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**THE ECONOMY OF OKINAWA:
PERFORMANCE, PROBLEMS
AND PROSPECTS**

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THE ECONOMY OF OKINAWA: PERFORMANCE, PROBLEMS AND PROSPECTS

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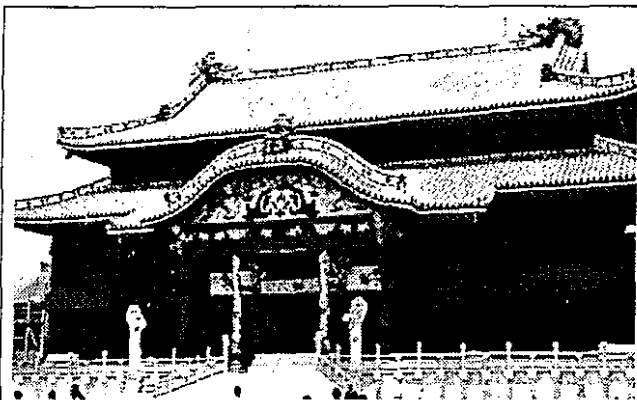
Sources of statistics:

The statistics shown in Tables 1 to 5 are taken from the *Prefectural Accounts* and *Labour Force Statistics* published by the Okinawa Prefectural Government. Other sources of statistics include *Annual Report of Prefectural Accounts*, published by the Japanese Economic Planning Agency and *A Minute Guide to Okinawa's Economy* published by the Bank of the Ryukyus.

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both the U.S. and Japan as a final line of defence against a U.S. landing on the Japanese mainland. For this reason, a major battle was waged by the two powers for the control of Okinawa in March-June 1945, from which the Americans emerged victorious. During the battle, over 94 thousand Japanese and 12 thousand American soldiers were killed. About 125 thousand civilians were also killed, since Okinawan civilians had to cooperate with the Japanese military. It is indeed very ironical that a people with a reputation of being peace loving had to experience in their midst one of the bloodiest battles of World War II.

Following the outcome of the Battle of Okinawa, the U.S. formed the United States Civil Administration of the Ryukyu Islands (USCAR) which in reality was a military government. This administrative setup lasted until 1972. During the 1945-1972 period, the island of Okinawa became a U.S. military stronghold, and played an important role in the U.S. strategies to contain communism in the cold war era. In the Vietnam war, the island was a major base from which aircraft, troops and supplies were dispatched.



The reconstructed Shuri Castle. The Castle was used by the Ryukyu kings for administrative and ceremonial purposes. It is now a symbol of the rich historical and cultural heritage of Okinawa

During the USCAR administration, the economy of the island was transformed into one depending on the American military expenditure. At the height of the American occupation, the U.S. military bases employed around 40,000 Okinawans and contributed almost 50% of Okinawan total income. In 1970, around 57% of export proceeds originated from this source. At that time, the per capita income in Okinawa was about 67% of the average for all Japan. Social overhead capital (roads, water supply, sewerage system, housing, education, medical care and welfare facilities) remained, in general, of a much lower level than the Japanese average.

The reversion of Okinawa to Japan was agreed upon in 1969 and occurred in May 1972. Following this historic development, the economy of Okinawa reduced drastically its dependency on the U.S. military expenditure. In 1971, just before the Reversion Year, a law entitled (loosely translated) Special Measures for the Development of Okinawa was enacted with the purpose of stabilising the livelihood and improve the welfare of the people of Okinawa and to promote the development of the prefecture. This piece of legislation ushered in a series of ten year development plans, and these have led to large financial flows from the National Treasury, giving rise to a situation where the prefecture has become increasingly dependent on

transfers from the central government.

A large proportion of the land area of Okinawa is still however utilised as U.S. military bases, a situation which is legalised under the Japan-U.S. mutual defence treaty, signed in 1951.⁴ In 1972 around 290 square kilometres were assigned to the U.S. military – now reduced to 250 square kilometres. At present there are plans for utilising the military basis for economic and social use (see Okinawa Prefectural Government, 1993, p. 4) including the construction of a free trade zone and residential urban developments, if and when the land is returned to Japan.⁵

As we shall show, at present Okinawa is still trapped in a dependency relation with mainland Japan, since it receives large amounts of financial transfers from the Central Government, and its external trade is to a very large extent carried out with Japan.⁶

Today, out of the 47 prefectures of Japan, Okinawa has the lowest per capita income and is one of the most dependent on Central Government transfers.

3. PERFORMANCE OF THE ECONOMY

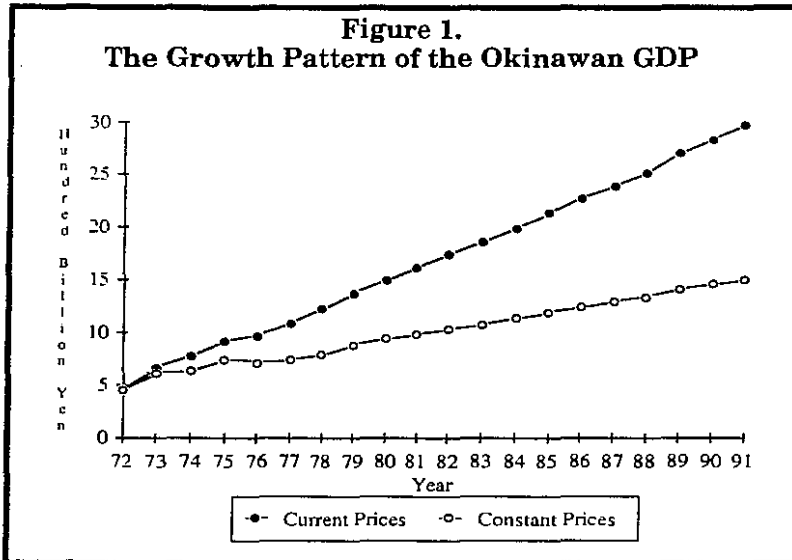
Following the reversion of Okinawa in 1972, three Ten Year Development Plans were launched. This section will assess the performance of the Okinawan economy against the targets set by these plans, the most important purpose of which was to promote the development of Okinawa in order to bring it in line with that of mainland.

3.1 The First Ten Year Plan

The first ten year plan covered the period 1972 to 1982. The plan gave top priority to the narrowing of per capita income and the expansion of the manufacturing sector. During the ten year period covered by the plan, the Okinawan economy grew at a very satisfactory rate, with the increase in Gross Domestic Prefectural Product averaging about 9% per annum at constant prices (see Figure 1), a growth rate higher than that of the Japanese economy as a whole.

Employment also increased during the first development plan period. In 1972 there were 364 thousand employees, increasing to 446 thousand in 1982, an increase of about 2.4% per annum. The rate of unemployment at first rose from 3% in 1972 to just under

Figure 1.
The Growth Pattern of the Okinawan GDP



7% in 1977, but then fell again to 5% in 1982 (see Figure 2).

During the first plan period, the gap between the average per capita income for Japan and that of Okinawa decreased from 40% in 1972 to 26% in 1982, which can be considered as a measure of success of the plan.

The first plan consisted of a number of projects, which supported rapid improvements in the infrastructure of the economy, roads and housing. The budget allocation for the Okinawa Promotion and Development amounted to ¥37 billion in 1972 and increased to just over ¥200 billion in 1981, a total of ¥1250 billion in ten years (about ¥1 billion per capita). Of this 43% went for road building, 19% for sanitation and sewerage, 18% for airports, 16% for farmlands and forestry and 5% for housing.

A major failure of the first ten year plan was that the manufacturing sector did not expand its share as projected. In 1972 the share of the secondary sector accounted for 28% of total output (with manufacturing taking 11% and construction 16%). In 1982, the share of the secondary sector decreased to 22% (with manufacturing taking 7% and construction taking 14%) of total Gross Output. On the other hand, the share of the tertiary sector increased from 67% in 1972 to 75% in 1982. In this respect, the targets of the first development plan have not been met.

3.2 The Second Ten Year Plan

The second plan covered the period 1982 to 1992. There was a change of emphasis in this plan in that the target of self-reliance was assigned more importance than the first plan. Another important characteristic of the second plan was that tourism was assigned a major role, following the awareness that tourist ex-

penditure was an important source of income and employment.

The outcomes of the second development plan were also a mixture of successes and failures. Between 1982 and 1992 the average rate of growth of GDP was 4.4% per annum in real terms, which is about the same as that for Japan as a whole, and in this respect, the plan targets can be said to have been attained.

Employment increased from 446 thousand in 1972 to 539 in 1992, an increase of about 2.3% per annum, which was a faster rate of increase than for Japan as a whole.

