams are more revealing (Fig. 10.5). Quite clearly in the southern Gilberts and in the Ellice Islands earnings from island cash production fall far short of the purchases of goods from the co-operatives. In the northern Gilbert islands the gap is not so wide and could probably be reduced by the addition of local non-agricultural incomes. The disparity is a little greater in the

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1 The period 1956-64 used in this graph is the longest period of acceptable figures; but the figures are not, in any case, completely accurate even for the most recent period.
GEIC
REGIONAL DISPARITY BETWEEN INCOME FROM ISLAND PRODUCTS AND EXPENDITURE ON CONSUMER GOODS

Fig. 10.5
Sources: Wholesale Society and Dept. Co-operatives, Tarawa.
central Gilbert region, but here an examination of the patterns of cargo supply shown in Fig. 10.6 might offer a partial explanation.

It can be seen from Fig. 10.6 that during 1960 and 1961 the value of cargoes supplied to the central islands actually fell below earnings from copra. Some surplus stock may have existed in the village co-operatives from previous years but in view of the boom conditions in copra earnings during 1959 this seems unlikely. Fig. 10.6 would suggest therefore that, if the island missions did not get the money, there was a possibility of some enforced savings, or credit with the Wholesale Society, in the years 1960/61. These savings may have provided money for the additional cargoes purchased in 1962/63 when copra values fell. This is a possibility, but the most important point to be noted is expressed by Fig. 10.7, which shows these disparities between incomes from the sale of island products and the purchases of consumer goods plotted island by island from the 1963 financial year. It is clear from this that for some of the islands in the southern Gilberts and the Ellice there was a discrepancy of up to 70 per cent in that year.

Before the large discrepancies in islands within the two regions mentioned are considered further it should be stated that, in general, the rise in the value of imported cargoes in the GEIC represented an increase in the volume of cargo purchased and was not due to increased prices to any extent. The prices in the GEIC are linked mainly with those in Australia and the Australian prices very likely did increase during
Fig. 10.6
Sources: Wholesale Society
and Dept. Co-operatives, Tarawa.
this period. The only policy of the CWS, however, has been to keep the price of basic commodities stable and increase the price of luxuries. Table 10.2 lists price changes in the GEIC since 1957. The reduction in the price of some goods during 1961 applied only to Tarawa and were made in order to compete with private traders. The rise in the price of sugar in 1963 on the other hand was felt throughout the archipelago and may account for the slight peak in cargo purchases shown in Fig. 10.6 for that year.

**TABLE 10.2: PRICE CHANGES FOR FOODSTUFFS IN THE GEIC (IN £)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice (lb)</td>
<td>0.11</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td>0.11</td>
<td>0.11</td>
<td>0.12</td>
</tr>
<tr>
<td>Flour (lb)</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.65</td>
<td>0.7</td>
<td>0.75</td>
</tr>
<tr>
<td>Sugar (lb)</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Corned beef(12 oz)</td>
<td>0.32</td>
<td>0.32</td>
<td>0.34</td>
<td>0.32</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Dried milk(12 oz)</td>
<td>0.40</td>
<td>0.40</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>0.46</td>
</tr>
<tr>
<td>Tea (lb)</td>
<td>1.20</td>
<td>1.0</td>
<td>1.5</td>
<td>1.5</td>
<td>0.98</td>
<td>0.98</td>
<td>0.98</td>
</tr>
</tbody>
</table>


It would seem that for the southern Gilbert Islands and the Ellice Islands in particular substantial sums of money continued to be available after the volume and value of copra declined from 1960 onwards. For reasons which will be given below it is unlikely that a large percentage of this money represented a release of saving where it came from was the phosphate workings at Ocean Island and Nauru, the Fanning and Washington coconut
Fig 10.7
Sources: Wholesale Society and Dept. Co-operatives, Tarawa.
plantations, wage-labourers on Tarawa, seamen on island vessels, workers in the new Hebrides fishing industry, and from the percolation through the archipelago of some of the £900,000 of Colonial Welfare and Development Grants which were received by the GEIC government between 1959 and 1964.

Fig. 10.8 shows the numbers and islands of origin of all these wage-labourers in 1963. The main cash support was however derived from the labourers on the phosphate islands. About 1,430 islanders are employed in this industry (District Office Records, Tarawa), they receive an average monthly wage of £26, plus bonuses, rations, and housing. The labourers are repatriated to their home islands bi-annually and a new workforce engaged. When they return to their islands they take with them a proportion of their wages, but in addition most labourers are known to have been remitting cash at various times during their period in the phosphate islands. For this particular part of the

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1 The small 'external' industries are nevertheless important for specific families. Doumenge (1966), for example, interviewed the Gilbertese working in the New Hebrides fishing industry. He reported: 'They have come to the New Hebrides mainly to provide for the needs of large families without resources. In fact, 20 of them state their families have no money coming in other than their wages, five say that their families have one other source of income apart from their own, and only one person stated that his family had two other sources of income ...' Arorae supplies 10 workers with 64 persons dependent upon them. Tamana has 8 workers who have 84 dependent persons, and Nikunau has 2 workers supporting 15 persons. One other island, Kuria, in the centre of the archipelago, provides 6 workers with 49 dependents.
Fig. 10.8
Sources: District Office Records, Tarawa.
British Phosphate Commissioners, Ocean Island.
Doumage, 1966.
discussion the question which is now patently obvious is, where was this money in the pre 1959 era?

The short answer to the question seems to be that the money was available but there was not enough consumer goods being distributed in the GEIC for it to be used in this way. Goods were of course purchased on Ocean Island and Nauru and brought back to the islands. In addition to foodstuffs many of these were durable goods such as sewing machines, bicycles and radios of which there appears to be, from general observations, a remarkable surfeit on some islands when compared with general living standards. This view has some support from the records of the co-operative department. The Co-operative Report for 1954 states:

...some lines carried by the Colony Wholesale Society continued in short supply particularly flour, and sugar, which are always in demand among the islanders. The principal difficulty here is inadequate shipping both from Australia and Fiji (the supply source for these goods) and within the Colony (para. 25)

and the report of 1958 continued to draw attention to a situation in which ...'island societies are still not able to provide the adequate stocks of consumer goods in their stores'... (p. 5).

The problem was not only one of shipping. Many co-operative societies also found difficulty in obtaining stock due to cumbersome methods of ordering and paying for the goods, and in some other cases due to a lack of working capital. By early 1960 the shipping situation had improved and in spite of the greatly increased quantities of copra to be collected cargoes
were delivered with more efficiency. The Co-operative Report for 1962/63 stated that while copra purchases fell by $31,532 the merchandise sales increased by $72,192. This, according to the report, was in part due... 'to improvements in the arrangements for transferring cash between outer islands and headquarters' (p. 2).

How much of the money coming back from Ocean and Nauru was actually saved during the lean years of cargo supply is impossible to state. The people of the southern Gilberts, in particular, are regarded as thrifty, and local foodstuffs have always been saved and stored against droughts in many parts of the Gilbert Islands (see Grimble, 1933-34, pp. 25-50). *Mronrones* are also designed for saving in order to achieve specific objectives. It is generally held in the GEIC, however, that people have not a great propensity for saving money, and this has been confirmed by personal communication from H. E. Maude who started the Savings Bank in the archipelago.

On the basis of evidence presented here it is therefore highly probable that during normal periods about 50 per cent of the money used for purchasing goods in the southern Gilbert Islands comes from sources exterior to that region, and during droughts this may increase to about 80 per cent. In the Ellice Islands the full

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1 As a result of the low rainfall during 1962 the island of Onotoa sold copra and handicrafts to the value of only $2,882 in the year 1963/64, but purchased $18,360 worth of consumer goods (Co-operative Dept.).
extent of outside financial support could be consistent, as high as 70 per cent. But this degree of support is not altogether surprising for the 1963 census records that 40 per cent of the males and 30 per cent of the females were absent from some of the Ellice Islands at the time of the census, and of these two thirds were on Ocean Island or Tarawa (GEIC Census, 1964, p. 40-41).

The relative proportions of labourers drawn from each of the four regions of the GEIC also makes it clear that the dependence on the phosphate industry is significantly greater in the southern Gilberts and the Ellice Islands. These proportions in 1963 were, per 1,000 of population, approximately - Northern 30, Central 15, Southern 50, Ellice 57. The extent of this 'external' financial support does present a problem when the limited future of the phosphates is considered, when the high growth rate in the population is recalled, and when, as this analysis suggests, there is a great propensity to consume all marginal increases in cargo delivered at the present time. The implications of this latter tendency will be considered again under the next sub heading.

In Fiji a certain amount of money is remitted to villages by labourers working in the Vatukoula gold mine in the sugar industry, and in the towns. This undoubtedly adds to the effective demand for cargoes, but there is little information on it. Questionnaires distributed by O'Loughlin for her national income survey of 1950-53 revealed that out of 22 villages (in Bega, Kadavu, Koro, Vanua Levu and Lau) 19 had men working away, and they 'brought a little money back' (CP44/1956, p. 69). But for the majority of villages and estates
outside of Viti Levu (excluding the sugar districts) it is undoubtedly copra values which determine the amount of outward cargo.

While it is not possible to obtain any clear idea of the value of cargoes going to each region in Fiji at least the incomes from copra can, in many parts of the archipelago, be used as some measure of the local purchasing capacity (see also Ward, 1964, pp. 69-73). In Caukadrove Tikina average per capita incomes from Fijian produced copra were $52 in 1963. In the Lau Islands they averaged $31.6, in Kadavu $15.6 and in the Yasawas $20.8 (based on FDF Records and local copra prices). There are also a few figures available which give some idea of the average annual expenditure on purchased goods. Table 10.3 is based on data used by the Central Planning Office, Suva, and on information extracted from Narayanan's income and expenditure survey of Kadavu Island.

There is a greater range of incomes in the township sugar districts, and estate areas of Fiji and these also affect cargo demand. A most important regional

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1 In actual fact there are significant variations between villages even along the same coastline. For example, if returns to Natewa Bay copra producers in the 1963/64 financial year averaged £F46 ($101.2) per ton (before cess deductions) then, by village copra production, the per capita incomes would have been (in $) - Yasawa 62.6, Wainiki 15.0, Vuniwai 54.0, Vuinadi 19.4, Viani 71.8, Sese 55.6, Sagani 48.6, Natewa 36.2, Drakeniwi 120.6. (Based on 'Economic Survey', Department of Co-operatives Suva.). Extracts from the Economic Survey for two contrasting villages (Wainiki and Vuniwai) are given in Appendix Five.
TABLE 10.3: AVERAGE ANNUAL PER CAPITA SPENDING BY SEA-
BOARD FIJIANS IN COPRA REGIONS (IN $)

<table>
<thead>
<tr>
<th>Item</th>
<th>Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar</td>
<td>3.00</td>
</tr>
<tr>
<td>Rice</td>
<td>4.90</td>
</tr>
<tr>
<td>Flour</td>
<td>3.80</td>
</tr>
<tr>
<td>Tinned meat</td>
<td>1.80</td>
</tr>
<tr>
<td>&quot; fish</td>
<td>0.55</td>
</tr>
<tr>
<td>&quot; milk</td>
<td>1.70</td>
</tr>
<tr>
<td>&quot; dripping</td>
<td>8.80</td>
</tr>
<tr>
<td>Tobacco and cigarettes.</td>
<td>3.30</td>
</tr>
<tr>
<td>Soap and toilet reqs.</td>
<td>4.20</td>
</tr>
<tr>
<td>Blue and starch</td>
<td>0.20</td>
</tr>
<tr>
<td>Household effects.</td>
<td>5.50</td>
</tr>
<tr>
<td>Tools</td>
<td>0.60</td>
</tr>
<tr>
<td>Clothes</td>
<td>1.10</td>
</tr>
<tr>
<td>Other</td>
<td>4.20</td>
</tr>
<tr>
<td>Total</td>
<td>42.65</td>
</tr>
</tbody>
</table>

Sources: Central Planning Office, Suva.
K.S. Narayane, UN Tech. Adviser, Suva.

influence in this respect is the port of Labasa. From
Fig. 10.2 it can be seen that about half of the outward
cargoes from Suva are destined for the northwest region
of Vanua Levu. The transhipment arrangements behind
this flow have already been outlined in Chapter 7, but
it should be emphasised that this is the one region of
Fiji from which there is very little complementary
inward flow of copra, for the main product is sugar and
this is loading directly on to overseas vessels.

The effective demand for cargoes in Tonga is even
more closely related to island agricultural resources
than it is in parts of Fiji. The warning which Dalton
gave to New Zealand commercial interests in 1919 is sti
the most valid interpretation of supply patterns:

The inward trade of the Tongan Islands has
always shown considerable fluctuations; the
movement of imports upwards or downwards is
entirely dependent on the fluctuations of out-
ward trade, and this in turn on the fluctua-
tion of the production of copra (Cmd 200, 1919, p.5
This link between the value of cash cropping and the purchasing of general cargo is dramatically confirmed in Tonga after a hurricane. The records of one of the leading wholesale and retail merchants at Vava'u showed a very small profit in the year 1961-62 after the 1961 hurricane, then in 1962-63 they made a substantial loss (sales were reduced by 70 per cent) and in 1963-64 a small profit of $800 was recorded.

Few Tongans have, in fact, many opportunities to earn money outside of agriculture; and those employed in Government service are paid salaries on the assumption that these will be supplemented by subsistence crops. Even in places close to Nuku'alofa this dependency on the land for cash incomes is almost complete. A. Maude made a survey of 135 households on Tongatapu and found that only nine persons had full time employment. When he took all non-agricultural sources of income into account he estimated that, per household they would not average much more than $20 per annum (1965, pp. 153-154). An average per capita income for Tonga (excluding Nuku'alofa) in 1963 was $24.6, on the basis of copra and banana cash returns to producers and a rough estimate of other returns from export crops.

It appears fairly conclusive that the principal factor determining the quantity of outward cargo is the cash returns which island producers can obtain for their crops, the main exception to this occurs in the southern Gilbert Islands and in the Ellice Islands. But the sums of money received from crop sales or remitted by labourers are undoubtedly small. Particularly so since the goods which are purchased have been manufactured in
Australia, shipped to the port towns, subjected to import duty, wholesaled to island stores and cooperatives, transhipped to the islands, and retailed to the people. Even in financially relatively prosperous islands the weekly purchases of goods must comprise of a limited range and quantity. In the poorer islands such as Nuitao in the Ellice, where the annual per capita purchases averaged only $6.54 in 1963, the amount of trade goods bought would appear microscopic by European commercial standards.

The question which is now raised is, to what extent are the various islands really dependent on imports from the port towns? This is an important question if the conclusions reached so far in this chapter are borne in mind, especially in view of the reliance on a wasting mineral resource by some communities and the great dependency on export crops on the part of others. These exports, it should be recalled, are subject to climatically induced fluctuations and to market price instability; at the same time the real earnings from both these sources of income are liable to diminish as prices for overseas manufactured consumer goods rise and population increases in the islands. It would solve many problems for the future deployment of scarce transport resources could it be assumed that the low intake of consumer goods to many of the islands signify virtually no dependence on the port towns and their trade.