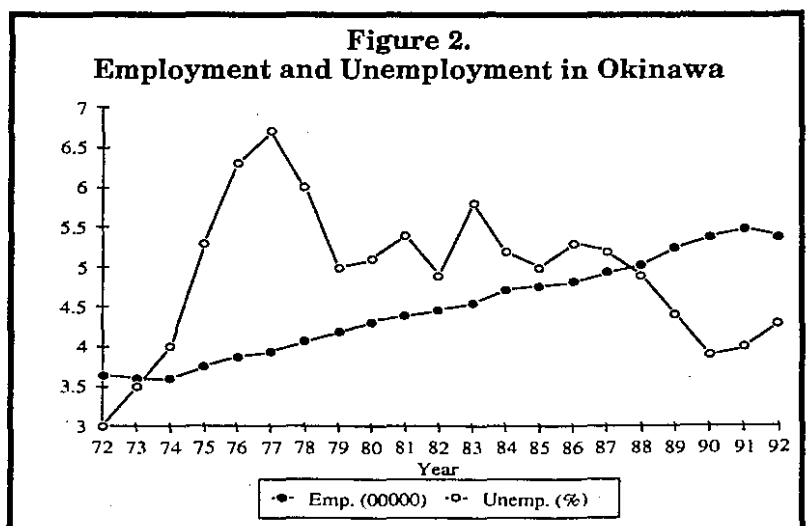
The objective of expanding the tourist sector has likewise been achieved in the sense that the number of incoming tourists increased from 1.9 million in 1982 to 3.2 million in 1992, whereas income from tourism increased from ¥201 billion to ¥344 billion yen, an increase of about 70% in ten years. There are however a number of misgivings about tourism development in Okinawa – these will be discussed at a later stage in this paper.

As in the previous ten years there was a marked development in public facilities as a result of the second plan (see Okinawa Prefecture, 1993, pp. 18-21), involving improvements in paved roads, airport and harbour development, education and medical facilities, restoration of cultural property and welfare services.

The most important failure of the plan was related to the opening gap in per capita income with the average for Japan. The gap tended to decrease from 26.2% in 1972 to 24.2% in 1986, but it increased again after that year, reaching 28.5% in 1991, a higher gap than that prevailing in 1982.

Another failure was that the structure of the economy did not change in the desired direction. The share of

Figure 2.
Employment and Unemployment in Okinawa



the secondary sector continued to decrease, from 22.0% in 1982 to 21.5% in 1990, with the manufacturing sector further losing its share from 7.3% to 6.6%. On the other hand, the tertiary sector continued to expand, from 75.2% in 1982 to 78.1% in 1992.

Self-Reliance. The success or otherwise of attaining the self-reliance objective of the second plan is not easy to assess, because there are various indicators of self-reliance and dependency. Here we take four ratios, which, it is admitted, by themselves do not shed enough light on the issue of dependency.

The first ratio relates to the Resource Gap. The ratio of total exports to total imports has increased from 58% in 1982 to 64% in 1991 (See Figure 4). Kakazu (1991) has refined this index by excluding receipts/payments from sales/purchases associated with the military bases. Using this ratio, we find that the ratio has tended to increase during the second plan. These ratios would seem to suggest that Okinawa has reduced its resource gap in relative terms, and thereby became more self-reliant. It should be noted, however, that these ratios may not very meaningful, because external trade in Okinawa is to a very large extent directed to and from the Japanese mainland, to which the prefecture is dependent economically and politically.

The second ratio relates to the dependence on transfers from outside the prefecture. If we measure the ratio of Central Government transfers to total external receipts we will find that these transfers have actually tended to increase from 52% to 55% between 1982 and 1988 (Okinawa Prefecture, 1994) but decreased to 50% by 1991.

A related ratio is the rate of domestic fiscal resources, defined as domestically raised finances as a percentage of total government revenue. This has increased from 60% in 1982 to around 67% in 1991.

The fourth ratio relates to income from the military basis. This has tended to decrease its percentage share of external inflows, from 10% in 1982 to 8% in 1991. When expressed as a ratio to resident total production, income from the military basis has decreased from 7.5% in 1982 to just under 5% in 1991.

From these statistics there is some evidence that during the second ten year plan period, the Okinawan economy has become more self-reliant. But this conclusion should be interpreted with great caution. Dependence on the Central Government finances is still very high, about two times as large as the average for other prefectures, indicating that Okinawa is still very heavily reliant on transfers from outside the prefecture. It should be recalled that transfers from the Central Government not only gave rise to infrastructural development, but also generated substantial income

and employment in the prefecture (see Table 13-11 of *Japan Statistical Yearbook 1993/94*).

Moreover, the structure of the Okinawan economy, has become more service oriented, which as may be one explanation for relatively low per capita income, given that services employment tends to be in small establishments and generally carries with it lower wage rates compared to other forms of employment (see Table 3-28 of *Japan Statistical Yearbook 1993/94*).

It may be concluded therefore that although there were signs of increased self-reliance in the Okinawan economy between 1982 and 1992, the economy is still very much dependent on the Japanese mainland, and its structure has become less manufacturing oriented.

3.3 Third Development Plan

The third plan covers the period 1992- 2002. The purpose of the plan has broadly the same objectives as the previous two, namely to reduce the differences that still exist between Okinawa and mainland Japan, to infrastructural development to strengthen the Okinawan economy, and to make the economy more self-reliant. The plan also emphasised the promotion of culture, improved welfare and promotion of international communication, and assigned an import place to tourism resort development.

It is too early yet to comment on the successes or failures of the third year plan, but there appears to be some misgivings among economic analysts in Okinawa regarding the important place assigned to resort development on the island.

3.4 The Overall Results of the Plans

As stated, there was a rapid increase in per capita income during the twenty year period covering the two development plans, which however was not enough to close the gap with the average for Japan. This gap renders Okinawa as the prefecture with the lowest per capita income in Japan. Of interest, however, is that the per capita income of Okinawa is higher than that of most developed countries, although most probably the purchasing power of this income is not as high as the absolute per capita income suggests, due to the high prices of commodities in the prefecture.⁷

During the twenty-year period there was an expansion of social overhead capital, eliminating the gap and at times reaching higher levels compared to the national average, in a number of areas including paved roads, households with tap water, sewerage per person and homes for the elderly. Okinawa however still lags the national average in hospitals, schools and parks (see Higa, 1993). It should be recalled that the

improvements in social overhead capital were mostly financed through transfers from the National Government.

The plans contained some important targets, including the expansion of the manufacturing sector to render its share comparable with that of mainland Japan. As stated, the target was not met, and this sector presently contributes only around 6.5% of Gross Prefectural Domestic Product.

Some factors which may have contributed to this lack of success include (a) the high cost of electrical power (b) problems of water supply arising not from lack of rainfall but mostly from leakages and distribution (c) absence of a railway system and other inadequacies in internal public transport (c) fear of labour union strength on the part of investors (d) high transport costs due to distance and insularity of the prefecture and (e) the inability of Okinawa to apply protection against imports from mainland Japan.⁸

On the other hand, the services sector grew faster than expected. Some reasons that could be put forward to explain this phenomenon include that (a) Okinawans are more adapt at working in the services sector, which requires less investment and training and (b) the increase in employment and income in Okinawa brought about an increase in consumer demand, giving rise to an increase in derived labour demand in the distributive trades.

4. THE PRESENT STRUCTURE OF THE OKINAWAN ECONOMY

This section describes the structure of the Okinawan economy and compares it with that of Japan. Four main aggregates will be examined, namely the Gross Prefectural Domestic Output, Gross Prefectural Gross Expenditure, the Balance of Payments and the Labour Force.