Regional Variations in the Dependence on Cargoes

It has already been shown in this chapter that ther
are some significant variations in per capita incomes even between villages along the same coastline. Broad regional estimates of incomes have nevertheless some meaning for the potential flow of goods. The incomes from export crops during 1963 are listed in Table 10.4

<table>
<thead>
<tr>
<th>Territory</th>
<th>Region</th>
<th>Copra</th>
<th>Bananas</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiji</td>
<td>Cakaudrove Tikina</td>
<td>52.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lau Islands</td>
<td>31.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yasawa Islands</td>
<td>20.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kadavu Island*</td>
<td>15.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonga</td>
<td>Excluding Nuku'alofa</td>
<td>18.0</td>
<td>3.6</td>
<td>3.4</td>
</tr>
<tr>
<td>GEIC</td>
<td>Northern region</td>
<td>10.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abemama region</td>
<td>20.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Southern region</td>
<td>2.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ellice Islands</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Some people are also in receipt of timber royalties and others employed in timber cutting and haulage.

Sources: Fiji: FDF Records, and average annual copra price.
Tonga: Report of the Agricultural Dept., 1963, and information from the TCB and TPB.

Only for the GEIC is it possible to go beyond these figures and show approximately the purchases of consumer goods made by each island for the year, this is given by Table 10.5.

The island of Abemama stands out in Fig. 10.1 for its relatively greater import of consumer goods and in
**TABLE 10.5:** PER CAPITA PURCHASES OF CONSUMER GOODS IN 1 GEIC DURING 1962/63 IN $ (EXCLUDING TARAWA AND FUNAFUTI).

<table>
<thead>
<tr>
<th>Island</th>
<th>Purchases $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilberts</td>
<td></td>
</tr>
<tr>
<td>Makin</td>
<td>11.92</td>
</tr>
<tr>
<td>Butaritari</td>
<td>11.50</td>
</tr>
<tr>
<td>Marakei</td>
<td>14.86</td>
</tr>
<tr>
<td>Abaiang</td>
<td>13.48</td>
</tr>
<tr>
<td>Maiana</td>
<td>18.00</td>
</tr>
<tr>
<td>Kuria</td>
<td>22.00</td>
</tr>
<tr>
<td>Aranuka</td>
<td>22.70</td>
</tr>
<tr>
<td>Abemama</td>
<td>29.28</td>
</tr>
<tr>
<td>Nonouti</td>
<td>12.00</td>
</tr>
<tr>
<td>Tabiteuea</td>
<td>10.18</td>
</tr>
<tr>
<td>Onotoa</td>
<td>12.92</td>
</tr>
<tr>
<td>Beru</td>
<td>12.22</td>
</tr>
<tr>
<td>Nikunau</td>
<td>14.27</td>
</tr>
<tr>
<td>Tamana</td>
<td>10.00</td>
</tr>
<tr>
<td>Arorae*</td>
<td>16.42</td>
</tr>
<tr>
<td>Ellice</td>
<td></td>
</tr>
<tr>
<td>Nanumea</td>
<td>9.58</td>
</tr>
<tr>
<td>Nuitao</td>
<td>6.54</td>
</tr>
<tr>
<td>Nui</td>
<td>10.82</td>
</tr>
<tr>
<td>Nanumanga</td>
<td>16.00</td>
</tr>
<tr>
<td>Vaitupu</td>
<td>13.06</td>
</tr>
<tr>
<td>Nukufetau</td>
<td>10.08</td>
</tr>
<tr>
<td>Nukulaelae</td>
<td>14.46</td>
</tr>
</tbody>
</table>

*According to the Colony Information Notes 38/1964 Arorae Co-operative made some serious clerical errors in the financial year 1963/64 and probably also in 1962/63.

Sources: Co-operative Society Records and receipt books of the Colony Wholes Society, Tarawa.

Table 10.5 for its higher per capita consumption of the...
and commerce (see Chapter 3), which enables the people of these islands to mobilize large quantities of coconuts for trade.

In terms of household consumption the average rate of purchasing on Abemama would be about $4 per week (the 1963 census gives the average figure of 6.31 person per household). By island standards this represents a fairly high consumption level of sugar, flour, rice and some tinned foods, and as Fig. 10.1 shows Abemama was the only island in the GEIC to import relatively large quantities of beer during 1963. To what extent these purchased goods would be used as supplements to or substitutes for the local diet of coconuts, toddy (sap from the coconut blossom), pandanus, breadfruit, and fish, will depend largely on personal preferences. But clearly this community must have acquired a fair dependency on these imports which give so much diversitj to their diets for the relatively small effort of making copra.

It is difficult to assess degrees of dependence however. Nowhere in the vast area under study could it be said that (other than in critical times) the very bio-physical existence of outer island populations depended on imported goods. Koch (1955, pp. 260-268), in his study of Tonga reported that 65 per cent of the households in 'Ulua (Ha'apai group) ate, exclusively, foods such as yams, kape, kumala, coconuts, bananas, breadfruit and fish (including shellfish, octopus, alga and crayfish) that were available in ancient Tonga. Walsh (1964, pp. 205-6) on the other hand demonstrates the reliance of Nuku'alofa residents on purchased foods
to happen even in Tonga. The Premier's Report of 1947 (p. 15) expressed concern for the food crops; as due to the high price of copra there was a tendency to neglect the planting of foods and rely on imported products. And, in 1964 the same process was taking place on the islands of Ha'apai due to a new opportunity and enthusiasm for the marketing of bananas. Conversely but just as revealing, on the small and remote island of Ogea in Fiji the complete reliance on locally caught fish was so unusual that the Registrar of Co-operatives had to point out 'It is probably the only co-operative that stocks neither tinned meat nor tinned fish in its store, the people of the island relying for protein food on fish caught in the sea' (CP 37/1965, p. 9).

There are numerous implications in the form of trade dependence outlined. The most obvious are the problems of the small Ellice islands and many of the Gilbert islands to which money has been coming from outside. It is certain that when these communities are, inevitably, thrown back on island resources the level of consumer purchases will fall, and they will be lowered still further by population increases. The islands will then offer an even less viable basis for the support of people who appear to desire more of these goods.

It may be argued that the people on some of these islands had to adjust to a loss of consumer goods during the war and they survived perfectly well. It may also be argued that many of the islands in the central and southern Gilberts have their cash incomes reduced during droughts and the people always adjust to this - in fact copra cutting is deliberately curtailed at such times.
A Government report dated 1st February, 1963, for example, stated that food was scarce on Arorae, Onotoa and Tamana due to the drought, and copra production had ceased 'for the nuts were too scarce for trading' (D.C. Report, Tarawa). The implication here is that the Gilbertese culture is so well adapted to the atoll environment that people can procure sustenance even under extreme conditions of drought while island customs ensure a redistribution of scarce foodstuffs among a community of kinsmen.

The above arguments may be perfectly true, for people will obviously deprive themselves of consumer goods and revert almost entirely to the business of collecting, preparing and storing scarce but procurable local food resources in order to survive, but it is unlikely that they would accept this situation over a long period. Despite, therefore, the low per capita purchases of goods in the Ellice islands and the southern Gilberts these places are also dependent on trade and will become more so.

In the Fiji archipelago the 'true foods' (kakana dina) are root vegetables, while fish, meat, and all the purchased foods are merely garnishings (na i coi ni kakana). Or so it is by custom; but Howard (1961, p. 272), writing of Rotuma said that European products were now absolute necessities rather than luxuries, and if Rotuma were cut off from them it would suffer as much as most communities in rural Europe would suffer under comparable conditions. Rotuma is a relatively rich island, but it would not be too much of an overstatement were this now said of most of the less well
endowed islands in the Fiji archipelago.

Conclusion

The importance of trade for island communities cannot be easily disputed and people want even more opportunities to enter into market relationships with the port towns. The alternative to this is a move to the towns, or to some other external sources of wage employment. There would have to be great increases in the sources of town based employment if they were to assimilate the growing populations in situ and an influx from the islands. This is difficult to envisage other than in Fiji, and even here there is no certainty that industries can be developed to this extent. On the other hand employment based on mineral resources must, by the very nature of these extractive industries, come to an end in due course.

The main conclusions are that in order to ensure the present rate of per capita supply of cargo to the islands in the future an increase in cash production will be required largely from island based resources; in some regions the prospects for this are not high. Yet even in the most remote and least money conscious islands in the GEIC it is certain that people will not now be deprived of 'cargo'. They are truly dependent on trade. One of the best expressions of this subtle form of trade dependence is the pathos in an old Gilbertese song which the writer heard in these islands. In part it goes, roughly:
Ai tera te bai ae e raka iaon abara
Ti a mate n tangiria
Te bai ae e kaokoro rabatana be e roro
Ao tera arana ngaia te Baake
E Kakorakai nano tangirakin te bae te moko
Tia, bora, kanga e rareanako
Te, bai ni I'Matang ae e roro
Ao e minomino nako irana
Aki, karau nano tangiran te moko

What is this thing which has come up into our country
We are dying for love of it
A thing with an odd sort of body it is black
And what is its name
It's tobacco
How strong the love for smoking
We die if it goes away
A white man's thing which is black
And twisted round every strand
Go easy on this love of smoking

1 Twist tobacco was one of the first items of European trade to come to the Gilberts, it is now one of the principal commodities which becomes voluntarily rationed when stocks in the island co-operatives reach a low level and the arrival of a trading vessel is in doubt. Some tobacco leaf is grown in the GEIC but the quality is very poor and it is only smoked when twist tobacco and cigarettes are unobtainable.

2 I am indebted to Mr. Paul Laxton for translating into English this and some other Gilbertese songs.
PART FOUR

CONCLUSIONS AND CONJECTURES
Chapter 11
PAST TRENDS AND FUTURE DEVELOPMENT

Port Town Economy and the Outer Islands

It was shown in the earlier chapters how changes in the economy of the islands have frequently been reflected in the spatial distribution of trading places and in particular by the centralisation of port functions. A few additional points may emphasize the long-term trends:

(i) As a result of Government activities and the power of the town merchants the historical trend in Fiji was towards the primacy of the port of Suva.
(ii) Sugar interests were successful in securing outlets in proximity to their producing areas.
(iii) Small servicing centres evolved in other areas where estates and relatively intensive forms of agricultural and non-agricultural economic activities had appeared - and where roads facilitated hinterland developments.
(iv) For most of the remaining areas of Fiji a one-step relationship was established between many individual villages and Suva without the growth of intermediate trading and servicing centres.

In the GEIC a tendency to centralize was also apparent. First came the withdrawal of trading-station directly maintained from overseas by company vessels; then followed the restricting and closing of ports of entry other than Betio. The locational forces in Tonga
were somewhat different. They gave rise to two outer-region ports of entry - which grew to only moderately less population rank than Nuku‘aloa and were, at least in theory, of equal entrepôt-status with the capital.

Corresponding to these differences in the distribution of overseas loading places there were differences in the flow of regional products for export. It was shown that unless the transport media were highly efficient trade became more homogeneous with increased distance from the port. This observation of the island space-economy is so clearly in line with Thünen theory that his model will be adopted here and elsewhere in this section to illustrate the factors involved.

In his initial model Thünen (1826) postulated a single city located on a plain of uniform fertility. He calculated the 'economic rent' of land at various distances from the city and concluded that from a narrow belt of horticultural activities close by there would radiate outwards concentric zones of production each with its own particular staple product. In part II of his study Thünen introduced variables such as the ease of access, differences in soil fertility and climate, and the existence of subsidiary centres, to the model of a single town on a uniform plain (Hall, 1966).

In the Fiji archipelago the dominant port town is separated from outer areas by the sea - which is frictionally uniform to transport. Fig. 11.1 shows how on the seaward side the Thünen rings were unmodified (if the very small commercial trade in fresh produce and livestock is ignored). But on the landward side where roads gave improved access the production zones were variegated.
Fig. 11.1
Source: Field Survey.
and more adjusted to ecological conditions. Access values have thus modified the effect of landward distance from the port. In the GEIC production for the market was seen as almost standardized throughout. But islands in relative proximity to the administrative and commercial centre did benefit slightly by their ability to supply roofing thatch at less real costs than would have been involved from the more distant zones. Tonga, as a result of regional subsidiary ports, was able to export fresh produce from areas distant from the main town, for the regional centres evolved their own local zones within the general spheres of influence around the capital. Fig. 11.2 summarizes the export crop distribution patterns in Tonga which are in contrast with the present situation in Fiji (Fig. 11.1).

Tonga has thus partially solved the problem of island dispersion and market production. Whether the Tongan form of subsidiary export centres (say at Funafuti) and improved regional services would help raise production in the Ellice Islands significantly above current levels (with their present population densities) is a moot point. Fiji on the other hand has an absolute potential for increased and more varied products from island regions, and has many opportunities for improved services to facilitate this.

Another developmental aspect of the distant island problem vis a vis the port town and adjacent areas is the recognition (in some cases very tacit) by governments that outer zone populations should not suffer economically because of their geographical location.
Fig. 11.2
Source: Field Survey
At least in the GEIC the official view would appear to be that the provision of shipping services should, like the provision of roads in areas of contiguous land, be a charge on the whole community. In all three territories also there is recognition of the need for some planned allocation of capital for development; otherwise if the 'free play' of the market is allowed to operate it is likely that it will be once again the towns and their immediate hinterlands which will continue to benefit at the expense of outer areas.

The development plans of the three territories will now be briefly outlined in the remaining part of this chapter. The final chapter will, in the light of these schemes, consider again the port town/hinterland links and some new relationships that could emerge in the space-economies of the archipelagoes.

The Need for Planning the Future

In the Gilbert and Ellice Islands the prospects for economic development, as defined by 'cumulative increase in output or consumption per head of population' (Stace, 1962, p. 7) appear poor. The coming exhaustion of the phosphate deposits in Ocean Island and Nauru, the rapid population increases, and the paucity of resources among the many small and dispersed islands are the main problems. The economic consequences of the exhaustion of phosphates are recalled in brief as a loss of wage earnings amounting to $450,000 per annum, a loss of Government revenue of about $900,000, while 3,500 people who are normally resident on Ocean Island and Nauru for some time may be permanently added to home
island populations.

If the copra industry of the GEIC is to make good these financial losses it will have to increase production to the value of $1,350,000. The total fob value of copra in 1963 was $600,000 (Copra Board Records, Tarawa) so that in order to maintain 1963 living standards and Government services the production of copra for sale will have to almost double in the next 20 years. But even this will not be good enough, for population, in the absence of migration, may also have doubled in size in that time (Census, 1964, p. 65). It is also highly probable that prices of Australian produce now imported into the GEIC will increase steadily during the next two decades and so will freight rates to the GEIC. If we add to these trends the market price instability of copra and the periodic droughts of the Gilbert group then significant increases in living standards seem in the highest degree improbable, and for some islands a grave deterioration in standards is far more likely.

Tonga also, with a 3.2 per cent rate of population increase, can expect to double its population by 1987 (Maude, A., 1965, p. 188) but prospects of economic development are brighter than in the GEIC. A. Maude argues that land at present unused can be developed and production on land presently under coconuts can be increased so that the export crop could possibly be doubled. Maude also sees scope for expanding exports of agricultural produce to Samoa and New Zealand and the replacement of meat imports by more animal rearing (Maude, A., 1960, pp. 201-4). There is, however,
underemployment and unemployment in Tonga and a critical scarcity of capital. Whether land, labour and scarce capital can be combined spatially in the best proportions depends very largely on the efficiency of planning and the possibility of external finance.