4.1 The Gross Prefectural Domestic Product

The Gross Prefectural Domestic Product is an aggregate of the value added produced within the prefecture. In other words, it measures the net contribution of each firm, after deducting intermediate inputs, such as raw material and other purchases from outside the firm (or outside the sector). The GPDP therefore excludes imports from outside the prefecture

Table 1.
The Structure of the Okinawan Economy

	OKINAWA			JAPAN
	1972	1982	1991	1991
PRIMARY SECTOR (%)	7.3	5.0	2.8	2.3
SECONDARY SECTOR (%)	27.9	21.7	21.0	39.2
of which:				
Construction (%)	16.4	14.4	14.2	9.9
Manufacturing (%)	10.9	7.3	6.5	29.0
TERTIARY SECTOR (%)	67.3	75.2	79.0	63.7
Adjustment*	-2.5	-1.9	-2.8	-5.2
Total (%)	100.0	100.0	100.0	100.0
Total ¥ billion	507.4	1822.6	3161.0	458599

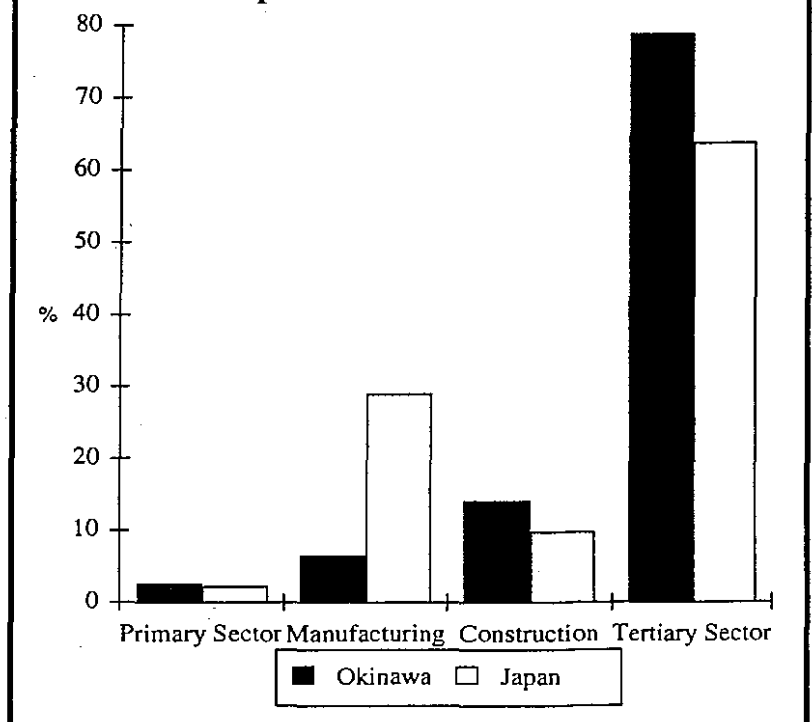
* The adjustment refers import taxes and interest deductions.

and its measurement avoids double counting of sales from one firm (or sector) to another.

Table 1 shows the sectoral shares of the Okinawan Gross Prefectural Domestic Product for 1972, 1982 and 1991, and compares the composition of GPDP with the GDP of Japan as a whole. The table shows that in 1991, the primary sector contributed just over 3% to the GPDP, the secondary sector contributed 21% and the tertiary sector contributed 79%. Figure 3 gives a pictorial comparison of the Japanese and the Okinawan structure of the economy.

The Okinawan economy is therefore dominated by the tertiary sector, while the secondary sector contributes

Figure 3.
The Composition of the Okinawan GDP



a relatively small proportion to GDP.

4.1.1 The Primary Sector. This sector, which consists of agriculture, forestries and fishing, has tended to reduce its share of GDP between 1972 and 1991. Agriculture dominates the primary sector, and in 1991 this sub-sector produced ¥624.3 billion (2.2% of GDP), with the most important products being sugar cane (about a fifth of total agricultural output), vegetables, pork, flowers, cattle, leaf tobacco and pineapples, in that order.

The fisheries sub-sector is very small, and contributed ¥191.9 billion in 1991 (about 0.6% of GDP) in 1991, with coastal fishing taking the largest share of the total.

4.1.2 The Secondary Sector. This sector comprises mainly construction and manufacturing.

The construction sub-sector grew rapidly after the reversion, when vast amount of funds from the Japanese mainland were transferred to Okinawa for the construction of roads, harbours, airports and residential building. As a result, the Okinawan secondary sector is dominated by construction.

The manufacturing sub-sector produced ¥193.8 billion (6.5%) of GDP in 1991. It is dominated by small firms, with the average number of persons employed per establishment being less than 10 (see *Japan Statistical Yearbook*, 1993/4, Table 5.6). The most important products are foodstuffs and beverages, petroleum and coal products, non-metallic minerals (ceramics, cement clay and quarrying), metal products and publishing/printing.

Okinawa also produces a number of traditional crafts, such as woven and died cloth, lacquer-ware, processed coral and decorative glass. In 1991, the gross value of the traditional craft products amounted to around ¥8.0 million yen.

Table 3 confirms that the share of the manufacturing sub-sector has tended to decrease since 1972. As already indicated, this is one of the most worrying aspects of the Okinawan economy.⁹

4.1.3 The Tertiary Sector. The tertiary sector, which as can be seen from Table 1 is by far the largest main sector in the Okinawan economy, contributed 79% of the GDP in 1991. This sector comprises personal services to household and to the government¹⁰ (39.3%) wholesale and retail trades (14.6%), real estate

Table 2.
Gross Expenditure in Okinawa

Category	OKINAWA			JAPAN
	1972	1982	1991	1991
PRIVATE EXPENDITURE (%)	98.2	83.5	75.3	81.4
of which:				
Consumption (%)	63.3	61.4	55.6	56.3
Investment (%)	34.9	22.1	19.7	25.1
PUBLIC EXPENDITURE (%)	27.0	36.5	31.6	15.8
of which:				
Consumption (%)	17.7	18.3	16.9	9.0
Investment (%)	9.3	16.3	12.8	6.7
FOREIGN SECTOR (%)	-19.0	-23.9	-9.9	2.7
of which:				
Exports Goods & Services (%)	39.7	31.6	23.9	14.5
Imports Goods & Services (%)	58.7	54.3	33.2	11.8
NON-PREFECT. INCOME*	-6.2	3.9	3.0	-
G. P. E. (%)	100.0	100.0	100.0	100.0
G.P.E. (Billion Yen)	480.6	1822.6	3147.4	458599.0

* Non-prefectural income includes statistical error.

(10.3%), transport and communication services (8%), banking and financial services (3.6%) and electricity gas and water (3.2%). The figures in brackets show the individual sub-sectors' contribution to GDP in 1991. The biggest sub-sectors, namely personal services and retail and whole trades consist mainly of small firms.

4.2 The Structure of Prefectural Expenditure

Table 2 shows the expenditure patterns of Okinawa Prefecture for the years 1972, 1982 and 1992, and compares the 1992 composition with that of Japan as a whole.

4.2.1 The Public Sector. The share of public sector spending has tended to increase from 27% of G.P.D.E. (17% of total final expenditure) to 37% of G.D.P.E. (24% of total final expenditure) 1982. It decreased to 32% of G.D.P.E. (24% of total final expenditure) in 1991. The share of public expenditure in Okinawa is higher than the average for the Japanese economy. One reason for this is the relatively large outlay of public funds for infrastructural development, which also require large administration expenses.

4.2.2 Imports and Exports. An important characteristic of the Okinawan economy is that exports and imports are much higher than those for Japan as a whole. This is typical of small economies, who of necessity, require a larger market than their own to produce certain products efficiently and who tend to have very few natural resources.

Table 2 also shows that the Okinawan external trade gap (comprising goods and services) has tended to decrease between 1972 and 1991. Most Okinawan imports and exports originate from and are directed to the Japanese mainland. However, Okinawa also trade with other countries, and in the case of merchandise, around 23% of imports and 33% of exports are transacted with non-Japanese suppliers and clients.

4.3 The Balance of Payments

Table 3 gives a brief description of the Okinawan balance of payments, from which a few characteristics of the Okinawan economy can be deduced.

Firstly, during the period covered by the table, there has been a consistent deficit in the balance of merchandise trade. The most important exports and imports were oil related products. Although the gap has tended to grow in absolute terms, it decreased in percentage terms during the 1980s.

Secondly, there has been a consistent surplus in services trade, mostly arising from inflows from tourism. Expenditure by military personnel has also been of importance in this regard. This surplus has tended to grow in absolute terms during the period covered in the table, although it has decreased in percentage terms during the eighties.

As a result of these changes, the resource gap, which is the difference between exports and imports of goods and services, has increased from ¥300 billion in 1975 to ¥414 billion in 1982 and decreased to ¥295 billion in 1991. Figure 4 shows how the resource gap in the Okinawan balance of payments changed between 1975 and 1991. The figure also shows that the ratio of imports to exports has tended to decrease during the period under consideration.

Thirdly, as Table 3 shows, inflows of factor incomes have been significant during the period covered by the table. These inflows mostly resulted from the military bases, in the form of wages and rents.

Fourthly inflows of funds associated with transfers were also important. These were mostly financial allocations by the Japanese Central Government to the prefectural government. Capital inflows to the prefectural gov-

Table 3.
The Okinawan Balance of Payments

	1975		1982		1991	
	Credit	Debit	Credit	Debit	Credit	Debit
Merchandise trade	217	685	247	951	271	982
Services trade	204	36	330	40	481	65
Factor income	63	-	89	-	174	-
Non Govt. Transfers	1	15	8	25	29	38
Govt. Transfers	230	77.4	68	169	700	305
Current A/C Flows	715	812	1141	1185.1	655	1390
Govt. Capital flows	125	1	273	3	270	9
Private Capital flows	24	-	14	-	4	-
Capital A/C Flows	149	1	287	3	274	9
Total inflows/outflows	864	813	1429	1188	1929	1399

ernment have also given rise to a net inflows of funds to the prefectural balance of payments.

4.3.1 International Merchandise Trade. A brief look at the international trade of Okinawa is in order here. The exports and imports shown in Table 3 include those sold to and purchased from other Japanese prefectures. In 1991 exports of goods to and from non-Japanese sources amounted to ¥86.6 billion, of which around 90% were directed at South East Asia, mostly South Korea, Taiwan, Hong Kong, Singapore and the Philippines. Other important clients of Okinawa were China and Guam. Most of these exports were oil products (around 80%), food, mostly from the sea (around 3%) and machinery/equipment (around 4%).

During the same year, imports from non-Japanese sources amounted to ¥234.8 billion, 73% of which was crude oil originating from Saudi Arabia, Oman, United

Figure 4
The Okinawan Resource Gap

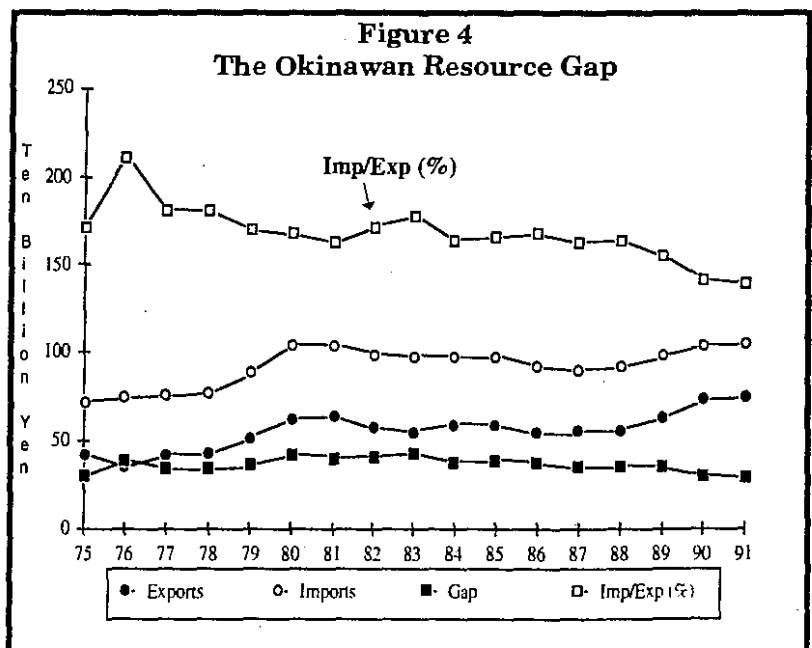


Table 4.
Tourism Inflows

	1972	1982	1991
Tourists (thousands)	443.7	1,189.2	3,151.9
Income (billion yen)	32.5	200.0	345.2
Tourism income as (%) of Current A/C receipts	—	17.5	20.9

Arab Emirates, and Iran. Other important imports are food products including meat products (around 16%).

This confirms that the Okinawan foreign trade is mostly related to oil products, which the prefecture imports in crude form and exports in a refined form. The Okinawan foreign trade is therefore very undiversified and depends too much on one product, which of course carries with the risk of having too many eggs in one basket.

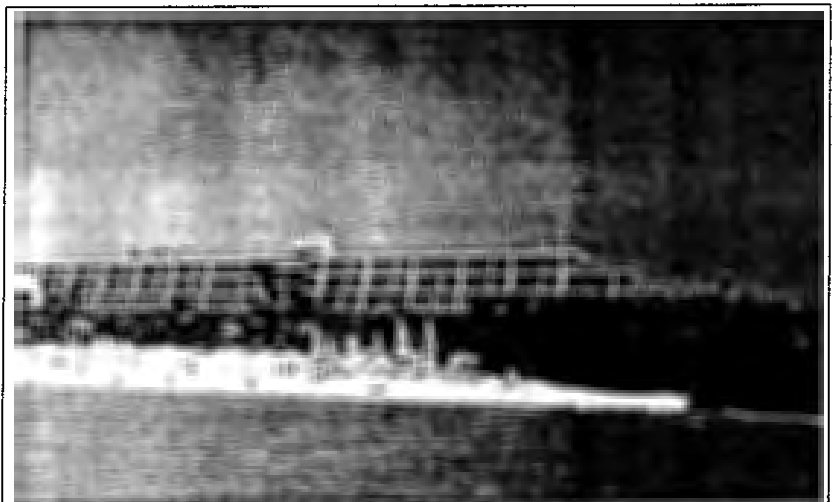
4.3.2 Tourism Inflows. In Okinawa tourism has been given a primary role in the economic growth of the prefecture and considerable capital outlays have been assigned for the infrastructure for resort tourism. The building of large hotels and golf courses and the improvement of beaches have been feature prominently in the second development plan, and even more so in the third development plan.

Resort Development. According to the latest Okinawa Prefectural Master Plan for Resort Land Development, 13% of the land area is designated for this purpose. As at 1991, there were 16 resort hotels in operation, mostly owned and controlled by non-Okinawan interests. When the plan is completed, Okinawa will have 41 resort hotels and 47 golf courses (with a total land area of around 300 square kilometres), mostly concentrated on Okinawa island, which already has a very high population density and therefore intense competition in land use.

Income from Tourism. Since 1972, Okinawa has experienced a rapid increase in tourism related income, as seen in Table 4. In 1972 the number of tourists amounted to just under half a million, and this inflow has risen steadily, exceeding 3 million in 1992.¹¹ Income from tourism amounted to ¥32.5 billion in 1972 and increased to ¥345.2 billion in 1991, a ten times increase in nominal terms (or about four times in real times). This increase in the importance of tourism has also been reflected in balance of payments statistics, where current A/C receipts from tourism as a percentage of total external sources tended to increase from 1982 to 1992.

The tourists that visit Okinawa come mainly from mainland Japan, and only a very small percentage originate from other countries. Okinawa is simply too expensive to attract international tourism.¹²

The main factors accounting for the rapid increase in tourism from Japan can be explained in terms of (1) the high per capita income in Japan allowing for an increasing demand in leisure activities (2) the big Japanese corporations have during the past twenty years tended to diversify their business with an increasing emphasis in the supply of leisure related productions and (3) the Central Government has in recent years adopted a policy which encourages development of resort tourism (1987 Resort Development Act).



Tourism is a very important industry in Okinawa.

Problems of Resort Tourism. Higa (1991) identifies a number of problems connected with the Okinawan tourist industry. These include (a) the resort hotels are mostly owned by non-Okinawan interest and capital (b) management is dominated by non-Okinawan personnel (c) food and raw material used in hotels, to a large extent is purchased from mainland Japan (d) the industry has limited multiplier effects because it is an enclave form of tourism (e) resort tourism development has given rise to a increase in land value, which is detrimental to Okinawan business and to residents in general (f) tourism has exacerbated the water problem and water shortages are common and (g) the facilities required for resort tourism pose a large financial burden on the finance of the local government.

Of interest is that resort related revenues to the government are rather high, and averaged around 12% of total government revenue in recent years, but only 25% of this is actually retained by the local government (Higa 1991). In this regard one should also consider public expense connected indirectly with tourism,

Table 5.
Military Expenditure (Billion Yen)

	1975	1982	1991
Personnel Expenditure	39.5	69.4	53.2
Wages from bases	36.1	30.6	47.9
Land Lease	26.9	37.4	51.6
Total Income (¥ billion)	102.5	137.4	152.7
Military Receipts as (%) of Cur. A/C receipts	17.8	11.6	9.2

including water supply, the sewerage system and environment protection.

Another factor to consider is that resort tourism may have some detrimental effect on local business. There is evidence to suggest that occupancy rates in small hotels, which tend to be locally owned have low occupancy rates (Okinawa Prefecture, 1990). There is also a possibility that advertising and packaging is diverting tourists away from locally owned hotels (see Higa, 1991, Miki 1990 and Ukai 1990).