Fiji's population is similarly increasing at a rate more than 3 per cent per annum, and in order to achieve cumulative per capita increases in incomes an economic growth rate exceeding 4.5 per cent per annum is required (Knoblock, 1963, p. 7). But the best land is already being used, and it is doubtful if:

...primary industries based on the Colony's physical resources will be able to continue to provide employment for as high a proportion of the workforce as is now the case, despite the intensification of land use and the development of new land which will take place (Ward, 1965, p. 77).

And McArthur (1961, p. 398) states that employment opportunities in non-agricultural industries will have to double in the next decade to avoid considerable unemployment.

The Choice of a Plan

Economists like Bauer and Yamey (1957) would maintain that laissez faire is sufficient to ensure development - after all the Western Nations were once themselves underdeveloped and did not require a development plan to 'take-off'. This of course depends on the definition of development. In this study it has been linked with welfare; and the one-sided type of economic growth which has characterized enclave enterprises in the archipelagoes in the past does not now meet these
requirements.

By far the simplest phase in island development planning is the setting of targets for agricultural output and improvements in communications. These are the types of projects initiated in the GEIC and Tonga. In the latter territory development projects were between 1957 and 1961 financed from internal capital sources. Then almost all revenue from imports and exports was used to purchase vessels, machinery and trucks and to pay for the construction of copra and produce sheds and offices. This 'up by the bootstraps' type of development was made possible without the hardships which it brought to other countries simply through the abundance of local foodstuffs and by the non-commercial flow of these and other goods to areas where scarcities arose (see Chapter 13). But the process never became 'self-generating' for development decisions in Tonga were made on an ad hoc basis and were immensely costly compared with their immediate returns. Loss of revenue as a result of hurricanes and the general scarcity of capital has put a limit on this form of growth. In the GEIC there was only minimal local expenditure involved in some agricultural projects, but for all other improvements - such as reef blasting - outside financial support was necessary and was obtained.

More complex than target plans is the 'sectorial' type of planning recently adopted in Fiji. This follows the techniques of national accounting and includes both the public and private sectors (CP 43/1961 p. 1). Sectorial plans are dynamic and normally the
'required changes in economic structure are so great that they are unattainable without changes in social structure as well' (Higgins, 1959, p. 641). In the financing of such plans, in non-socialist economies, governments normally undertake investment in the public sectors (ports and transport) and the provision of agricultural subsidies in such a way as to relieve bottlenecks in the private sector, increase primary production, and induce further private investment. Again overseas loans and grants are frequently obtained to assist developing countries introduce these schemes.

Structure of the Present Development Plans

In the GEIC the plan which was introduced in 1966 (CIN 32/1966) will cost about $3 million to implement. Most of this will come from Britain, and 37 per cent will be spent on communications (especially regional air services) and 19 per cent on 'economic projects' (mainly the coconut industry). The balance of the money will be allocated to social services and education including the setting-up of a marine training school at Tarawa. In addition the projected improvements in air services within the GEIC are seen as a possible stimulus to tourism.

The only plentiful local resources in the GEIC are manpower and the sea; however, as there is no plan as to how they, the latter especially, may be more fully utilized further discussion of these factors will be deferred until later.

In Tonga the emphasis in the development plan (1965-70) is also on the rehabilitation of the coconut
industry plus improvements in agriculture and fishing, port facilities at Nuku'alofa, tourism, and expanded educational and social services. The costs of this will be around $4.2 million, of which about 60 per cent will be mainly in the form of grants from overseas (primarily from Britain).

Before this plan was prepared Tonga had already moved in the direction of raising coconut products to a higher level of value by processing in the islands before selling them. For this purpose a small dessicated coconut factory, with an output of 450 tons per annum, was started at Haveluloto near Nuku'alofa in 1962. But more ambitious than this, the Copra Board in 1963 invested about $450,000 in the Coconut Processing Corporation of Pago Pago in American Samoa, with an understanding that further shares would be purchased. Under this arrangement whole nuts (30 million per annum) will be transported from Tonga to Pago Pago, made into dessicated coconut (6000 tons per annum), and possibly other products, and then sold in the U.S.A. In this way Tonga intends to obtain entry to the American market and the trade link may also give opportunities for selling fresh produce in American Samoa.

When, or if\(^1\), the Pago Pago project gets under way it will mean that Tongan farmers will no longer make copra but will be able to concentrate on the raising of coconuts, fresh produce, and livestock. It should also

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\(^1\) At the time of writing there were still some doubts about this project for the American company seemed less enthusiastic than at the outset in 1963.
be noted that all the regions of Tonga will remain directly export-orientated - in contrast to the situation which would have arisen had the present coconut processing plant been expanded at Haveluloto. The possible significance of this for economic development will be discussed in the next chapter.

In Fiji the government, on the basis of the Burns Commission's recommendations (CP 1/1959, paras. 707-9), adopted the principles of economic planning for the future. A Central Planning Office was accordingly set up in 1964 under the direction of a United Nations expert. The Development Plan (CP 11/1966) was produced in mid-1966; it will cost about $42 million over a five year period; of this sum about one quarter will be raised locally. The plan does not envisage any major production changes in the period 1966-70 during which time pre-investment surveys will be undertaken. Sugar by 1970 will still be the main export earner ($78 million) followed by coconut products ($6.6 million) and tourism ($4.6 million).

By the year 2000, however, forestry is expected to have become the principal export earning industry in Fiji. The two large islands, and also Kadavu Island, have land and climates suitable for quick growing tree species. It is anticipated in the plans that by 2000 A
'
...produce from plantings would have an annual export value of at least £F20 million (§44 million) as roundwood at present-day prices, and if exported as processed products (pulp and paper) would produce annual earnings of more than £F100 million (§220 million)' (p. 8).

The second most important industry in the future fo
Fiji may be tourism. Full cognizance of Fiji's natural and acquired advantages in this field has thus been taken, particularly the location of the archipelago in the main Pacific shipping and air routes. Tourism is an excellent potential source of income and is also labour intensive, these are two major requirements for island development projects. As a result, however, tourism is also highly competitive and appears in the development plans of almost all Pacific territories.

In Fiji the circum-insular road around Viti Levu is to be improved under the development plan partly to facilitate the spread of tourism. The extent to which the outer islands will benefit directly from the £F35 million ($77 million) which tourists may be spending in Fiji by the year 2000 depends primarily on the type of local transport which will be provided.

Agriculture must of course remain the mainstay of Fiji in the provision of foods for the local population and also for the export trade in sugar, copra, coconuts, coffee and some fruit and vegetables. However the scarcity of arable land makes it unlikely that agricultural output in the traditional crops could be more than doubled by 2000 AD. This, the plan states, is why agricultural production must be intensified in the

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1 But supersonic aircraft may well overfly Fiji between Australia-New Zealand and Honolulu. Already with subsonic aircraft there is a direct Brisbane-Honolulu service. Fiji will thus have to generate more of its own air traffic and can rely less on stopovers.
FIJI DEVELOPMENT PLAN

Pasture 500,000 acres
Sugar 200,000 "
Timber 550,000 "
Coconut 230,000 "
Rice 50,000 "

Coffee 30,000 acres
Gardening " " M
Cocoa 22,000 " C
Banana 10,000 " B
Palm Oil —— P

Source: Central Planning Office, Suva.
output. But minerals of the type found in Fiji will be exploited only periodically when the world price is suitable. Fig. 11.7 shows the main distribution of known mineral resources and Table 11.1 indicates that unless there are major world price changes not a great deal can be expected from this sector. The most likely mining projects in the near future will be the extraction of the copper/zinc deposits at Uda Point, Vanua Levu for export, and the exploitation of several of the Lau phosphates deposits for internal use. If transport and loading facilities can be arranged the latter may yield between one to two and a half million tons from Vanua Vatu, Ogea Driki and Tuvala Islands (Fiji Lands, Mines and Surveys Dept., 1965).

More end products from coconuts, the possible development of palm oil production, and the building of pulp mills will add to secondary industry in Fiji. Already there is a certain amount of small-scale industry and manufacturing such as cement, biscuits, furniture, clothing, matches, cigarettes, beer and paint as well as relatively large-scale sugar milling. Apart from the bulk of the sugar these products are for local consumption, but some are exported to other Pacific Islands (see Table 7.7).

1 Suva cement was being landed at Vila in the New Hebrides in 1965 at about 60 per cent of the price of Japanese cement. Local shipowners in the New Hebrides saw this as an opportunity for more inter-territorial trade between Fiji and the New Hebrides (H. C. Brookfield, pers. com.).
Fig. 11.6

Source: Central Planning Office, Suva.
FIJI ESTIMATED SURPLUSES AND SHORTFALLS OF VEGETABLES 1970
(Tons Thousands)

Fig. 11.5
Source: Central Planning Office, Suva.
Fig. 11.4
Source: Central Planning Office, Suva.
TABLE 11.1: DEVELOPMENT PROSPECTS IN FIJI MINING AND QUARRYING

<table>
<thead>
<tr>
<th></th>
<th>1963</th>
<th></th>
<th>1970</th>
<th></th>
</tr>
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<tr>
<td></td>
<td>Net</td>
<td>Imports</td>
<td>Gross</td>
<td>Net</td>
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<td>Mining</td>
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<td>Turn-</td>
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<td></td>
<td>Produc-</td>
<td>Materials</td>
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<tr>
<td></td>
<td>tion</td>
<td></td>
<td></td>
<td>tion</td>
</tr>
<tr>
<td><strong>EXPORT DEMAND</strong></td>
<td>£Fm</td>
<td>£Fm</td>
<td>£Fm</td>
<td>£Fm</td>
</tr>
<tr>
<td>Gold &amp; Silver</td>
<td>0.8</td>
<td>0.7</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>0.2</td>
<td>0.3</td>
<td></td>
<td>0.5</td>
</tr>
<tr>
<td>Iron</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td>0.2</td>
</tr>
<tr>
<td>Bauxite</td>
<td>0.3</td>
<td>0.5</td>
<td></td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>0.9</td>
<td>0.7</td>
<td>1.6</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>HOME DEMAND</strong></td>
<td></td>
<td></td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Phosphates</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td>Road Metal</td>
<td>0.1</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Sand &amp; Gravel</td>
<td>0.2</td>
<td>0.1</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>0.8</td>
<td></td>
<td>1.9</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>1.1</td>
<td>0.8</td>
<td>1.9</td>
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</tr>
<tr>
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<td>4.3</td>
<td></td>
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</tbody>
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**Summing Up the Development Plans**

Four points emerge from this summary of the Fiji plans. Firstly, the welfare aspect of development alone would call for further investment in the small islands of Fiji, and the shortage of arable land would appear to make this economically advisable. Secondly, without any concentrated effort to increase food production the 'surpluses' from the other islands would (if they could be transported) meet a high proportion of the short-run deficits in south-east Viti Levu. Thirdly, import
Fig. 11.7

Source: Dept. Lands, Mines and Survey, Suva.
of meat, margarine, ghee, rice and fresh produce will continue to rise; one of the long-term aims of agricultural development and local manufacturing will therefore undoubtedly be towards more import-replacement by the local production and manufacturing of these commodities. Lastly, these developments clearly involve a prior commitment to further transport investments in order to bring in higher copra tonnages, and in addition timber, livestock and vegetables from the outer zones.

In the GEIC there is little planning being done that can really ensure a rising living standard for the people. The main target set is increased copra production. But this is difficult to achieve against a rising population in a region of droughts, and where one of the main subsistence foods is coconuts. How difficult may be appreciated from the fact that from 1950 through 1956 total production of copra for sale amounted to 36,590 tons, while from 1957 through 1964 only about 35,600 tons were produced for sale (Copra Board Records, Tarawa). In the same period population had risen from approximately 38,500 in 1951 to around 50,000 in 1964. In effect production per capita has been falling. Despite therefore improved production techniques, clearing and replanting of groves, and the eradication of rats, it is not easy to envisage much real increases in income from copra alone.

The only other economic projects in the GEIC are the marine training school which will provide men for recruitment to the merchant navies of other countries;
and of course tourism. Both of these schemes depend for their success, it will be noted, ultimately on factors outside the control of the island government. The present GEIC plans do in fact appear inadequate to meet exigencies which will arise by 1990 from the reduction in phosphate wages and revenue. What seems to be required is another large-scale industry based on resources within the GEIC. In view of the present and future world food shortages commercial fishing would seem to be the most likely possibility in this region of the Pacific. In the past fishing has been rejected largely on the grounds of remoteness from markets. However, new techniques in fish storage have reduced the factor of distance in commercial fishing, and the use of small vessels in conjunction with a 'mother ship' has eliminated the need for elaborate shore installations. This point will be returned to in the discussions of island shipping links in the final chapter.

In the Tonga plan there is no mention of the likely socio-economic effects of the Pago Pago desiccate coconut plants. Until this has been started and Tonga ships have commenced delivering whole coconuts it is difficult to evaluate the course of economic development planning in this Kingdom. It should be stated however that there are misgivings about the loss of overseas earnings which will result from the withdrawal of the largest vessel of the Tonga fleet from what is currently a profitable Pacific charter in order to service the Pago Pago plant.
The implementation of development plans as a solution to many socio-economic problems in the islands raises some final questions for the archipelago trading systems. What, for example, will be the future relationships between the port town economy and the outer areas? Will small scale industry spread outwards from the towns to island centres - or will there be additional ports of entry to facilitate the direct exports of island commodities? These points are borne in mind in this attempt to see how the trading systems could change in the process of economic development.

Changing Functions of the Port Towns

Since the second world war the port towns have burgeoned in population and have acquired increased and more complex functions in the archipelago space-economies. Only Betio in the GEIC retains the characteristics of an entrepôt pure and simple - but the spread of administrative, educational, and medical establishments around the southern part of Tarawa lagoon serving the needs of islanders indicates that even here there are changes. It is clear also that only stringent checks on population movement prevent an accelerated rate of migration from the outer islands to Tarawa.

Despite the similarity of changes which have begun to integrate urban institutions with the new educational, social and economic needs of the islanders there
remain many differences between the various towns. These differences in size and functions reflect in some ways existing diverse stages in the development of the archipelago economies. The GEIC for example is monoculturally and directly export-orientated. Tonga is also directly export-orientated but has some diversity in primary production for export and a small factory output of desiccated coconut for export. Fiji exports directly only fresh produce; the bulk of the coconut crop is exported as oil and cake and the sugar cane crop as milled sugar; in addition there is an export of manufactured goods from port town industries. Fiji is clearly at a more complex phase of development than are the other two territories. Another distinctive feature of Fiji is the way in which the port town of Suva dominates by its population size and multiplicity of activities.

Fig. 12.1 shows the relationship in size which all the principal towns bear to lower-order centres in the three archipelagoes. If, as has already been suggested, these differences in the size distribution of centres are related to economic development, then this obviously requires consideration; particularly so before discussing further any possible rearrangement of the patterns of trade and the role of trading places in order to facilitate another transition in archipelago economic development.

Development and the Size of Centres

It is self-evident nowadays that at relatively advanced stages in economic development (e.g. manufactur
PORT TOWN RANK IN EACH ARCHIPELAGO

Suva

B  Betio
Bt  Butaritari
F  Funafuti
L  Lautoka
La  Labasa
Le  Levuka
N  Neiafu
Nk  Nukualofa
P  Pangai

Population (ooos.)