4.3.3 Military Bases Expenditures. When discussing the military bases in Okinawa, the argument necessarily focuses on two aspects, namely land use and expenditure.

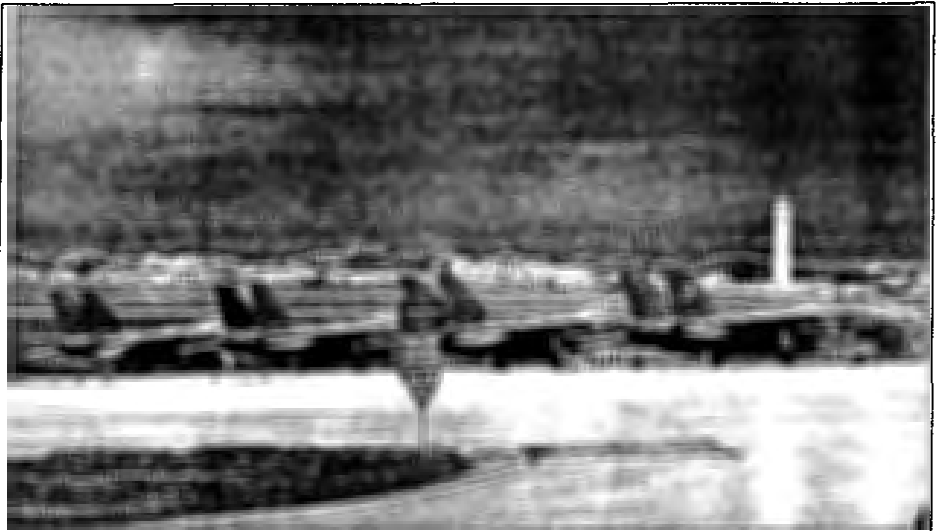
Land Use. Traditionally land use in Okinawa was mainly for agricultural purposes. Following the World War II, a large proportion of Okinawa land area was taken for U.S. military purposes (See Shimambikuro, 1992). Land in Okinawa is very scarce, and, as already stated, it will be scarcer still in the future with the growth of resort tourism.

In recent years, the land used for military purposes amounted to 256 square kilometres, which is around 11.5% of total land use and 20% of mainland Okinawa. The land assigned to the military is mostly in the centre of Okinawa, where an urbanisation process is under way. In 1992 there were 45 facilities on mainland Okinawa, of which 20 were Marine bases, 10 Air-force bases, 11 Naval bases and 4 Army basis (see People's Voices for Peace, 1993), with about 29,000 military personnel, 21,000 family members and 900 non-military American employees, giving a total of 50,000 persons.¹³

Military Expenditure. As stated, military expenditure is a very important source of income for Okinawa.

Table 5 shows that there are three main inflows from this source, namely consumption expenditure by military personnel, wages to employees engaged at the bases and land lease receipts for the bases. It can be seen that although the total amount of revenue increased between 1975 and 1991, the dependence on this source of revenue (measured as a ratio of total external receipts on current account) has decreased. It is however still a relatively large proportion of external inflows, amounting to just over 9% in 1991.

4.3.4 Government Related Inflows. Table 3 shows that the Okinawan Balance of Payments would have had consistent deficits on current and capital account had there not been transfers and capital flows from the Central Government. This problem has already been discussed elsewhere in this paper, and we shall not dwell further on it except to re-emphasise the fact that this is an indicator that the Okinawan economy is still heavily dependent on Central Government support.



A considerable proportion of Okinawan land is taken up by the U.S. military bases.

4.4 The Labour Market

Table 6 shows the composition of employment in Okinawa for the years 1972, 1982 and 1991, and compares the composition of employment with that of Japan as a whole.

Table 6 shows that by and large the distribution of employment is similar to the sectoral distribution of GDP. The distribution of employment, compared with that of Japan as a whole is also shown graphically in Figure 5.

4.4.1 Unemployment. Okinawa has a relatively high rate of unemployment, which in 1991 amounted to 4.0% of the labour force, compared to 2.1% for the national average. This rate of unemployment would seem

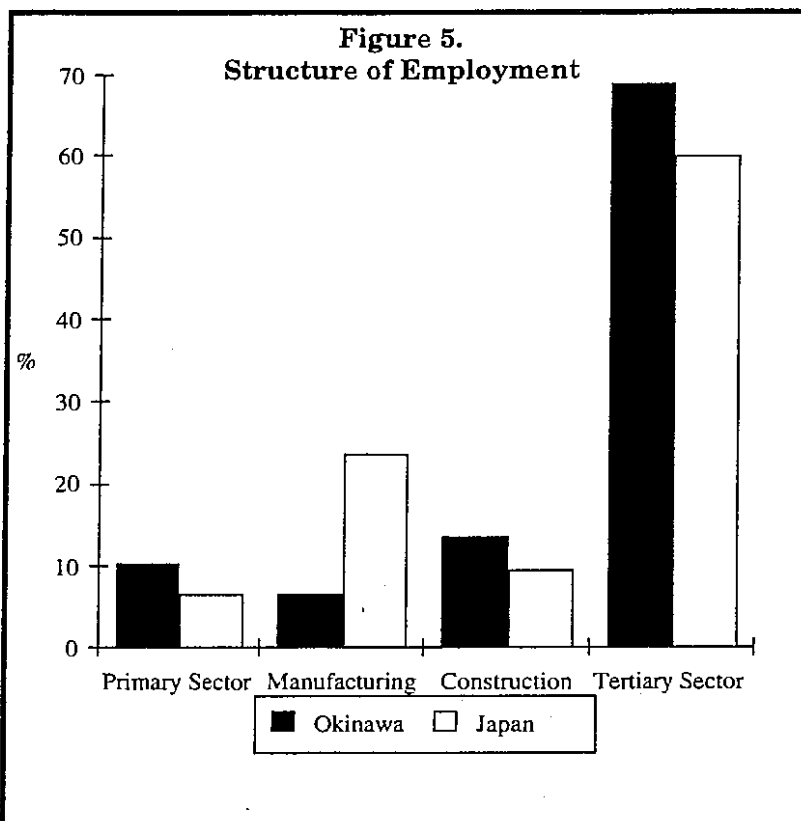
to be rather low by European or U.S. standards, but it is one of the highest among Japanese prefectures. It is to be noted here that in Japan, the unemployment rate may be understated when compared to the US and the EU, because Japanese firms do not tend to shed labour as readily as US and EU firms during a recession.

The distribution of employment in Okinawa also differs markedly from that of Japan as a whole, since it has a much lower percentage of persons employed in manufacturing and a higher percentage employed in construction. Another characteristic is that in the tertiary sector of Okinawa employment is relatively larger than that of Japan as a whole. These characteristics are similar to those related to GDP composition.

4.4.2 Migration. An important characteristic of the Okinawan labour market is migration. Inward migration consists mainly of returned migrants and immigration of managers/administrators from the mainland. The latter group of immigrants generally accompany private investment and Central Government financial transfers.¹⁴

Outward migration occurs due to lack of job opportunities in Okinawa. However, such migration is not as large as one would expect given the unemployment and income discrepancy between Okinawa and mainland Japan.

Between 1989 and 1991 around 84,000 persons emigrated from Okinawa to mainland Japan, an average of 28,000 annually (equivalent to around 2.3% of the population or 5% of the labour force). During the same



years, there were around 72,000 in-migrants, an average of 24,000 annually, which means that actual net-migration was around 4000 annually (equivalent to 0.3% of the population or 0.7% of the labour force).

Taira and Kyan (1988) discuss the hypothesis that labour usually moves from lower-income to higher income areas, since in the latter areas there are better chances for education, jobs and good income, and therefore attract migration from the periphery. They conclude that this may not be true in the case of Okinawa, which is the lowest income prefecture. There are brief stays by students and temporary workers in Japan, who return after a few years. This form of labour immobility (or temporarily mobility) maybe one reason why Okinawa has a higher unemployment rate than other prefectures.

The main reasons for this form of immobility, according to Taira and Kyan, include that (1) Japan and Okinawa are almost two distinct countries, with distinct national identities (2) Okinawans are satisfied with their way of life (3) transport and job-search for Okinawans in mainland Japan are very costly due to distance and insularity (4) when such costs are reduced through PESO (Public Employment Stabilisation Office) recruitment, very often the jobs offered are not to the satisfaction of Okinawans, who consider low income in Okinawa to be

Table 6.
Structure of Employment

Category	OKINAWA			JAPAN
	1972	1982	1991	1991
PRIMARY SECTOR (%)	18.1	13.2	10.4	6.7
SECONDARY SECTOR (%)	20.9	20.2	20.2	34.1
of which:				
Construction (%)	11.8	13.4	13.5	9.5
Manufacturing (%)	9.1	6.7	6.7	23.7
TERTIARY SECTOR (%)	61.0	66.6	69.4	59.5
TOTAL (%)	100.0	100.0	100.0	100.0
Employed ('000)	364	446	549	63,690
Unemployed ('000)	11	23	23	1,360
Labour Force ('000)	375	469	572	65,050
Unemployed (%)	3.0	4.9	4.0	2.1
Participation 15+ (%)	59.0	58.4	61.8	63.8

better than bad jobs in Japan.