Fig. 12.1
Source: Census data.
agglomerations of population and functionally integrated economic activities tend to cluster and grow in the one place. Economies of scale, the divisions of labour, the stimulus of a local market - and so on - and thereby generated and facilitated. In an economy geared primarily to supplying an overseas market with raw materials the concentration of population to the same extent is less meaningful from an economic standpoint.

In terms of population size Suva shows a high degree of primacy, Nuku'alofa is much less dominant, and the curve (Fig. 12.1) of centre-size distributions in the GEIC (such as it is) approximates to log normality. On the basis of the above it would be possible to postulate an accelerated growth of Nuku'alofa if the Tongan economy became less directly export-orientated and semi-processing and manufacturing sought the economies inherent in locational grouping at the main port. Conversely, but by the same token, the rationale of all GEIC raw materials being assembled at Betio could be questioned when there is no 'value added' at that point. An alternative possibility for the GEIC will be discussed below.

On a world scale, however, the concept appears inconclusive; Berry (1961) as a result of a statistical exercise found that:

There are no relationships between type of city size distribution and either relative economic development or the degree of urbanization of countries, although
urbanization and economic development are highly associated. It appears that there is a scale from primate to lognormal distributions which is somehow tied to the number and complexity of forces affecting the urban structure of countries, such that when few strong forces obtain primacy results, and when many forces act in many ways with non predominant a lognormal city size distribution is found. Simplicity was associated with indigenous political and administrative controls from orthogenetic primate cities, with dual or multiple colonial economies and controls exercised from heterogenetic primate cities, and with empire capitals, in all cases also combined with small countries. Note that in most instances of primacy these statements apply only to primate cities themselves, for the system of smaller urban centres is generally distributed lognormally. Complexity was associated with specialized economies, but also with countries which have strong urban traditions and long histories of urbanization, and was found in countries of every size. (1961, p. 587).

In some ways Berry's conclusions contradict the size/development hypothesis; but it should be apparent that the lower-order centres in Fig. 12.1 would not be included in Berry's classification and a place like Suva would belong to a 'simple economy'. In which case the hypothesis could be pressed further by speculating that some time in the future when the Fiji economy becomes more complex there may be considerable growth in the regional 'capitals' of Lautoka and Labasa and a return to lognormality in size.
distribution. For reasons which will become apparent later the implication at present is that Suva is likely to continue to grow and to develop diverse manufacturing and servicing functions ahead of these other ports and that this is desirable from the point of view of development.

There is another point to be considered in the relationship between economic development and the size of the port towns, this is the problem of people arriving in the towns ahead of the level of urban employment outlets. Suva is *overurbanised* in this sense; Nuku'alofa probably more so; and at Betio overurbanisation has already reached such critical proportions in relation to available land and potable water that people are now being sent back to their home islands. There are a number of views on the question of overurbanisation, but at least two conflicting approaches are worth noting as further factors to be taken into account in any plan affecting inter-spatial relationships in the archipelagoes.

Lampard (1954) for example, while not in any way denying the advantages of agglomeration and specialisation, suggests that a large city could act as a curb rather than a stimulus to economic growth. He

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1 At risk it could also be suggested that an almost horizontal line below the GEIC curve would represent size distributions in the subsistence economy. Then a progression linked with economic development might be traced, in either time or space, through lognormality to primacy followed by a trend returning again to a lognormal distribution.
maintains that, by analogy with 'Western' economic history, there is a case for priority investment in agriculture and rural industries under certain conditions of underdevelopment. This would '...help accumulate more capital for the future, but would lessen the tendency for urban development to get out of step with the rest of the economy' (1954, p. 132). Davis and Golden (1954) on the other hand are less disturbed by the phenomenon of overurbanisation; they in fact see it as a possible stimulus to economic growth. The governments will as a result be faced with idle, impoverished and rootless urban masses, they must somehow adopt measures for the creation of employment or otherwise be faced with social upheaval. This view is more applicable to the cities of Asia than to the Pacific towns - especially where kinship channels still connect the urban unemployed and underemployed with areas of food surpluses in the islands (see below Chapter 13) but it could apply with full force to landless Fiji Indians.

This latter view is nevertheless partly shared by Cyril Belshaw (1963). He points out that colonial governments would prefer to see the unemployed and underemployed distributed throughout the countryside rather than in the towns. He goes on to speculate that given uninhibited migration to the urban areas of the Pacific a milieu for the development of local enterprises might be created by the juxtaposition of 'underemployed minds associated with available unemployed labour' (1963, p. 23). Belshaw's
hypothesis has the virtue of social reality for people will no doubt continue coming to Suva ahead of available town employment. Whether this will also result in employment-generating is a moot point, but there is some evidence for this process in West Africa (see Bauer, 1954). The views of Belshaw and the other writers have also some support in modern economic theory and are not simply an extension of laissez faire hopes. Economists such as Hirschman (1958, p. 36), for example, advocate the deliberate unbalancing of an economy precisely for the responses which this can bring about in various sectors. Overurbanisation would fit into this view of 'unbalanced' as opposed to 'balanced' processes of growth.

With the above points in mind, and taking into account the development plans, it is now proposed to discuss a possible future arrangement of the island trading systems which might, in some practical way, overcome the sea transport difficulties and facilitate long-term development.

Island Transport and Development

In the development context sea transport is required to help stimulate agricultural production in the areas of higher intrinsic potential by providing suitable services and adequate carriage facilities; at the same time it must meet the special needs of the poorer and more remote islands in terms of cheaper carriage and reliable contact. This multiplicity of development functions was emphasised by Hindelink when he wrote of transport and development
generally:

The transport and communications problems of the present and future must of necessity be approached and solved with full regard to the requirements of all sections and phases in the growth of the economic life of all communities within the development area (1953, p. 11).

It might appear unrealistic to speak of promotional and welfare functions being added to the present tasks of island shipping, since the point which has been stressed throughout the preceding chapters is that shipping is barely able to carry out its day-to-day functions efficiently and make a profit, and in some areas seldom does it do so with a reasonable margin of safety. Yet if valuable land is not going to be wasted and certain poorer islands are not to become the chronically depressed regions of the archipelagoes something must be done in this direction. The two courses open to governments seem to be to subsidise the ships and/or find ways of making them more viable.

Subsidise or Rationalise?

Subsidies are usually justified on a temporary basis; when for example a service is initiated or improved ahead of development and it is expected that economic loads will eventually be attained. The government may then recapture the subsidy through its taxation policy as incomes and exports increase.

It was proposed at one time that the USS Co. would call regularly at Kadavu Island in Fiji for
bananas and this would solve the problem of high freights and the losses of fruit as a result of carriage to Suva. It seems as if 4,000 cases would be an economic load and the USS Co. would have received a subsidy until this was reached. Unfortunately nothing came of the scheme and very few bananas are now produced for sale on Kadavu - but it demonstrates the most convincing case for a shipping subsidy. Otherwise there seems little point, in purely economic terms, in using scarce capital on a long term basis to bring to market resources which in themselves cannot bear the costs of transport.

The choice, of course, is not always between using or not using scarce resources to bring idle but valueless resources (in the sense that total transfer costs exceed current market prices) into production. Many small poor islands exist, they are populated and the people require a shipping service. The government has therefore to see that this is provided. In the GEIC the islands nearer to the export port are charged relatively high freight rates in order to subsidise smaller and more distant islands. There is much to be said for this egalitarian policy even on an international level; but, as was pointed out in Chapter 8, it runs into difficulties when it is arbitrarily imposed - especially on a people whose social structure is eminently suited to the support of kinsmen but who may be unconcerned about the welfare of those outside the bounded clan and kindred (see Maude, H. E., 1963, esp. pp. 51-2).
There may be a case for subsidy in the form of a long-term loan. Indeed, it is difficult to see how there can be replacement in the small-ship sector of the Fiji fleet without an arrangement of this sort. Such a course would solve for a time the problem of safety on voyages, but not the problem of making vessels pay; so that while a shipbuilding and replacement subsidy may be a prerequisite to development it is not the answer.

Shipping subsidies must in most cases be regarded merely as temporary measures. The real solution would appear to lie in rationalising the trade. Before this is gone into in detail the areas that appear most amenable to rationalisation will be outlined. Chapter 7 showed that the crux of the transport problem for Fiji lay in the excessive time spent on a voyage which involved small quantities of cargo, a high labour cost per ton mile, and the risks of expensive repair costs. By reducing the turn-around time economies would be made in local sea services. This latter statement is true of almost all present day shipping. In a submission by the Secretary-General of the 'Inter-Governmental Maritime Consultative Organisation' to the 'Advisory Committee on the application of Science and Technology to Development' (United Nations) the following point was stressed:

...I would wish to draw your attention to a problem largely regarded as being one of universal concern to the maritime industry, that of the turn-around time of ships in port. It is considered that there is no
subject that as such promise of fruitful results for the maritime industry as that of an attack on the problems of cargo handling (U.N. Resource and Transport Division, 1965, p. 1).

In Fiji the margin of potential savings from reduced turn-around time in the islands is very substantial indeed.

This particular problem is less acute in the GEIC, and in any case it is being tackled by the Wholesale Society. Where economies could be made in this region is by the elimination of cross-hauling and other duplications of work. One could question the rationale of a vessel carrying general cargo at two-monthly intervals from Australia to Tarawa at $32 a ton and leaving Tarawa without loading; another ship arriving from Fiji at four-monthly intervals with a small quantity of cargo at $24 a ton and loading copra for Europe at $30 a ton; yet another coming from Europe at two-monthly intervals with small quantities of general cargo again to leave without loading. In addition local vessels are collecting and redistributing these cargoes in the archipelago at the average rate of $20 a ton, and making, in total, six voyages per year to Fiji for refits. Part of this duplication of work in the GEIC is due to the directional imbalance of trade which has arisen in the Pacific, especially since 1914. Nowadays large quantities of general cargo come from Australia but almost all copra is shipped directly to Europe.

Tonga at present provides a more rational arrangement with three ports of entry and small feeder services
connecting with these limited island hinterlands. Fiji would appear to have a shipping industry which is less amenable to rationalising due to its heterogeneous structure. However, even here the need for reorganising the present system has been recognised by some private entrepreneurs and by village people. These intrinsic trends developing within the Fiji trading system are worthy of fuller treatment for they appear to be in the direction the industry should be taking in order to further island economic development.

Rationalising Trends in Fiji Shipping and Trade

A few of the small shipowners in Fiji have recognised the dangers of unlimited competition and they have tacitly agreed to give and take in the island trade. This is made difficult by others who move widely in the group 'skimming the cream' rather than attempting a sustained service. Up until very recently villagers have tended to encourage these latter practices by giving a little cargo to every vessel, primarily to induce as many as possible to call at their village and in this way obtain a more frequent service.

With the consolidation of the co-operative movement in Fiji the position of many island shippers improved vis-a-vis the shipowners. This was demonstrated by the Rotuman Co-operative Society which, by exercising the right to charter its own tonnage, achieved a remarkable reduction in transport costs in the face of rising freight rates.
The co-operatives of Lomaiviti also recognised the need for a more rationale transport service and accordingly they used their better bargaining position to achieve this. The Annual Report of the Registrar of Co-operative Societies for 1963 says:

The islands of Gau, Koro and Vatulele have been increasingly frustrated by poor transport. Small vessels operating in competition provided a highly irregular service and ships and shippers suffered alike. The shippers were inconvenienced by the irregular intervals between ships, the ships by the uncertainty of gaining full loads. To ensure greater efficiency societies were encouraged to contract with one company for the transport of all produce and of goods for their stores, in return for which the company guaranteed regular service and adequate space. The Societies offered to purchase shares in the company if required to do so both to protect their contract and to enable the company to extend its services by acquiring more vessels. (CP 5/1965).

One of the results of this arrangement between the co-operatives and a small company has been to eliminate some of the destructive competition in the trade of the above islands. There is also now more regularity in the services; but the cutters must still call at all villages so that turn-around times remain protracted and the marketing of large quantities of fresh produce continues to be precarious.

New developments in Natewa Bay, Vanua Levu, although experimental in some ways, are in line with current trends. This is a region where lateral communication by land is difficult and trade stores few and widely dispersed. People have been accustomed in the past
to carrying small quantities of copra by launch to the trade stores, and selling it at prices $21 to $26.50 per ton below the Suva price. Trading vessels come to the Bay usually at three-weekly intervals; they load estate and traders' copra and call at thirty or so villages. New arrangements with one shipping company encourage village co-operatives to send their copra by launch to places that can be worked relatively easily by the vessels. There they receive an advanced payment on their copra from the shipping company. It is no longer necessary therefore for this company vessel to call at so many places as before. The advantages of the new arrangements in Natewa Bay are clear. The needs of the producers for spot cash are met and at the same time the Suva price is paid less $8.80 freight plus some small charges by the societies. The launches used for centralising are local craft and are paid for by deducting $2.70 from each ton of copra. Local resources and labour are used in this way and additional income is earned by the launch owners. At some stage we would expect the co-operatives to negotiate a lowering of freight charges to Suva on the grounds of improved ship turn-around times as a result of their efforts.

There is thus a minor trend in Fiji towards the zoning of operators in order to minimise competition which is reducing load factors in some regions. There are also small scale attempts being made to consolidate cargo activities in one area. These trends would seem to be in a direction best suited to economic development.
Rationalising by Regional Centralising in Fiji

It was suggested in Chapter I that villages with favourable conditions of access were already receiving a more reliable service than those where tide delays and difficult landing conditions prevailed. The theory of rationalising on the basis of Central Trading Places (CTP) is to build up cargo at these accessible points, and if necessary improve their entrance and berthing facilities.

The advantages of this form of centralisation are quite numerous. The concentration and collection of cargo by road, launch and other means would for example allow scheduled services to be introduced from the port towns to the CTPs and ship turn-around times to be cut by half. The need to carry heavy workboats and extra crew to act as stevedores and boatmen would be eliminated (thus reducing total wage costs), and the dangers of accidents due to reef pilotage minimised. These economies would allow a reduction of freight rates to be negotiated and at the same time enable vessels to pay their way. Apart from general economies in shipping this form of consolidation would also mean opportunities for

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1 A more detailed outline of the CTP proposal (including financial inducements) was made in 'Report on the Interinsular Shipping and Trade of Fiji, 1965' by A. D. Couper, Australian National University to the Government of Fiji. It was stated there that more local surveys were required into the location of CTPs and other aspects of shipping. These have now (1967) commenced under a United Nations project.
the sustained marketing of fresh produce and fish from some areas. It may even be possible for mobile refrigerated containers to be packed at the co-operative purchasing depots and loaded directly on board the vessels on arrival.

In order to contrast the present unconsolidated system with a possible future pattern the distribution of trading places at which Fiji interinsular vessels called in 1963 is shown by Fig. 12.2. The distribution of proposed CTPs which have high access values, which are already school or medical centres, or which are the most important copra producers in their area is given by Fig. 12.3. The CTP development project is a feasible solution but it requires a fundamental change in the pattern of island trade.