4.4.3 High School Graduates. Related to the migration issue, there is the question of school graduates' recruitment. In Japan a very high proportion of graduates tend to find jobs after being recruited by companies for 'lifetime' employment. In Okinawa the proportion of graduates recruited in this manner is much lower, due to the meagre presence of very large firms on the island. According to Kyan and Taira (1988), 40% of the recruited graduates find jobs in Japan, 10% in Okinawa and the remaining 50% remain undecided. For this reason, youth unemployment sometimes rises to 18% in the 15-19 age group, as compared to an average of 4% in Japan. During the American occupation this phenomenon of high youth unemployment was not observed.

Each year, large firms in Japan secure a crop of good graduates from the Japanese mainland. They also employ short term workers, which allow firms to make short term adjustment to changes in demand resulting from cyclical or seasonal fluctuations. According to Tiara and Kyan many Okinawan high school graduates take up work of a temporary or seasonal nature in Japan. As stated, a large number of these graduates return to the island after 3 or 4 years, and probably only about 10% settle in Japan.

5. PROSPECTS

As we have shown in the preceding sections, the Okinawan economy has attained satisfactory rates of growth and has enjoyed rapid infrastructural development since its reversion to Japan in 1972.

A visitor to Okinawa, even one with a good knowledge of economics, when told that the prefectural per capita income has in recent years exceeded US\$20,000 would not, as an immediate reaction, consider the prefecture as one with grave economic problems. After all, this level of per capita income is higher than that of all developing countries and of most developed countries. The visitor could not help but notice the good state of roads, ports and bridges, the impressive resort hotels, the many modern multi-story commercial buildings in Naha City, the large amount of new and expensive cars, and the smartly dressed people of Okinawa.

The impression that all is well with Okinawa is reinforced by the fact that, when compared to populations of other prefectures, the Okinawans enjoy a higher life expectancy and have a lower death rate from cancer or heart disease. They also tend to allot more leisure time for socialising than the Japanese in general.¹⁵

However, a deeper analysis of the economy soon reveals deep rooted problems which are not very easy to

solve. The basic weakness is that the Okinawan economy is at present a very much dependent one. As we have shown, Okinawa depends on the Japanese Central Government for funds, on the Japanese mainland for most of its exports and imports of merchandise, and on Japanese travellers for most of its tourist inflows.

5.1 Dependency Relationship with the Mainland

This dependency on the mainland is typical of many other rather big islands, which, like Okinawa, are administered as provinces or departments of larger developed states. Many such islands are characterised by heavy dependence on the national treasury, giving rise to a relatively high per capita income when compared to developing countries - a fact which conceals many underlying economic problems, including the contraction of the manufacturing sector. Many such islands, like Okinawa, find themselves in a situation where a large proportion of the funds originating from the mainland, flow back to the mainland in the form of imports or expatriate profits as a result of control by mainland economic interests.¹⁶

Some island populations take this dependency relation for granted, and accept it as an economic reality which cannot be overcome. Some island inhabitants, on the other hand, especially in islands which in the past have had a spell of independent existence, exhibit a desire to attain higher degrees of self-reliance, and a feeling of frustration develops if things move in the opposite direction. This is probably the situation in Okinawa, where the visitor can sense that something concerning the economy hurts the self-esteem of many Okinawan people, proud to belong to a group of islands which once enjoyed a high degree of independence and created considerable wealth through international trade.

The Okinawans in general are loyal subjects of Japan and consider themselves as part of the Japanese nation (Sakihara, 1991), and the prospect of political independence does not even enter the mind of most Okinawans. This paper does not enter into the merits and demerits of political independence, although the present author believes that political independence for Okinawa is not a possible or desirable option. However, below, a hypothetical scenario shall be created to explore the possibility of reducing the economic dependency on mainland Japan.

Put in a nutshell, the argument put forward here is that the political realities of the region do not permit that Okinawa becomes an independent state, and therefore the island has no room for manoeuvre in so far as the exchange rate of its currency is concerned. It shall also be assumed that the Yen is overvalued as far as the Okinawan economy is concerned. This as-

sumption is based on the current strength of the Yen, which is adversely affecting the competitiveness of Japanese products in general, let alone that of Okinawa, which has a less efficient industrial base. This is leading Okinawa into a vicious circle of dependency with mainland Japan. It will be argued that this "the umbilical cord" could be severed if Okinawa can find a way of creating its own "comparative advantage" niches.

5.2 Self-Reliance and Export Led Development

Small economies, as a general rule, can only survive by cultivating a relatively large foreign sector. The main reasons for this are:

- *Small Domestic Market and Dependence of Export Markets.* A small domestic market means that economies of scale and efficient production of many goods can only be achieved by supplementing domestic demand with external demand, giving rise to a relatively high dependence on exports, and therefore on economic conditions in the rest of the world.
- *Limited Natural Resource Endowments and High Import Content.* Small size often implies poor natural resource endowment and low inter-industry linkages, which result in a relatively high import content in relation to GDP.
- *Limitations on Import Substitution Possibilities.* A small domestic market severely limits import substitution possibilities. In many small economies where import substitution policies.

For these reasons, the Okinawan economy, especially its manufacturing sub-sector, depends to a very large extent on sales and purchases to and from the rest of the world.

5.3 Exports of Manufactures

Okinawa has two major types of external demand, namely that originating in mainland Japan and that originating in non-Japanese markets. We shall refer to exports to Japan as sales to the mainland and to non-Japanese markets as international sales.

Exports to the Mainland. Okinawa finds it very difficult to compete with mainland Japan in exports of merchandise which are produced also in mainland Japan. Japan has a large internal market, joined by a good transport and distribution network, and penetrating this market is therefore not an easy task, considering that Okinawa has a number of disadvantages associated with insularity and small size.

Okinawa also finds it difficult to export to mainland Japan certain merchandise which Japan purchases from South East Asia and other foreign countries, given that Okinawa does not have the option of transacting other than in Yen, which has in recent years tended to appreciate against most foreign currencies.

International Exports. As stated, export competitiveness is of utmost importance for a small economy. If, as assumed, Okinawa has an overvalued currency for its economy, economic performance will be adversely affected in so far as international trade is concerned. The effects of an overvalued currency are well known, and include lack of competitiveness of domestic products in (a) the international markets and (b) in the domestic markets, against imports. The latter is especially important when substitution possibilities between domestic and foreign products exist.

For this reason, the pricing of products using the Yen rate of exchange may be working against the promotion of Okinawan international sales. This argument applies to merchandise as well as to tourism.

One may remark here that Japan has been successful in the export sector despite the high exchange value of the Yen. Cannot Okinawa be as successful as other parts of Japan, and override the Yen problem? The difficulty in this regard relates to comparative advantage. Mainland Japan has managed to develop a comparative advantage in its manufacturing industry (especially cars, machinery and electronic industries) and conditions in Japan, including government support, during the time when such comparative advantage was being developed, were favourable. In Okinawa, as explained in section 3, there are various factors which work against such development, including the high cost of electrical power¹⁷, problems of water supply, inadequate internal public transport facilities, high transport costs due to distance and insularity of the prefecture¹⁸ and the inability of Okinawa to protect itself against imports from Japan.

For these reasons, it does not appear that the Okinawan manufacturing sector has promising prospects, at least in the foreseeable future, under the existing conditions.

5.4 Exports of Services

As stated, the contraction of the manufacturing sector has been accompanied by an expansion of the services sector. This sector tends to have a relatively low earnings per unit (see *Japan Statistical Yearbook*, Table 3-28) and low productivity (Bank of Ryukyus, 1991, p. 77), possibly being one explanation of the relatively low and declining GNP per capita when compared to mainland Japan.