The argument so far has concentrated on possible alterations in the channels of trade in Fiji. But the CTP proposal may also have implications for the hierarchy of settlement. The suggestion here is that these central places could possibly develop social and commercial functions in addition to facilitating a more economical transfer and redistribution of commodities. In effect, while manufacturing and more complex services would continue to expand at Suva — their most economical location — the CTP would take over some minor regional commercial and servicing activities from the towns. This of course is a highly speculative proposition, for it involves one of the pitfalls of 'social engineering' by anticipating changes in established patterns of social behaviour simply on economic grounds. It
Fig. 12.2
Source: Field Survey.
is nevertheless worth exploring, for if such a trend did emerge it might then be recognised as a positive one in the space-economy.

Regional Centres and the Minimising of Movement

It was observed in this study that people frequently travelled long distances to the port town in Fiji in order to procure articles or obtain services unavailable in their villages. One reason for this was the existence of so many small competing village shops, each with a limited market, and few able to stock more than the same small range of basic necessities. This, of course, is not an unusual feature of an underdeveloped region, where it is normally treated as a symptom of disguised unemployment, but also arises from internal village conflicts. The central trading places might offer the requisite island-wide markets to co-operatives or entrepreneurs in order to introduce such facilities as a cinema screen, bar, cafe, refrigeration plant and expanded stock in the stores. The anticipated effect might be a saving of some of the time and money which is consumed during trips to the port towns and also, a minor point, the creation of a certain amount of non-agricultural employment outlets in the islands.

There is in fact some theoretical and empirical support for this view. Chisholm for example states that '...one of the objectives of planning is to reduce the amount of circulation necessary for the normal business of living' (1962, p. 11). Likewise, if Zipf's (1949, p. 59) 'minimum equation' has any
Fig. 12.3 (Settlement Names)
Source: Field Survey.
relevance for human behaviour it must surely be in this area where, if there were a choice, people might prefer not to spend a high proportion of their time and income travelling in order to procure goods and services available with less effort.

The degree to which any regional centre could expand in Fiji would naturally depend on the population size and the prosperity of the rural hinterland. These factors would also determine the range of stock carried by regional stores. The latter observation is a simplification of part of the locational system developed by Lösch (1959 ed.). He showed that a producer at a particular place would draw customers from the surrounding area until the good becomes too expensive to ship - then a second and third producing centre would arise. For different goods, however, there would be a different sized market.

More recently Curry (1962) has applied similar reasoning to service centres within towns; and Haggett (1966, pp. 130-2) has extended Curry's model to a hypothetical regional situation - which has particular relevance for this discussion. The model erected by Curry is shown in Fig. 12.4. Haggett uses this first to answer the query of why there is any need for intermediate centres. Why, for example, in the island context, should the collecting places grow to anything beyond their village status? The Curry model would indicate that a much greater range of functions required by outer area communities could be located at places other than the largest centre. Theoretically there is an optimization point in the space-economy
to which freight is carried and to which people move on procurement trips.

This theory rests on four basic assumptions, which, to summarise Haggett, are:

(i) There exists an order of goods depending on the size of the population that is required for a market. First-order goods require the whole population of the given territory as a market, second-order goods require half this number, third-order goods one-third of this population, and so on.

(ii) Corresponding to this order of goods is an order of centres. This order, running from large first-order centres to small tenth-order centres, forms the x-axis of the graphs, in Fig. 12.4.

(iii) There exists a range of stock for the order of centres, so that each lower grade of centre supplies one-third less than the next highest order of centres. The form of stock range curve is shown in Fig. 12.4 A. The relative number of procurement trips in a given time period, the trip frequency, is the square of a centre's order....

(iv) By multiplying the stock-range by a trip frequency, a movement index is produced.

Fig. 12.4 thus constitutes a hypothetical model of 'movement optimization in central-place structure'. Under the conditions shown in Fig. 12.4 for Vanua Levu there is one first-order centre (Suva) which has the lower-order centres of Labasa, Savusavu and Somosomo linked with it. Many of the settlements and villages of Vanua Levu are in the hinterland of these lower-order centres. They have as a result a 'two-stepped' relationship with the primary centre of Suva. That is, day-to-day items can often be procured by the
MOVEMENT OPTIMIZATION

Fig. 12.4
people at village level; other commodities and educational and medical services are obtainable at the regional centre, and higher order goods and services can be obtained at Suva. In another direction (Lomaiviti, Kadavu and Lau) villages have only a 'one-stepped' relationship with Suva.

In effect the CTP proposal for Fiji envisages the growth of an island centre corresponding to the fifth-order centre in Curry's model; stores at such a place could carry a range of stock twice that held by village shops. But for first-order goods (such as furniture) and higher-order services (hospital treatment) all places would fall within the zone of the primate town.

Before some of the more obvious objections to these models are raised—especially the sociological factors involved—it is as well to look at such empirical evidence as there is on the effects of a regional centre on the movement of people. Zipf (1949) expanding on Revenstein (1885) demonstrated that in a number of instances the interchanges between any two communities (P1 and P2) varied directly with their populations and inversely with the distance (D) separating them. He expressed this by the formula

\[ \frac{P_1 \times P_2}{D} \times \frac{1}{10^7} \quad (\frac{1}{10^7} \text{ is a constant}) \]

Under archipelago conditions this is a reasonable working hypothesis in order to estimate the potential number of travellers. In simple terms places with
the largest populations are likely to record the largest number of travellers, but movements will be modified by distance - and this may be expressed either as time/distance or economic/distance.

In Fig. 12.5 the rather crude figures of passenger flows recorded in Fiji during 1963 have been plotted against the Zipf equation. The hypothesis is supported for all points other than the areas Bua/Macuata and Cakaudrove. These places would from their high Zipf factor have been expected to provide the majority of passengers to Suva. That they do not is partly because these are the areas where people have access to intermediate centres lying between their villages, estates, or farms, and Suva. It should also be pointed out that the two deviant areas were also in air communication with Suva from the vicinity of their regional centres (Labasa and Savusavu). There are good reasons for believing, however, that it was the higher income sections of the populations that utilized this form of transport, and this would not have greatly affected the number of potential deck passengers.

One of the most obvious objections to the above speculation is the fact that we cannot anticipate the effect of such things as kinship 'pulls' which might still induce people to travel to the primate towns in preference to regional centres. Or people may simply desire to visit a large town. This latter factor certainly appears to influence the pattern of travelling in a higher income country such as Australia. According to Quinlan's study of air
Fig. 12.5
Source: Suva Harbour Office Movement Book.
transport in Australia (1967, unpub.) local centres are often by-passed in favour of air connections directly with the state capitals. Rose (1966, p.19) also points out that while people in a small Australian town might occasionally use the next nearest larger town for services it is more likely that they will use the distant capital. He also makes the point that there is in Australia no diminution of the 'gravity' of the central city with distance.

The by-passing of small regional centres might apply in most countries where the cost of long distance travelling only consumes a small proportion of income, and the frequency of services (especially the ability to choose a convenient return trip) are reliable. It seems arguable that this would not be the case in the islands, were there an alternative centre to the primate town. However, as this discussion is centred around a dynamic rather than a static view of the space-economy, it could be further speculated that if, partly as a result of the CTP arrangement, services to the islands were made cheaper, more reliable, and safer, this would in fact encourage increased numbers of people to travel to the port towns. Nobody knows of course, and it is probably safer to look for analogous situations rather than argue from abstract models.

In the above respect Tonga may provide a safer analogy than Australia. Again regional centres exist and they are utilised especially for weekly procurement trips. But with the improved transport
services in recent years there have been increasing numbers visiting Nuku'alofa. It seems however that a very large proportion of this travelling is linked with the educational facilities of the capital. The decision (in the Tonga Development Plan) to build a secondary school at Vava'u should lead to a reduction in the numbers of children travelling to Nuku'alofa with their parents, and the number of parents and other relatives who visit them periodically during school terms.

Speculation on the rise of small regional centres is supported by some theoretical considerations of the space-economy. It also rests on empirical evidence of the movement patterns recorded from places where some such small port centres exist. If we consider ports of any size as technological units then, in effect, this CTP type of technical change allows a more intensive application of capital at selected places. These become the growing points in local economies which are more efficiently linked by scheduled services to the port towns. Island entrepreneurs and co-operatives thereby secure more local outlets for their energies, imported goods are likely to be cheapened, and the marketing of a wider range of cash crops is facilitated.

Rationalising in the GEIC by Inter-Territorial Integration

If shipping in the GEIC could eliminate the need to make non-economic runs to the low-producing drought islands and the distant Ellice Islands then the
vessels would probably pay. If, in addition, the directional imbalance of overseas trade was reduced a large part of the problem of high overseas freights and the difficulty of obtaining chartered vessels would also be solved. These are ideal solutions for the marketing and shipping side of the economy. In practice they are unattainable; but the stating of the problem in this way has suggested that the organisation of shipping can possibly be altered so as to include the less economical islands within a new framework of overseas importing and exporting.

I am suggesting that the GEIC should integrate its trade with Fiji by using some sort of 'pendulum' arrangement of shipping. Under such a scheme a ship would load copra on a southward run through the Gilbert and Ellice Islands to Fiji; then load general cargo in Fiji and deliver this on a northward run through the GEIC. An approximate cost comparison of this proposed relationship with the present situation will make some of the advantages clear to begin with (Table 12.1). Part I of Table 12.1 summarises the current cost structure of importing/exporting and interinsular work which is being done by separate ship units in the GEIC. Part II assumes an integration of interinsular tasks with those of exporting and importing to and from Fiji.

The differences in costs per ton in the two systems summarised in Table 12.1 are significant, but these are not the main advantages to be derived. The relative geographical position of the drought islands
<table>
<thead>
<tr>
<th>I</th>
<th>Present Cost per ton</th>
<th>II</th>
<th>Future Cost per ton</th>
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<tbody>
<tr>
<td>Interinsular collection of copra</td>
<td>16</td>
<td>Copra collected and delivered to Fiji</td>
<td>23</td>
</tr>
<tr>
<td>Export to Europe</td>
<td>30</td>
<td>General cargo from Fiji and delivered to islands</td>
<td>23</td>
</tr>
<tr>
<td>Import of cargo from Australia</td>
<td>33</td>
<td>Freight on general cargo from Australia to Fiji</td>
<td>20</td>
</tr>
<tr>
<td>Interinsular distribution of cargo</td>
<td>20</td>
<td>*Freight on copra Fiji to Europe</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>Total</td>
<td>88</td>
</tr>
</tbody>
</table>

*If copra is processed in Suva or re-exported in semi-processed form, this element is further reduced.

Source: Based on the average freight charges for 1963 extracted from the GEIC Copra Board and Wholesale Society Records.

and small Ellice Islands would be altered from an extremely isolated situation to one lying in a channel of trade between the more prosperous northern Gilbert Islands, the port of Tarawa, and Fiji. Further, the assumption in Table 12.1 that the cargo loaded in Fiji will have come first from Australia is not necessarily valid in the long run. Fiji is developing small manufacturing industries and in terms of taste and demand the indigenous communities in these Pacific islands are virtually homogeneous so that a fair and increasing proportion of the cargo could have its manufacturing origins in Fiji. The GEIO/Fiji
integration would offer an enlarged market for Fiji's industries as well as the possibility of reduced freight rates for the GEIC in the future. It has also been pointed out that Fiji will undoubtedly expand the semi-processing and manufacturing of coconut products. Conceivably copra from the GEIC might be sold and processed in Suva and thus eliminate overseas trans-shipment costs on this product. There are clearly gains to be made, but again traditional trading relationships would have to be altered and new techniques introduced.

For the purpose of a pendulum relationship with Fiji a single GEIC vessel between 800 and 900 net tons would be required. If this ship made eight round trips per annum then all the GEIC copra would be delivered and general cargo distributed. It would also be possible for the vessel to earn charter fees by carrying out recruiting work in the islands for the British Phosphate Commission and Fanning Island Plantations Ltd. - both of which often charter outside tonnage for this purpose. Such a vessel fitted with freezer space would cost around $450,000. But it would pay on this trade; and savings would also be made by reducing the number of vessels employed in the GEIC. Furthermore, a locally-owned ship of this size would free the territory from continually seeking chartered vessels; these have seldom been reliable and have always proved more expensive than was originally
There can be few absolute predictions made for the pendulum trade relationship with regard to economic development of the small islands — other, that is, than the cheapening of services and goods which would thereby allow money to be used in other ways. But a regular connection with Tarawa and Suva might offer these islands many opportunities by the alteration of their locational disadvantages. Commercial fishing, for example, could possibly be carried out with, say, Funafuti as a storing depot if a vessel fitted with freezer space could take the loads to market on a regular basis. The oceans are, after all, one of the main under-utilised sources of food, fertilisers and chemicals and the islands of the GEIC should be able to exploit this resource. If they do not on a large scale in the future at least some arrangement of this sort would help provide cash incomes. An outlet for island handicrafts would also be assured the drought islands and small Ellice Islands through the new channel of trade to Suva; and the tourist potential

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1 The exception to this is the copra-carrying vessels of the Bank Line which have maintained an old tradition of British tramping by calling anywhere in the Pacific for a few hundred tons of copra.
of the islands would, similarly, improve.

**Tonga**

Tongan shipping is at too transitional a stage for further comment on its rationale. The 1,200 net ton 'Nuivakai' will in the future be employed carrying coconut cargoes from Tonga to American Samoa and returning with some tranhipped North American cargoes to Tonga. There are some doubts expressed about this project. It is felt, for instance, that the dessicated coconut industry should have been expanded *in situ*, and might have been had the full extent of the smaller, but apparently profitable, Australian and New Zealand markets for this product been appreciated. There are also the misgivings, already referred to above, about removing the 'Nuivakai' from what has proven to be a lucrative charter between Australia, Fiji and Tonga.

1 In his survey of tuna fishing in the South Pacific F. Doumenge (1966) draws attention to the possibility of using shuttle services, or the return trips of cargo vessels, for the marketing of fish. He also points out that promoters of fishing ventures would be shortsighted to succumb to the lure of quick returns by using already established bases when these can be set up in places suffering from isolation and underdevelopment. It might also be noted from the point of view of inter-territorial integration that at a conference in Canberra a British government representative stated that the future of these Pacific territories might well lie in political federation (*Canberra Times*, 27 August, 1966, p. 4). There are undoubtedly possibilities of more co-operation and integration, and even for a Pacific Common Market, but the whole question of inter-territorial trade in the region requires further detailed studies.
**Summing Up**

Conclusions have been stated throughout this thesis and there seems little need to repeat them at any length. However, if there is any lesson to be drawn from the commercial history of the island trade it is that changes have always characterised the trading systems. The itinerants gave way to the resident traders, the residents in turn lost their independence to the town merchants and became company agents, and finally the agents were displaced from many of the villages by co-operatives of local people. All of these changes have found some spatial expression in the channels of trade and in the size and distribution of trading places.

This penultimate chapter has suggested future alterations in the spatial pattern of island trade during what is again a period when many planned and unplanned social and economic changes are taking place, or seem about to take place, in the islands. When, for example, Fijian villagers are increasingly beginning to 'hive-off' and become individual farmers. Traditional ties to the village community are loosening and people are working in order to acquire goods and services for nuclear families. It is suggested that a rationalisation of the trading systems and the concomitant growth of island centres are in line with these trends. They may, in short, help solve the contradictions which appear to exist between the ecological potentials of some islands and their cash production, and between the new socio-economic needs
of islanders and the means of satisfying these from island-based institutions.