The relative success of the tourist sector is also not without problems. As argued above there are two basic problems in this regard. Apart from the question of rising land prices and the environmental impact, there is the problem of lack of diversification. Because of the Yen exchange value, almost all incoming tourists are from mainland Japan. Attracting international tourists at present appears a hopeless task, even

though Okinawa is a beautiful island - the prices of board and lodging and other tourist goods and services are simply prohibitive with regard to the international tourist market. The excessive dependence on Japan has given rise to a large flows of tourist income flowing back to mainland Japan.

There are contrasting view about the multiplier effect of tourism (see Oshiro, 1993, Higa, 1991 and Bank of Ryukyus (1991) but it cannot be denied that the type of tourism at present encouraged from Japan is accommodated mostly in Japanese owned hotels, in package tours to enclave areas, and is not family oriented. International tourism, on the other hand tends to be more family based, and less enclave oriented, and it would probably have a higher multiplier effect.

5.5 An Alternative Path?

As stated, the argument just developed is based on the premise that Okinawa's currency is overvalued and that most of the ills in the Okinawan economy are related to the prefecture's inability to develop a diversified external sector due to an overvalued currency. What is the alternative? Would an independent Okinawa fare better in economic terms?



Okinawa has been rebuilt after the devastation of World War II. Modern commercial structures are a common sight in Naha

A Hypothetical Scenario. For the moment, we shall abstain from political considerations, without minimizing them in the least. For the sake of the argument we assume that Okinawa has the ability to determine its own exchange rate, and it sets the value of its currency (which we shall call here Okinawan Yen) at OKY1.0 = JPY0.75. The immediate effect of this change will be a reduction in the price of exports, and an increase the price of imports. The impact on export and import demand will depend on the elasticity of demand for Okinawan exports, the impact on the price of imports, and the elasticity of demand for imports¹⁹ (see Briguglio, 1989).

However, given that the import content of exports is less than 100%, the immediate effect would be a reduction of export prices, which can then be rendered more competitive with Japanese mainland exports and with the international market. This conclusion can be applied to exports of goods such as agricultural and

manufactured products and to services such as tourism, given that inflation is sufficiently contained (see Briguglio, 1989).

In the longer run, under this regime, the government would have to adopt an exchange rate policy which is consistent with the economic realities of a small export oriented economy, which cannot attain viability with an overvalued currency.

Another beneficial impact on the economy could be the stimulus that the economy will receive from the much increased pressure on the Okinawan government to adopt economic policies promoting viability and self-reliance.²⁰

The balance between the benefits and the drawbacks involved in this scenario would depend on a number of factors, not least of which is the success of the foreign exchange rate policy that would adopted in

Okinawa, and the ability of the Okinawans to be flexible enough to transform their economy from one based on transfers from the National Government to one depending on international trade.

Political Realities. We now introduce political considerations

in this scenario. There are two major factors that have to be considered in this regard. The first relates to the transfer of Japanese Central Government funds, and the second the geo-political realities of the region.

Since this move will effectively mean economic independence from Japan, one would expect (a) a reduction of transfers from the Central Government, with adverse effects on infrastructural development and public sector employment (b) a short and medium term lowering in the per capita income of the Okinawan people, because, amongst other things (i) the OKY will only be worth a fraction of the previous yen (ii) imports will become more expensive as a result of the devaluation²¹ (iii) the construction industry will probably experience a slow down in its growth and an eventual contraction of its share of GNP, due to the fact that transfers from Japan for infrastructural development will decrease and (iv) the unemployment rate will go up due to a reduced rate of employment in the

construction industry.

The biggest obstacle working against the realisation of this hypothetical scenario relates, however, to geopolitical realities of the region. First of all the Okinawan people seem, in general, disposed to remain part from the Japanese nation.²² Secondly, the location of Okinawa is not conducive towards the realisation of this scenario. This argument shall not be pursued further, since it is beyond the scope of this paper.

5.6 A Way-Out?

Is there a third way in-between the two positions of high dependency on Japan and economic independence? One solution, and probably the most desirable in the existing political configuration, would be that, while remaining a prefecture of Japan, Okinawa attempts to attain international competitiveness, in spite of its overvalued currency, its small size and its international transport constraints.

One way of doing this is through a vigorous attempt to create "comparative advantage" niches. This proposal, also made by Oshiro (1993) and Kakazu (1992)²³ necessitates that Okinawa does not accept its existing lack of comparative advantage in many goods and services as a *fait accompli*, but should actively seek to modify its economic structure to create new exportable products.

"Comparative advantage" niches that can be explored are manufactured products, customised for particular markets, where international price is a secondary factor. Okinawa has a great tradition in textile and lacquer-ware production and these products could be marketed more aggressively internationally. There is also potential in the agricultural sector, where diversification of production is already under way.

The existing international transport connection of Okinawa would have to be improved if such a policy is to be successful. It can be argued, however, that demand for "export niche" or customised manufactured products cannot be large enough to solve Okinawa's dependency problems.

Okinawa could also attempt to promote comparative "advantage niches" in the services sector. Oshiro (1993) singles out intellectual, research and technology related activities, which are human-resource intensive and have a high domestic value-added. This path is not without difficulty, given that the island faces the important constraint that not many intellectuals can write and speak English - at present the most important international language in intellectual and related activities - at a satisfactory level. International communication requires an international language, and English serves this purpose very well. If Oshiro's

proposals are to have any success, the teaching of English in Okinawa should be given much more importance than it is being given at present.

The success of restructuring the economy to find "comparative advantage niches" will depend of course on the Okinawan people themselves. It will test their ingenuity, resourcefulness and inventiveness, because being able to compete internationally with an overvalued currency, producing relatively small production runs, and with international transport constraints is definitely not an easy objective to attain.

However the chances of success could be greatly improved if the process is accompanied by human resource development, encouragement of research and development, tax and subsidy incentives and improvements in the transport and communication networks. These improvements have already been singled out by the Okinawa Government (see *Okinawa - Guidebook of Industrial Location*) but they have to be directed as far as possible, towards the creation of new "comparative advantage" niches, compatible with the realities of the Okinawan economy just described. The provision of new factory sites is also important, but this by itself does not guarantee industrial development, and if the wrong strategy is adopted, they may eventually end up as industrial cemeteries.

6. CONCLUSION

In this paper we have seen that the Okinawan economy is characterised by heavy dependence on Central Government funds, domination by interests originating in mainland Japan in many spheres, and revenues associated with the presence of the U.S. military in the prefecture. These factors, especially the first, have been instrumental in bringing about economic expansion in the prefecture and a relatively high level of per capita income, at least when compared to the developing world. The economy is however very unbalanced, with a small and shrinking manufacturing sector, a large external trade gap, and relatively high unemployment rates.

This situation has fostered a feeling among the Okinawan people that their economy cannot be self-reliant and that this may be possibly due to incompetence on their part. However, Okinawa once enjoyed a high degree of self-reliance, based on international trade, as a result of which the Okinawan people enjoyed a high degree of prestige in East Asia. One senses a deep sense of nostalgia among the Okinawan people in this regard, but at the same time an atmosphere of hopelessness would seem to pervade Okinawan society.

Many Okinawans believe that it is not possible to escape the viscous circle of dependency: dominance by non-

Okinawan interests and lack of local entrepreneurial spirit brings about further dependency. It is ironic, in this regard, that the Okinawan politicians who manage to negotiate large financial transfers from the National Government may be promoting economic growth but at the same time may be strengthening the viscous circle of dependency.

The paper has explored briefly three possible main roads that the Okinawans can take.

The first is the maintenance of the *status quo*, with continued financial support from the Japanese Central Government and continued domination of the economy by mainland Japanese interests. The full-integration of the Okinawan economy in the Japanese one enhances dependency, mostly because, it has been argued, the exchange rate of the Japanese Yen is overvalued for Okinawa, giving rise to a contraction of the manufacturing sector and further dependence on Japan. This setup has in the past guaranteed a good standard of living and rapid social and economic infrastructural development, and it is likely to continue doing so, as long as Central Government funds keep flowing in. It has however turned the Okinawan people into a nation of dependants on non-Okinawan funds, hurting their pride, and subduing Okinawan entrepreneurship.

The second option is that the Okinawan people take a sink-or-swim path by reducing their dependency on

mainland Japan, enabling them to opt for a more realistic exchange rate of their currency. This would essentially render Okinawan goods and services more competitive in the international and local markets. This disengagement from the Japanese economy would probably usher in a reduction in the standard of living of the Okinawans in the short and medium run, and there cannot be a 100% guarantee that this would be remedied in the long run. More importantly, it was argued, the existing political realities do not permit the realisation of this option.