What is not being suggested is that all Fijian, any more than all Gilbertese, villagers, are becoming simply 'economic men' indistinguishable in their needs from other ethnic or cultural groups within a 'Western' commercial system - and thus amenable to all the generalisations of economic policy. There are many variations of attitude between islands and between villages to the cash economy. In this synoptic and basically economic study these subtleties could not be investigated fully. For this reason, however, a postscript has been added to the thesis; this will at least demonstrate that there is yet another system and level of island trade which has survived since early times, and within which the participants are not seeking to obtain the maximum command over resources with the minimum of effort - a generalisation which might pass as the motivation of 'economic man' in abstract.
PART FIVE

POSTSCRIPT
Chapter 13
NOTES ON NON-COMMERCIAL TRADE

The survival of indigenous forms

In an earlier chapter the point was made that during pre-contact times, and for a number of years after contact, indigenous forms of trading were carried on within and between the archipelagoes. It is necessary to say a little more about some aspects of this type of trade, for contrary to the general commercialising trend in island life non-commercial forms of exchange have persisted, and the facilitating of these is one of the 'hidden' functions of commercial shipping.

The early exchanges in the islands were geographically soundly based. Places such as Kabara Island rich in hardwood yesi (Intsia bijuga) were areas of tanoa carvers and canoe builders, and on some of the low dry islands with poor soils the heavy nokonoko wood (casuarina equisetifolia) grew and was utilized for the making of war clubs (Seeman, 1862, p. 362). The best matting sails and other products of pandanus came also from the drier islands. Pottery was made from high island clays and salt was obtained from the tiri (tidal mangrove flats) along the coastline of some of the main islands. A few of the volcanic islands were also known as great yam and taro producers. Bark cloth appears to have been made in many parts of Fiji and Tonga, but in this activity there were regional specialists in colour and design, and mats also had certain regional characteristics of size, thickness, and function.
All these goods were exchanged\(^1\), but the most important links appear to have been between the rich food-growing islands and the less fertile areas where people specialised in the production of craft goods; between regions which were inadequately endowed with timber for canoes and those which had these timbers and the *matai* craftsmen; and between sea and land peoples.

For all its seeming ecological and economic rationale the indigenous exchanges must frequently have been guided to a considerable extent by the payments of tribute to chiefs and by kinship ties. The goods followed what Hocart (1929, p. 120) has called the 'paths of feasts and gifts'. Kinship guided the main channels of trade and it was feasts and gifts that were the distributories. This type of trading differed radically from the impersonal economic linkages of modern commerce.

One of the most common forms of indigenous trading in Fiji appears to have been the *solevu*, although it is more than likely that this is a blanketing term now used for a number of non-commercial exchanges and for the presentation payments to people such as boat builders. The main characteristics of a *solevu* are briefly, the prior arrangement by one

\(^1\) For details of regional exchanges see *The Journal of Thomas Williams*, esp. 1843-4 in Henderson (1930); *Jackson's Narrative* in Erskine (1853); Williams (1870, pp. 40-42); Thomson (1940, esp. pp. 207-12); Quain (1948, p. 19 and p. 173); Hocart (1929, p. 120 and p. 290); Sahlins (1962, esp. pp. 419-33).
related group to visit another, the preparation of the goods to be exchanged over a period of months or even years, the visit, the ceremonial exchange of gifts (status being accorded to the most generous) and the accompanying *magiti* (feast) and *meke* (dances).

When the Europeans established their political and economic hegemony over the islands the effect was not to stifle indigenous trade - at least not in Fiji. Sir Arthur Gordon, the first governor of that archipelago, favoured its continuation on the grounds that:

...it would form a substitute for commerce until the natives should become better accustomed to money as a medium of exchange, and it was inseparable from the quasi-commercial institutions in which the race had been reared. It was felt that without the solevu, the manufacture of native commodities such as mats, pottery, salt, native cloth, sennit, wooden bowls, etc. would fall into disuse... (Report...1896, p. 59, F).

What appears to have taken place by the last quarter of the nineteenth century is an increase in the number and frequency of these exchanges. The observation by Basil Thomson that the solevu was in decay may have been a little premature. Thomson wrote:

With the arrival of the trader who, all unconsciously, was set to teach the natives an entirely new system of trade based on currency, all need for the solevu vanished, and each native product immediately acquired a recognised place in the scale of values, either in money or calico (1908, p. 286).

In actual practice the custom of solevu and kerekere (soliciting goods) was more durable than this, and
people who had access to the new European articles were called upon to solevu with kinsmen who did not have such direct access.

One of the factors which could have facilitated an actual increase in solevu was the acquisition of European-type boats which people wanted to display in the archipelago. The Commissioners of 1893 were, in fact, quite certain that there was then more travelling about in boats to solevu and that the solevus were conducted 'on a far larger scale and with greater frequency, than in the period before Cession'. (Report... 1896, p. 48 and p. 59).

By the 1890s it was customary for quite enormous solevu to take place at the annual meetings of the Provincial Councils, and it was proposed that exchanges on these occasions should be abolished. This was done before the end of the century. It also seems to have become the practice for solevu to be restricted whenever possible. The Western Provincial Council records of 1899, for example, state that 100 people were leaving for the Yasawa Islands on a solevu but they were limited to a stay of four days only - otherwise they would have left a famine behind them. (Western Provincial Council, 13 December, 1899, p. 71).

With the decline in the number of Fijian owned craft it obviously became more difficult for people to solevu, but not impossible. The exchanges could now be arranged by letter without a preliminary visit (although this was not precluded) and some time about the appointed date people could travel on commercial trading vessels, or alternatively a small cutter would
be chartered for the voyage.

A more important change in the solevu had, however, come about with the growth of the port towns and the numbers of people working as wage-labourers. This altered the main channels of trade for the most frequent solevu in recent years have been between the people in the towns and those in the islands. Some of the articles of exchange have in turn changed for nowadays it is common for one party to present 'European' goods (and cash) and receive island foodstuffs and handicrafts in return. Nevertheless the original non-monetary morality is still dominant in these exchanges.

In the indigenous trade between Tonga and Fiji there appears also to have been increased activity following European contact. The Tongans acquired European goods with which to trade in Fiji for timber, canoes and sails. (Williams, 1870, pp. 82-83). This trade appears to have declined with the coming of more regular commercial shipping; and, as in Fiji, when the preferences of Tongans turned from canoes to cutters which were built of imported timbers or purchased from New Zealand¹. Non-commercial trading contacts have, however, recently been revived between the peoples of these two archipelagoes.

It is proposed to give some examples of non-commercial trade at the present time. This is almost entirely unrecorded and often passes unnoticed even on board vessels on which the participants are travelling.

¹ As early as the 1850s West described how 'The King and Chiefs of Tonga are also directing their attention to the introduction of European vessels, instead of their own canoes. The King owns several schooners...' (1865, p.431).
The relatively large-scale exchanges referred to in part of this chapter are based on sample surveys of island cutter movements maintained at Suva, Lautoka, and Levuka during several months of 1963-4 and on information from the freight and passage receipts of some island supercargoes. A few of these records were followed up by interviewing the people who had arranged the solevu. In the examples from Koro Island, and in the exchanges between Suva and Tonga, it was actually possible to interview some participants from both sides - but the figures they gave did not always tally so that the quantities quoted should be treated with caution. It was also possible in the exchange between Suva and Nairai Island to consult the official papers of the Court of Inquiry into the loss of the vessel that was chartered for the solevu and also to interview Fijians who had helped arrange this solevu. Before these relatively large-scale examples of non-commercial trade are given a number of other less apparent forms will be referred to.

'Gift' Trade

By far the most common non-commercial method of sending goods between the towns and the islands, and of redistributing local produce and handicrafts from one island to another, is via passengers and members of the crew of trading vessels. In Tonga, Fiji and the GEIC island foodstuffs are continually being sent to relatives in the towns and townships in this way; very often these are gifts made in return for the
boarding of schoolchildren or in order to support people living temporarily in the towns.

In the opposite direction the flow of goods such as kerosene, clothing, and furniture as well as money from the port towns to the islands is frequently in response to soliciting letters from islanders. This is particularly common during periods of hardship following hurricanes and droughts, but also on occasions such as Christmas. In the Gilbert Islands the custom is termed bubuti, in the Ellice faka molemole, in Tonga kolo, and in Fiji kerekere. This mechanism of distribution operates in the Gilbert Islands also in relation to labourers returning from the phosphate workings. Very often they are, literally, stripped of many of the articles they have brought with them and these are redistributed amongst relatives.

In all of these exchanges there are usually reciprocal obligations implied, but these may be inapplicable in places such as the southern Gilbert Islands where the people have few products commensurate in value to goods which they bubuti from wage-earners.

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1 Wilkes noted this type of 'exchange' in the Gilberts during 1841 when he wrote - 'Another custom is remarkable: when a fisherman arrives with a well-loaded canoe, his neighbours assemble around him, selecting and taking away such as they please, leaving the owner nothing in return but the satisfaction of knowing that on a similar occasion he has a like privilege to help himself'. (1852 edition, Vol. 2, p. 216).
Tribute and Ceremonial Exchanges

Tributes to chiefs no longer operate to the extent they once did in the movement of island products. The only items of cargo recorded as falling into this category were 70 baskets of yams sent from the coral islands of Ha'apai to Nuku'alofa during September/October, 1964. This was part of the Polopolo (first fruits) tribute of the Ha'apai people to their chiefs resident in the capital. Like so much of this type of cargo flow the date of presentation is not purely arbitrary; in this sample (which reverses the normal flow of foodstuffs between richer and poorer areas) it was clearly geared to the earlier ripening of yams in the Ha'apai group compared with those on cooler Tongatapu Island.

There are many non-commercial exchanges connected with marriages, births and deaths among scattered island kinship groups. These go on continually as people travel to and from islands and take with them both 'European' and local products. Only one such exchange was actually recorded in the field. This was 'a hundred nights' (ai vakabodidrau) ceremony which marks the end of the formal mourning period in Fiji. Some relatives of a woman who had died on Kanacea Island travelled from Suva on 12 November, 1964 and brought with them kerosene, soap, and yagona. They returned to Suva on 22 November with mats and masi.

Solevu in Fiji

The first solevu to be recorded by the field sample
survey was on 10 March, 1963. Then 24 people from Lautoka left that port for an exchange with the people of Yaqeta Island in the Yasawas. They sailed on the 23 feet cutter 'Qoroii and carried 24 four-gallon drums of kerosene and 16 baskets of salt. The salt had been evaporated from sea water on the tidal mangrove flats (tiri) to the north of Lautoka\(^1\). The people said they were to exchange these things for mats and foodstuffs at Yaqeta, but the return of the party was not recorded.

A solevu between Fijians from Suva and the suburbs of Nabua, Lami and Vatuwaqa (plus at least one person from Vatukoula) and the people of Waitoga village on the island of Nairai was held on Easter weekend, 1964. For about two years prior to this the Suva people had been meeting, in response to an invitation from Waitoga, to arrange the solevu. It was decided that a party of about 28 of them should go to Nairai Island and also, according to a Nabua woman, each person would contribute £F21 ($27.30), a drum of kerosene, a bolt of material and the party would carry tabua (whales' teeth); but the contributions do seem to have varied between individuals even within the same group.

\(^1\)Salt is a traditional item of ceremonial exchange in Fiji. Parham (1942) describes the tracks through the interior of Viti Levu from the 'dry' to the 'wet' sides which have been kept open especially by the transport of salt from the Sigatoka and Nadi coasts to the Wainimala and Waidina Rivers.
The owner of the cutter 'Yacomai' was approached with a view to chartering the vessel. According to the owner he declined as about 40 people were likely to be involved and this was more than he could take. The cutter 'Kadavulevu' was obtained, and on the night of 26 March the solevu party with their kaukau (things carried) began to arrive by taxis at Suva wharf. There were over 90 people on board by the time the vessel sailed (some, it appears, without payment of fares or solevu contributions). The cargo included drums of kerosene, bales of cloth, furniture, single and double beds, and mats; in addition about $600 in cash was taken for the church at Waitoga village.

The 'Kadavulevu' anchored off Waitoga on the morning of 27 March. The people and crew disembarked, ate breakfast, and then the visitors presented their solevu. A magiti was held followed by a meke and a tra la la (dances). The following day the Waitoga people arranged their solevu in several piles about five feet high. These comprised 250 mats, two to three tons of yams, three to four tons of dalo, 800 husked and unhusked coconuts, three sacks of tapioca, eight bunches of bananas, six bundles of voivoi, 150 bottles of coconut oil, live pigs and live chickens. The solevu was presented and loaded on board the 'Kadavulevu'. Another feast was held followed by a meke and tra la la—then throughout the rest of the night until Sunday morning the men drank yagona.

The 'Kadavulevu' sailed from Nairai at 2 p.m. on Sunday, 29 March with the solevu cargo in the hold,
stocks of cooked foods for consumption during the voyage, and about 100 souls. The vessel was grossly overloaded and sank in the Koro Sea about 11 p.m. that night; only two women and one young boy survived.

There was another solevu recorded in March of that year; this was between the people of Naidi village near Savusavu on Vanua Levu and the people of Nabuna village on Koro Island. It had been arranged by letter through a woman of Nabuna who was married at Naidi. The cutter 'Tui Vunilagi' was chartered and the party from Naidi took dinner services and large plates to Koro in exchange for voivoi.

On 15 August, 1964 a Sogo Sogo Vakamarama (Women's Association) of Lautoka came to Koro Island on the 'Gau Princess' to take part in a solevu for which they had been preparing for about ten months. They are reported as having brought 40 tins of biscuits, 16 bags of flour, 16 bags of sugar, 40 five gallon drums of kerosene and 20 yards of material. On the return trip they had 120 mats, 120 tanoa, masi, and tabua.

A solevu was also made to Nacamaki village on Koro Island on 8th September, 1964 by ten women who were wives of policemen in Suva. They came on the cutter 'Adi Maopa' and brought dressing tables, chairs, crockery and rice. The women spent two weeks at Nacamaki and returned to Suva with mats, voivoi, coconut oil, dalo and pigs.
Finally it was recorded at Suva that the schooner 'Yatu Lau' sailed for Lakeba Island on 15 October, 1964 with 48 people on board. They were returning to their home island after visiting relatives at the Vatukoula Gold Mines. There they presented mats, masi, dalo, yams and coconut oil, and received money. With the money they purchased furniture (beds, meat safes, chairs, dressing tables) kerosene and cloth in Suva.

No information was recorded of solevu directly between any of the outer islands during 1963/64, but people said this still occasionally took place; in particular people on Koro Island reported that a Fijian owned boat named 'Lagokali' sometimes came from Nairai Island to exchange for voivoi. One exchange between people on the same island was observed, however, when on 4 November, 1964 a group of women boarded the 'Adi Maopa' at Namuca village on Koro Island. They had travelled to Namuca from Nacomaki village and had brought with them soap and cloth in order to get voivoi.