The third option briefly discussed in this paper is a vigorous attempt to create "comparative advantage" niches. This path, if successful, will permit the Okinawans to have the best of both worlds, in that while accepting the existing political realities, they will aim at improving the competitiveness of the prefecture *vis-a-vis* other prefectures and the rest of the World. It was emphasised however that this third road is fraught with difficulties, the most important of which is the exchange rate of the Okinawan currency, the small size of the economy and international transport connections constraints.

However the third is probably the best option and it is hoped that through this path, the Okinawans will be able to fend more for themselves, by generating more of the income they need through trade. If this path is successful, it will have the added benefit of fostering a sense of achievement among the Okinawan people, restoring their lost pride and self-confidence.

NOTES

1. In this presentation, the terms Okinawa and Mainland Japan are repeatedly used. Okinawa here generally refers to the Prefecture and not to Okinawa main island only. The term Japanese mainland as used here refers to the four Japanese large islands.
2. Including only those islands with a land area of over 0.01 square kilometres.
3. The Ryukyu Islands (roughly covering what is now the Okinawan Prefecture plus the Amami islands to the North) had a very interesting history (see Kerr, 1958). They became a unified Kingdom during the first half of the 14th Century, and enjoyed a quasi nation status, with tributary relations with China and Japan. The Kingdom was abolished in 1872. During the Ryukyu Kingdom era, the islands managed to develop extensive trading relations with many South East Asian countries including China, Java, Malaya, Siam and Korea. This trade expansion not only gave rise to considerable profit and prosperity to the Okinawa but also enabled the Kingdom to develop and cultivate its own distinctive art and culture. The Okinawans are very proud of this historical heritage. According to a recent opinion poll in the Okinawa Times, the Okinawans would seem to be worried about the loss of their unique culture as a result of the Japanisation process (Nakachi 1993).
4. A description of the disputes regarding appropriation and renting of land and the rents paid by the Americans for the Military basis in Okinawa is given in Nakachi (1991). Rabson (1989) gives an account of the sufferings and humiliations of Okinawans under American administration, without forgetting the beneficial effects that such an administration had on Okinawa in the reconstruction process. For an account of the present day attitudes of the Okinawan people toward the American occupation of Okinawa see Nakachi (1993). The attitudes of the Okinawans towards the Japanese and the Americans is discussed in Sakihara (1991) who suggests that the Okinawans are loyal subject of Japan and regard themselves as part of the Japanese nation and accept they form part of Japan, although their pride is hurt when considered as inferior country cousins by the Japanese.
5. The military presence in Okinawa has had important repercussions on the political scene in Okinawa. Okinawan political attitudes can broadly be divided into two main groups namely (a) the Reformists (mostly represented by the Okinawa Social Popular Party, the Okinawa branch of the Socialist, Communist and Bhuddist parties and the Okinawa branches of the workers' unions) and (b) the Conservatives (mostly representing the interest of the Okinawan branch of the Democratic Liberal Party). The Reformists are in favour of the dismantling of the U.S. military bases as soon as possible, whereas the conservatives take a more cautious approach. Public opinion in Okinawa seemed to have been wavering between these political attitudes. Going by the preferences for elections for the Prefectural Governor, there appeared to be a majority support to reformist policies between 1972 to 1978 and to conservative policies between 1978 to 1990. The present governor, Dr. Masahide Ota, who has a reformist attitude, was elected in 1990. He has recently issued a petition to the U.S. Government for the early reduction and realignment of the U.S. military bases in Okinawa. Calls for an independent Okinawa or Ryukyu Republic do not enjoy much public support, although a number of intellectuals give serious consideration to this option (see also Nakachi 1993).
6. Kakazu (1992) labels this situation "the economic boomerang

- model" which is a form of dependency model where a dependent economy receives financial assistance which is tied to the donor country and returns to the donor country in the form of imports and other ties with the mainland.
7. During a three month stay in Japan between March and July 1994, the present author has calculated that on average the cost of food and clothing (excluding expenditure connected with schooling of children) for a family of two adults and two children aged 10, in Japan is about four times as much as the cost for similar goods and a similar family size in Malta.
 8. See also Higa, (1993). Kakazu (1993) lists a number of other disadvantages which could have contributed to the lack of success of Okinawa. When comparing Singapore with Okinawa, Kakazu attributes one of the differences in performance to the style of macroeconomic management. Singapore is an independent state whereas Okinawa is a small part of a large country. Another factor is that Okinawa has never had a strong leader in its long history. A third difference is the geo-political reality. Singapore is one of the busiest air and cargo ports in the world, being at the crossroads of the world busiest trade route. On the other hand Okinawa is isolated. A third factor relates to the relatively high unit costs in Okinawa, even when compared to Japan.
 9. According to the Annual Report of Prefectural Accounts 1993, published by the Economic Planning Agency of Japan (Table 1), Okinawa has the smallest manufacturing sector in relation to the Gross Prefectural Domestic Product among all prefectures. Two other prefecture with a relatively small manufacturing sectors are Hokkaido and Aomori, but in relative terms the manufacturing sector of these last two prefectures is twice as large as that of Okinawa.
 10. The share of tertiary sector associated with the public sector is relatively large in Okinawa when compared to other prefectures of Japan. According to the Annual Report of Prefectural Accounts 1993, published by the Economic Planning Agency of Japan (Table 1), Okinawa has the largest share of public sector services in relation to the Gross Prefectural Domestic Product among all prefectures.
 11. It should be noted here that the average stay per tourist in Okinawa is on the low side, and declining. When comparing Okinawan tourism with other countries, this factor has to be taken into account. The number of tourist night has declined from around 5.4 nights per persons in the late seventies to 4.1 nights per person in the early nineties (Okinawa Prefecture Tourism Statistics, 1992).
 12. According to a publicity brochure by the Okinawa Prefectural Government (Guidebook of Industrial Location) the transport contact are mostly with Japanese airports with 33 daily domestic flights. The international flights are 30 per week, mostly to nearby Taipei, Seoul and Hongkong.
 13. The US military presence in Okinawa has given rise to a number of complaints from Okinawan Nationals. Apart from using useful land for development the basis are giving rise to forest fires mostly through live ammunition exercises, giving rise to various forms of pollution, including noise (mostly through flying aircraft), air (mostly through hazardous waste upon burning) and sea (through live shelling and red soil flows into the sea).
 14. A discussion of migration in Okinawa is given in Taira (1991). Early this century, emigration was predominantly to Hawaii, Mexico, the Philippines, New Caledonia, Taiwan and Micronesia. Later, between 1910 and 1940, the Philippines and Latin America attracted the majority of Okinawan emigrants. By 1935, 32000 Okinawans had emigrated to Japan mainland, 17000 to Taiwan/Micronesia, and 43000 to other countries.
 15. Comparisons of social indicators for Okinawa and other areas of Japan are given in Bank of Ryukyus (1991).
 16. Higa (1993) gives an example of a hotel in Miyago Island, where it appears that around 75% of transfers flowing into the construction of the hotel found their way back to firms based in mainland Japan. Higa (1993) also argues that spending associated with the public sector has a large rate of leakages to the mainland. Also, important beneficiaries of Central Government transfers are non-Okinawan public sector employees, working in Okinawa. See also Kakazu (1991) who discusses the "economic boomerang" model.
 17. Kakazu (1984) has shown that electrical power is more expensive in small economies.
 18. To make matters worse, the transport connection of Okinawan trade are mostly via mainland Japan, adding to per unit cost and making Okinawan exports less competitive in the international market. See also footnote 10.
 19. The degree of this effect depends to a large extent on import substitution possibilities. If imports have a very low elasticity of demand, an increase in prices may actually increase foreign exchange outflows (see Briguglio 1989).
 20. Another advantage, which has not been explored in this paper, is the possibility that economic self-reliance may stimulate productivity. Kakazu (1992) referring to a quotation from Crocombe states that in the Pacific there exists a negative correlation between assistance and productivity, that is, the more foreign assistance there is, the lower the productivity. Kakazu further adds that "there are cases where the more financial assistance there is, the less the willingness to save and the less the amount of effort".
 21. This effect depends on a number of factors. The impact of devaluation could be partially offset by the improved freedom of choice as to purchasing of imported raw material, industrial supplies and consumer products, other than from the Japanese mainland. Another factor to consider here is that the final price of goods and services in Okinawa could go down as labour costs will be valued in OKY, and the purchasing power of the OKY could therefore increase.
 22. See footnote 4.
 23. According to Kakazu (1992), the solution to the Okinawan dependency problem is to disintegrate what he calls the "economic boomerang" situation through (1) choosing high value added economic activities supported by local research and development and (2) diversification taking into consideration competitive factors and not protective measures.

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