Non-commercial Trade in Tonga

It was suggested in Chapter 9 that the bulk of foodstuffs shown in Table 9.12 for Tonga was very likely moving as 'gifts' and in order to provide support for people visiting the port town. This seems to be true; in addition there were also many other small items recorded in this category of non-commercial trade; such, for example, as the kilikili (black stones for decorating graves) from the volcanic islands which were being sent through Ha'apai to Nuku'alofa.
The regional specialisations in Tonga form, as in Fiji, a traditional and ecological basis for exchange. The large island of Tongatapu offers favourable growing conditions for the hiapo (paper mulberry) from which tapa is made. The small low coral islands of Ha'apai are ideal for growing pandanus used in the making of mats, and in the tropical zone of Vava'u the vavae tree thrives, from this kapok is made. Wooden articles such as tanoas are generally manufactured on the forested island of 'Eua, or are made from wood obtained from there.

Main non-commercial trading links in Tonga are thus between the people of Ha'apai and those of Tongatapu. The former specialize in large floor mats (takapau), sitting mats (papa), and house or deck mats (papa totaha) as well as the special fihu mats which are used as gifts during ceremonies. In return the Tongatapu people give tapa and foodstuffs (especially yams). Another trading link exists between Vava'u and Tongatapu with the movement of kava and kapok against tapa. It should be noted that the carriage of goods is almost invariably to Tongatapu, and this reflects the importance of the capital and the fact that non-commercial trade is nowadays carried on mainly in conjunction with the periodic visits which people make to Nuku'alofa for various purposes.

Many of these kātoanga (exchanges) are arranged by women's committees. The Kautaha Lālenga (association of mat makers) and the Kautaha Koka'anga (association of tapa makers) in their respective areas produce the articles and conduct the trade. They
normally make the arrangements for the kātoanga by letter and each party, as in Fiji, knows roughly what is expected of them; also, as in Fiji, the exchanges are accompanied by feasts and dancing.

Other organised groups, as well as individuals, also trade in this way. In February, 1965, for example, arrangements were being made at Ha'apai for an exchange with the village of Kolovai on Tongatapu in connection with the visit of a Ha'apai basketball team to the island. It had been agreed that each of the Ha'apai people would make three mats and the Kolovai participants one launima of ngatu (about 70 feet of tapa).

**Inter-territorial Exchanges**

There appears to be a small revival of non-commercial trade between Tonga and Fiji. The supposition that it is a revival is based merely on the statement of people that they can not recall any organised occasions previous to those recorded here - although they all said that the carriage of goods by individuals between the two archipelagoes had always taken place.

During May, 1964 a Suva Sogosogo Vakamarama arranged an exchange with a Kautaha at Ma'ofanga village on Tongatapu. On 30 November the Fijian party of eleven arrived at Nuku'alofa and were met by people from Ma'ofanga and transported to that village. The Fijian party remained there for two weeks and returned to Fiji on the Tongan vessel 'Aoniu' where they arrived on 15 December. The exchange by the
Fijian members of the Sogosogo who had gone to Tonga had also been made on behalf of eleven other women who had remained in Fiji.

When the 'Aoniu' arrived back in Suva the details of the exchanges were recorded from the Fijian party by J. Taka as:

From Fiji everyone of them took one dressing table, 12 yards of material, a companion set of ladies perfumes, and one bedspread.

From Tonga everyone of them received a tapa (100' x 20'), five large Tongan mats, and 30 bottles of Tongan oil.

This was fairly well substantiated during a visit to Tonga in February, 1965, and it was also learned then that a return exchange was being arranged for November, 1965 when the Tongan women would visit Suva.

Other articles which move from Fiji to Tonga through non-commercial channels include wooden kali (headrests for presentations at weddings), tano'as and some tao'ovalas (mats worn by Tongans). The Fijians in turn like to obtain Tongan oil, kapok mattresses, and tapa. The latter fetches an excellent price in Suva where it is cut up and made into articles such as handbags for the tourist trade, so that nowadays in this particular exchange there may be economic overtones.

In passing, it is worth mentioning that some non-commercial trade is still conducted between Samoa and Tonga. In particular seamen on Tongan vessels are sometimes asked to find someone in Samoa who is willing to trade the precious kie mats for tapa and coconut oil. These finely-woven Samoan mats are very scarce and are
prized in Tonga - where families usually keep them in chests under mothballs.

**Conclusion**

The examples of non-commercial trade which have been given here cannot be interpreted as anything more than an indication that this still takes place. There is no way of telling the extent to which these samples represent the whole or a small part of the non-commercial trading system that operated during the period 1963-64.

One important characteristic of this system is the way in which it allows consumer goods from the port towns to be distributed in the island hinterlands, at least among communities of kinsmen. In turn the people of the islands are able to utilize some 'surplus' foodstuffs and their local craft specialisations to meet some of the needs of townspeople for these 'things of the land'.

Whether or not the calling on relatives in the port towns, and in other areas of wage-labour, for money or goods is a desirable practice is a question beyond the scope of this study. Clearly, however, a great deal of time can be spent on solevu: it is costly to organise and finance, and quite large quantities of foodstuffs are consumed by the visitors. The sponsoring families in Tonga also pointed out that during the visit to their village they purchased butter every day to make 'a good showing'. These non-commercial exchanges could no doubt be 'costed'
and it is quite certain that were the normal commercial channels of exchange and distribution used the people would, financially, be better off.

On the other hand the true value of non-commercial trade may lie in the insurance which the maintenance of these kinship channels provide in cases of real need particularly following hurricanes and droughts. Such informal trading 'contracts' contrast with those in modern capitalist society, in which contract is based, as Lewis puts it ...'upon considerations of price and quality, leaving aside considerations of kinship, or the personal merit, welfare, or good fortune of the party with whom one is doing business'. (1963, p. 45).

Whatever assessment may be put on non-commercial trade the fact remains many people travel on ships and small boats for this purpose and quite a substantial amount of cargo is also moved in this way. The non-commercial exchange system has thus attached itself to the modern commercial system. And, if the examples of the Tonga/Fiji exchanges represent anything more than an excuse for a holiday on the part of the women, this type of trading may continue to thrive with improvements in island communications. In any event it is worth noting, for if island shipping is partly a service to the people, as well as a stimulus to development, then vessels and schedules, at least, should remain flexible enough to meet these social needs as they arise.
APPENDICES
Appendix One. **TABLE I: FIJI: EFFECTIVE FLEET, 1965**

<table>
<thead>
<tr>
<th>Port</th>
<th>Vessel</th>
<th>Net Tons</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suva</td>
<td>Ratanui</td>
<td>250</td>
<td>Burns Philp</td>
</tr>
<tr>
<td></td>
<td>Zephyr</td>
<td>115</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Komaiwai</td>
<td>183</td>
<td>Island Industries</td>
</tr>
<tr>
<td></td>
<td>*Altair</td>
<td>137</td>
<td>Morris Hedstrom</td>
</tr>
<tr>
<td></td>
<td>*Tuvalu</td>
<td>124</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Tui Cakau</td>
<td>60</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Viani Princess</td>
<td>69</td>
<td>A. Evans and Partners</td>
</tr>
<tr>
<td></td>
<td>*Fijian Princess</td>
<td>50</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Gau Princess</td>
<td>14</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Adi Maopa</td>
<td>43</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Tui Vunilagi</td>
<td>33</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Malolielie</td>
<td>32</td>
<td>T. E. Hurley</td>
</tr>
<tr>
<td></td>
<td>Melanesia</td>
<td>30</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Koroibo</td>
<td>21</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Malawai</td>
<td>12</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Adi Talei II</td>
<td>10</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Yatu Lau</td>
<td>40</td>
<td>Fijian Affairs</td>
</tr>
<tr>
<td></td>
<td>Ta-Na-Toba</td>
<td>28</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Tai Levuka</td>
<td>26</td>
<td>J. Ali and H. Raza</td>
</tr>
<tr>
<td></td>
<td>Tai Kanacea</td>
<td>24</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Adi Tai Loma Loma</td>
<td>16</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Kailas</td>
<td>18</td>
<td>Shamshar &amp; Dhani</td>
</tr>
<tr>
<td></td>
<td>Venture</td>
<td>11</td>
<td>Dhani and Sing</td>
</tr>
<tr>
<td></td>
<td>Tai Valevadra</td>
<td>11</td>
<td>M. Prassad</td>
</tr>
<tr>
<td></td>
<td>Yacomai</td>
<td>14</td>
<td>F. Ming &amp; P. Yee</td>
</tr>
<tr>
<td></td>
<td>Tovolea</td>
<td>15</td>
<td>Lum On</td>
</tr>
<tr>
<td></td>
<td>Adi Lau</td>
<td>31</td>
<td>Kaloni Mere</td>
</tr>
<tr>
<td>Levuka</td>
<td>Ange May</td>
<td>13</td>
<td>A. M. Powell</td>
</tr>
<tr>
<td></td>
<td>Agnes</td>
<td>13</td>
<td>Narain Sani Bros.</td>
</tr>
<tr>
<td></td>
<td>Engela</td>
<td>3</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>Roblyn</td>
<td>10</td>
<td>Parashu Ram</td>
</tr>
<tr>
<td></td>
<td>Wilma</td>
<td>8</td>
<td>F. G. Woodhouse</td>
</tr>
<tr>
<td>Lautoka</td>
<td>Adi Beti</td>
<td>95</td>
<td>Saimoni Naivalu</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1559</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Vessel replaced since February, 1965.*

Sources: Marine Board, Suva, and Personal Interviews.
# TABLE II: TONGA: EFFECTIVE FLEET 1965

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Net Tons</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuivakai</td>
<td>1155</td>
<td>TCB</td>
</tr>
<tr>
<td>Aoniu</td>
<td>270</td>
<td>TCB</td>
</tr>
<tr>
<td>Lolomeamaia</td>
<td>180</td>
<td>Government</td>
</tr>
<tr>
<td>Hifofua</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Kao</td>
<td>40</td>
<td>TCB</td>
</tr>
<tr>
<td>Pangalifuka</td>
<td>20</td>
<td>Government</td>
</tr>
<tr>
<td>Fanualei</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Ulsfonua</td>
<td>20</td>
<td>TPB</td>
</tr>
<tr>
<td>Taufale</td>
<td>18</td>
<td>Lopeti Ramsey</td>
</tr>
<tr>
<td>Tukiungata</td>
<td>13</td>
<td>Church of Tonga</td>
</tr>
<tr>
<td>Vaiolupe</td>
<td>11</td>
<td>A. Tongilava</td>
</tr>
<tr>
<td>Alaimoana</td>
<td>11</td>
<td>Tofua Ramsey</td>
</tr>
<tr>
<td>Kaimoana</td>
<td>10</td>
<td>S. Kausia</td>
</tr>
<tr>
<td>Folauhoho</td>
<td>6</td>
<td>S. Vea</td>
</tr>
</tbody>
</table>

Total 1844

Source: Customs House Register, Nuku'alofa.

# TABLE III: GEIC: EFFECTIVE FLEET 1965

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Net Tons</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moana Raci</td>
<td>253</td>
<td>Wholesale Society</td>
</tr>
<tr>
<td>Nivanga</td>
<td>163</td>
<td>Government</td>
</tr>
<tr>
<td>Ninikuria</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>John Williams VII</td>
<td>69</td>
<td>LMS</td>
</tr>
<tr>
<td>Santa Teretia II</td>
<td>60</td>
<td>Catholic Mission</td>
</tr>
<tr>
<td>Fetu Au</td>
<td>45</td>
<td>Seventh Day Adventist</td>
</tr>
<tr>
<td>Kiakia</td>
<td>32</td>
<td>Simon Edwards</td>
</tr>
</tbody>
</table>

Total 720

Source: Marine Department, Tarawa.
### Appendix Two: TABLE I: FIJI FLEET, TONNAGE ANALYSIS 1965 (OTHER THAN TUGS AND BARGES)

<table>
<thead>
<tr>
<th></th>
<th>Less than 150, more than 80</th>
<th>Less than 80, more than 50</th>
<th>Less than 50, more than 30</th>
<th>Less than 30, more than 20</th>
<th>Less than 20, more than 10</th>
<th>Less than 10, more than 2</th>
<th>Launces less than 2 tons</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>600</td>
<td>5</td>
<td>472</td>
<td>3</td>
<td>198</td>
<td>6</td>
<td>228</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
</tbody>
</table>

### TABLE II: FIJI FLEET, AGE ANALYSIS 1965 (OTHER THAN TUGS, BARGES AND LAUNCHES)

<table>
<thead>
<tr>
<th></th>
<th>Less than 10 years old</th>
<th>10 to 20 years old</th>
<th>20 to 30 years old</th>
<th>30 to 40 years old</th>
<th>More than 40 years old</th>
<th>Vessels of unknown age</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Net</td>
<td>12</td>
<td>350</td>
<td>14</td>
<td>750</td>
<td>13</td>
<td>420</td>
</tr>
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</table>

Sources: Marine Board Register. Records of boat movements at Lautoka and Levuka.
### TABLE III: GEIC FLEET, TONNAGE ANALYSIS 1965 (OTHER THAN TUGS AND BARGES)

<table>
<thead>
<tr>
<th></th>
<th>250 tons and over</th>
<th>150 tons and over</th>
<th>Less than 150, more than 80</th>
<th>Less than 80, more than 50</th>
<th>Less than 50, more than 30</th>
<th>Less than 30, more than 20</th>
<th>Less than 20, more than 10</th>
<th>Less than 10, more than 2</th>
<th>Launches less than 2 tons</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Net</td>
<td>1</td>
<td>253</td>
<td>1</td>
<td>163</td>
<td>98</td>
<td>2</td>
<td>129</td>
<td>2</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Net</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE IV: GEIC FLEET, AGE ANALYSIS 1965

<table>
<thead>
<tr>
<th></th>
<th>Less than 10 years old</th>
<th>10 to 20 years old</th>
<th>20 to 30 years old</th>
<th>30 to 40 years old</th>
<th>over 40 years old</th>
<th>Vessels of unknown age</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Net</td>
<td>4</td>
<td>583</td>
<td>2</td>
<td>105</td>
<td>1</td>
<td>32</td>
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</table>

Source: Marine Department, Tarawa.
### TABLE V: TONGA FLEET, TONNAGE ANALYSIS 1965

<table>
<thead>
<tr>
<th>Gross Tonnage Range</th>
<th>No.</th>
<th>Net Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50</td>
<td>1</td>
<td>1155</td>
</tr>
<tr>
<td>50 to 100</td>
<td>1</td>
<td>270</td>
</tr>
<tr>
<td>100 to 150</td>
<td>1</td>
<td>180</td>
</tr>
<tr>
<td>150 to 200</td>
<td>1</td>
<td>70</td>
</tr>
<tr>
<td>More than 200</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>More than 300</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>More than 400</td>
<td>5</td>
<td>63</td>
</tr>
<tr>
<td>More than 1000</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>More than 2000</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>1904</td>
</tr>
</tbody>
</table>

### TABLE VI: TONGA FLEET, AGE ANALYSIS 1965

<table>
<thead>
<tr>
<th>Age Range</th>
<th>No.</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10 years old</td>
<td>11</td>
<td>1809</td>
</tr>
<tr>
<td>10 to 20 years old</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>20 to 30 years old</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30 to 40 years old</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>More than 40 years old</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unknown age</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: Certificates of Registry.
### Appendix Three: CONDITION OF THE EFFECTIVE FLEET IN FIJI, FEBRUARY 1965.

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Year Built</th>
<th>Construction</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratanui</td>
<td>1946</td>
<td>Steel hull</td>
<td>M/G</td>
</tr>
<tr>
<td>Zephyr</td>
<td>1952</td>
<td>&quot;</td>
<td>M</td>
</tr>
<tr>
<td>Komaiwai</td>
<td>1955</td>
<td>&quot;</td>
<td>M/G</td>
</tr>
<tr>
<td>Altair</td>
<td>1944</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Tuvalu</td>
<td>1944</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Tui Cakau</td>
<td>1934</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Viani Princess</td>
<td>1941</td>
<td>Wooden hull</td>
<td>F/M</td>
</tr>
<tr>
<td>Fijian Princess</td>
<td>1948</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Gau Princess</td>
<td>1955</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Adi Maopa</td>
<td>1939</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Tui Vunilagi</td>
<td>1957</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Malololie</td>
<td>1917</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Melanesia</td>
<td>1917</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Koroibbo</td>
<td>1922</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Malawai</td>
<td>1963</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Yatu Lau</td>
<td>1952</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Adi Talei</td>
<td>1957</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Ta Na Toba</td>
<td>1951</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Tai Levuka</td>
<td>1950</td>
<td>&quot;</td>
<td>P/F</td>
</tr>
<tr>
<td>Tai Kanacea</td>
<td>1930</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Adi Tai Loma Loma</td>
<td>1938</td>
<td>&quot;</td>
<td>P</td>
</tr>
<tr>
<td>Kailas</td>
<td>1959</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Venture</td>
<td>1936</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Tai Valevadra</td>
<td>1940</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Yaomai</td>
<td>1955</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Tovalea</td>
<td>?</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Adi Lau</td>
<td>1927</td>
<td>&quot;</td>
<td>F/M</td>
</tr>
<tr>
<td>Ange May</td>
<td>1956</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Agnes</td>
<td>1946</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Roblyn</td>
<td>?</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Wilma</td>
<td>1951</td>
<td>&quot;</td>
<td>F</td>
</tr>
<tr>
<td>Adi Beti</td>
<td>?</td>
<td>&quot;</td>
<td>P</td>
</tr>
</tbody>
</table>

Note: The vessels in the category poor (P) were due, or overdue for replacement; those in category fair (F) ought to be replaced within the next four years; and most of the fair to moderate (F/M) replaced within the next six years.

**Sources:** Marine Board Register, Suva.  
Interviews with surveyors, captains and owners.  
Personal observations.
## Appendix Four: A Comparison of Possible Times and Actual Times on Voyages (Seven Vessels) in Fiji During July and August 1964

<table>
<thead>
<tr>
<th>Vessel</th>
<th>Average speed knots</th>
<th>Tons per hr at 75% load (round trip)</th>
<th>Total tons at 75% load (round trip)</th>
<th>Operating region &amp; No. of round trips</th>
<th>Operating region &amp; No. of round trips</th>
<th>Operating region &amp; No. of round trips</th>
<th>Operating region &amp; No. of round trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>9</td>
<td>6</td>
<td>320</td>
<td>8 Cakadrove 1 Labu</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>II</td>
<td>7</td>
<td>5</td>
<td>240</td>
<td>3 N. Lau 1 C. Lau 1 Labu</td>
<td>1 Uda 1 Labasa 1 Labasa</td>
<td>1 Uda 420</td>
<td>1 Natewa B. 460</td>
</tr>
<tr>
<td>III</td>
<td>6</td>
<td>1.5</td>
<td>75</td>
<td>5 W. Lau 2 Labu 1 Wainunu</td>
<td>1 Wainunu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IV</td>
<td>5</td>
<td>1.5</td>
<td>36</td>
<td>3 C. S. Lau 3 Kadavu</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>V</td>
<td>5</td>
<td>1</td>
<td>33</td>
<td>6 Koru 1 W. Lau</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>VI</td>
<td>6</td>
<td>1</td>
<td>27</td>
<td>8 Wainunu 2 Gau 1 Kadavu</td>
<td>1 Gau 1 Kadavu</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>VII</td>
<td>5</td>
<td>1</td>
<td>27</td>
<td>9 Gau 1 Savusavu 1 Kadavu</td>
<td>1 Kadavu</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1Half of the cargo handling rate is adopted, as cargo 'handled' is twice that of cargo 'carried'.


(Table continued on p. 359).
<table>
<thead>
<tr>
<th>Vessel</th>
<th>n</th>
<th>o</th>
<th>p</th>
<th>(q)</th>
<th>d \times 10</th>
<th>(q + r)</th>
<th>s</th>
<th>t</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>9</td>
<td>3140</td>
<td>14.5</td>
<td>20.0</td>
<td>34.5</td>
<td>60</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>7</td>
<td>2630</td>
<td>15.5</td>
<td>14.0</td>
<td>29.5</td>
<td>60</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>8</td>
<td>1860</td>
<td>13.0</td>
<td>16.6</td>
<td>29.6</td>
<td>60</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>6</td>
<td>1980</td>
<td>16.5</td>
<td>14.4</td>
<td>30.9</td>
<td>60</td>
<td>49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>7</td>
<td>1560</td>
<td>12.3</td>
<td>9.6</td>
<td>22.1</td>
<td>60</td>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>11</td>
<td>1980</td>
<td>14.0</td>
<td>12.4</td>
<td>26.4</td>
<td>60</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td>11</td>
<td>1660</td>
<td>13.8</td>
<td>12.4</td>
<td>26.2</td>
<td>60</td>
<td>57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix Five: TWO SAMPLES FROM FIJI CO-OPERATIVE ECONOMIC SURVEY 1964

1) Name of Village - Vuniwai
   Location - Saqani, Cakaudrove
   Population - 112
   Communications - By sea

Present Copra Production - 60 Tons dry per year.

Method - Copra is cut individually and carried to the drier. Copra along the coast is transported by punt or launch. Dried individually. Each has a copra drier (smoke). Some sun dried on vatas.

Financial - One store in the village. Chinaman's stores at Blaugunu (4 miles) and Sese (3½ miles).

General Comments - Copra Co-operative is needed here to enable the purchase of a hot air drier. A Store co-op can join Lakeba to form one store. There are six wooden buildings financed from cess. One church building is wooden - quite new. No pipes - water supply available from a spring near the village. There is one launch privately owned. Copra sold at Suva, some to Chinaman's stores stated above. Copra cess deducted to mataqali (three mataqali). Copra can be loaded at low tide. M.H.'s boat calls at three week periods. One denomination, Methodist. All food can grow. Soil is fairly fertile...

2) Name of Village - Wainika
   Location - Saqani, Cakaudrove
   Population - 200
   Communications - By Sea

Present Copra Production - 30 Tons dry per year.

Method - Copra plantations scattered along the coast, some inland. Copra is cut individually in the bush and carried to the village. Copra on the coast is transported by punt or launch. Driers (smoke) individually owned. Some sun dried.

Financial - Two village stores privately owned supply consumer goods. Lack finance, sometimes no goods in the stores and the people have to travel 8 miles to the Chinaman's store at Udu Point to obtain supplies.
General Comments - A copra co-op is badly needed here, and a store. Soil is poor, in dry weather unable to plant dalo. Poor village, no piped water, no dispensary, no wireless station (10 miles Udu nearest). There are five launches in good condition owned by members of Wainika village. Copra can only be loaded at High water.
Appendix Six: NOTES ON SHIPPING IN SOME OTHER PACIFIC TERRITORIES 1965

Western Samoa - In this relatively compact territory main roads and feeder roads have superseded much of the coastal shipping. The main scheduled service is between the islands of Upolu and Savai, and a scheduled weekly service operates to American Samoa.

The fleet consists of eighteen vessels ranging from 11 to 75 tons net. There are nine companies operating these, all but three vessels are owned by commercial companies which have trading stores in the islands.

Cook Islands - The archipelago is divided into two regions, the North which has seven islands and the South eight. Distances from the port of Raratonga to the North Islands vary from 500 to 730 miles. There are three steel hulled ships of 132, 100 and 60 net tons in the trade. In addition, some small cutters operate between islands which are about 30 miles apart.

A regular weekly service is maintained to all southern islands, but in the northern group services occur less frequently and at irregular intervals. The northern islands export copra only and the southern copra and fruit. Anchorages and sheltered harbours are few in the Cooks but all cargo lightering is done by island people themselves using their own cargo boats.

British Solomon Islands Protectorate - This archipelago comprises ten main islands with adjoining small islands and extends over 900 miles of sea. Roads are few and there are only two or three wharves at which interinsular vessels can lie alongside. Trading is carried out by 120 or so small commercial vessels. These belong to planters,
traders, co-operatives and village people. The owners are engaged primarily in the carriage of their own produce and stores. The government operates 27 vessels all of which carry commercial cargo.

There are no scheduled shipping services other than that provided by a government vessel. This vessel calls at all main ports from which district-based similar government craft operate. But there is a good deal of duplication of work in the BSIP and small craft are undercapitalized and in poor condition. The government has no wish to continue as a common carrier and would prefer to shift cargoes now handled by government ships on to a scheduled commercial service, if this were possible.

Papua - New Guinea - A recent survey has been done in this region by the World Bank. The following is an extract from their report (p. 241):

In some parts of the Territory the coastal trade is dominated by coastal vessels operated by the large trading and plantation companies which are geared primarily to the satisfaction of their own needs rather than to providing a public service. In addition to large trading companies, coastal vessels are operated by a number of small companies acting as owners, charterers, agents, etc. Some of these companies are starved for capital; their equipment is obsolete and their operating costs are high.

The coastal shipping fleet in mid-1963 consisted of 207 vessels of which 180 were capable of carrying only 50 net tons or less. This fleet is not adequate for current needs of the coastal trade. In some areas the lack of regular shipping services has adversely affected the production and marketing of cash crops. With expected increases in agricultural production, the coastal shipping service will become increasingly inadequate unless a comprehensive programme of rationalization and modernization is adopted.
MARINE CASUALTIES

Pacific Vessels that have been lost under circumstances which to the writer suggest a reduced GM, or 'righting-lever', have been as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Tons</th>
<th>Region</th>
<th>Loss of Life</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>Monique</td>
<td>240</td>
<td>New Caledonia</td>
<td>120 (no survivors)</td>
<td>PIM Sept. 1953, p. 141</td>
</tr>
<tr>
<td>1963</td>
<td>Muniara</td>
<td>300</td>
<td>Papua-New Guinea</td>
<td>No survivors</td>
<td>PIM Aug. 1959, p. 103</td>
</tr>
<tr>
<td>1964</td>
<td>Kavieng</td>
<td>100</td>
<td>Papua-New Guinea</td>
<td>No loss of life</td>
<td>PIM March 1964, p. 10</td>
</tr>
<tr>
<td></td>
<td>Trader</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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PLATE I. Low coral island barely visible from the deck of an island vessel at a distance of 11 miles. But the reflection of the lagoon on the clouds is more apparent.

Photo: A. D. Couper.
PLATE 2. Typical wide fringing reefs around island coastlines, this means navigating well off-shore when moving between settlements.

Photo: Rob Wright, Public Relations Office, Suva.
PLATE 3. When leaving reef islands loaded workboats may have to cross dangerous surf at the reef edge. Gilbertese seamen wait for a lull to pull through the surf zone.

Photo: A. D. Couper.
PLATE 4: Coastal work in Fiji means frequent anchoring and on cutters where everything is manhandled this involves time and several seamen.

Photo: A. D. Couper.
PLATE 5. Old Pacific trading captains (and friends). Centre, Captain Burrell of the schooner 'Sandfly' and, bottom right, Captain Lane of the schooner 'Myrtle' in Tonga about 1884.

Photo: Reproduced from Jull 1883-84, National Library of Australia, Canberra.
PLATE 6. Resident trader and his wife in the Marshall Islands during the 1890s.

Photo: Reproduced from Mrs. R. L. Stevenson, 1915.

Photo: Reproduced from Jull, 1883–84, National Library of Australia, Canberra.
PLATE 6. Double canoe trading in Tonga in the 1880s.

Photo: Reproduced from Jull, 1883-84, National Library of Australia, Canberra.
PLATE 9. A 90 feet ocean-going canoe at Tabiteuea in the Gilbert Islands in the 1920s.

Photo: From Maude Collection, Department of Pacific History, A.N.U.
PLATE 10. A canoe shed and a 60 feet canoe under construction at Aranuka in the Gilbert Islands, 1964.

Photo: A. D. Couper.
PLATE 11. The schooner 'Sandfly' and the Union Steamship Co. cargo vessel 'Wainapu' trading in Tonga in the 1880s.

Photo: Reproduced from Jull, 1883-84, National Library of Australia, Canberra.

Photo: C. M. Humphrey Collection, National Library of Australia, Canberra.

Photo: A. D. Couper
PLATE 14. The Fiji cutter 'Kadavulevu' at Levuka. This vessel capsized with the loss of over 90 lives.

Photo: Fiji Government.
PLATE 15. Cutters and company trading vessels at Suva.

Photo: Rob Wright, Public Relations Office, Suva.
PLATE 16. A modern cargo vessel owned by the Government of Tonga.

Photo: Government of Tonga.
PLATE 17. A new type of island vessel. The powered landing barge 'Kao' loading at Nuku'alofa.

Photo: A. D. Couper
PLATE 18. Modern GEIC vessel alongside in the port of Betio.

Photo: A. D. Couper.
PLATE 19. Large Tongan vessel on passenger-carrying voyage between Vava'u and Nuku'alofa, 1965.

Photo: A. D. Couper.
PLATE 20. Overloading, common on all sizes of Pacific craft.

Photo: A. D. Couper.
PLATE 21. Island hinterland transportation by pack horse.

Photo: Rob Wright, Public Relations Office, Suva.
Plate 22: By 'putt putt' down river.

Photo: Rob Wright, Public Relations Office, Suva.
PLATE 23. By 'bilibili' down the Rewa River.

Photo: Rob Wright, Public Relations Office, Suva.
PLATE 24. Women carrying reeds and 'voivoi' along the coast.

Photo: Rob Wright, Public Relations Office, Suva.
PLATE 25. Women carrying produce and coconut leaf basket of copra from the bush for village drying, Gilbert Islands.

Photo: A. D. Couper.
PLATE 26. Villagers carrying copra out to the workboats in the Gilbert Islands.

Photo: A. D. Couper.
PLATE 27. Swimming cattle about two miles to a ship off Gau Island, Fiji.

Photo: A. D. Couper.
PLATE 29. Fijian women coming to market.
Photo: A. D. Couper.
PLATE 30: Fijian women selling fresh produce at a municipal Market.

Photo: Rob Wright, Public Relations Office, Suva.
PLATE 31: A Yasawa cutter trader selling goats and tapioca to an Indian middleman on the beach at Lautoka.

Photo: A. D. Couper.
PLATE 32. A village co-operative society store in the Lau Islands.

Photo: A. D. Couper.
PLATE 33. Passengers disembarking in the Ellice Islands.
Photo: A. D. Couper.
PLATE 34. Workboats leaving the Colony Wholesale Society vessel in Funafuti lagoon.

Photo: A. D. Couper.
PLATE 35. A crew member lashing his own 'voivoi' and 'yaqona' during an island voyage in Fiji.

Photo: A. D. Couper.
PLATE 36. A large ceremonial presentation of 'masi' and mats in Fiji.

Photo: Rob Wright, Public Relations Office, Suva.