ECONOMIC DEVELOPMENT OPTIONS FOR THE FEDERATED STATES OF MICRONESIA AT INDEPENDENCE

John Cameron
University of East Anglia
Norwich, United Kingdom

Introduction

This article is intended to extend discussion of development strategies of Pacific small-island countries to include the Federated States of Micronesia (FSM).[1] The FSM archipelago, with its four constituent states,[2] gained formal independence on 3 November 1986 with the ending of the United States' United Nations trusteeship, and this article describes development prospects at that moment.

Much of the previous literature on the region constituting the FSM was written by US academics and administrators and concerned with evaluating US policy during the forty years of the UN mandate. Overall, the evaluation appears to have been negative (a more sympathetic view can be found in Kanost 1985–1986, more typically negative views can be found in Kent 1982 and Kiste 1986). This negative evaluation can be split into two periods.

First came the "zoo" critique, starting with the capture of the islands from the Japanese and the period of Navy rule to 1951 and stretching through the rest of the 1950s. This critique saw US policy as self-interestedly restricting access to progressive political and economic ideas. Second was the "welfare" critique, following the negative UN comments in the early 1960s and the threat of possible loss of the trust territories. In this period, antipoverty programs designed for the mainland US were implemented in the Trust Territory of the Pacific Islands

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(TTPI) with little local consultation and on a basis that gave virtually universal eligibility. This was also seen as being in US self-interest, as that self-interest was seen to be geopolitically strategic rather than economically extractive. Indeed, the original US mandate from the UN was unique in being formally labeled "strategic," with explicit US military rights. The four trusteeship districts, now constituting the states of the FSM, had been governed separately in effect and the independence constitution is strongly federal along the lines of the US Constitution. This has given the FSM a relatively weak central government compared to other Pacific small-island states.

The four TTPI districts that eventually emerged as the FSM states can justifiably claim to have been as economically and politically ill-prepared for independence as any of the small-island Pacific countries. This article, however, is more concerned with appraising the future than evaluating the past. Notably, it is concerned to bring the situation in the FSM into the debate on development in Pacific small-island countries, stressing export promotion versus import substitution and large-scale versus small-scale production.

The Present Economic Situation and Likely Future Developments

The 100,000 people of the Federated States of Micronesia are now facing for the first time what could be termed the "economic reality" of most of the smaller, independent Pacific countries. This reality consists of four interrelated elements:

1. Economies dominated by agriculture and fishing (as measured by the population's declared economic activities) with a rising demand for imported goods, most disturbingly food and beverages
2. Difficulties in finding new exports from the agricultural and fishing sectors, difficulties associated with sufficient quantity, consistent high quality, and punctual delivery to high-income markets
3. A tendency for people to look to government office salaries and trading in imports as preferred economic activities
4. Government expenditures rising faster than locally generated revenues

These processes were initiated in all the current FSM states during the US trusteeship period (by comparison, the period of the Japanese League of Nations mandate appears to have been one of some development of productive forces [pers. com. from three older Pohnpei

residents, 1987; Yanaihara 1939]). By the time of independence, the processes had been permitted to attain extraordinary dimensions by the willingness of the US simply to underwrite the economy. The result is a macroeconomic situation in terms of balance of payments and government deficit, which the newly independent economy could not possibly sustain through its own efforts, a situation summarized in Table 1.

Import figures shown in Table 2 suggest that food, beverage, and tobacco imports have been rising on average as fast as total imports, not a surprising statistic as they constitute around 45 percent of the total. Without a local price deflator it is difficult to say what has been happening in real per capita terms. The actual US dollars per capita spent on food imports per annum does seem to have risen to around $200 from $130.[3] Given depressed international agricultural commodity prices in 1983 and 1984 plus substantial "disguised" imports in the form of US

TABLE 1. **Economic Indicators for the Federated States of Micronesia in the Mid-1980s**

Estimated Balance of Payments (1983)	
Estimated "imports" (including net remittances outflow)	$52,090,000
Estimated "exports" (including tourism receipts and fishing rights payments)	$ 6,800,000
Imports/Exports ratio	7:1
Waged and Salaried Employment (1985 estimates)	
Government sector jobs	6,810
Private sector jobs	5,820
Government/Private employment ratio	1:2
Productivity in Unwaged Subsistence/Artisanal Sector (1983)	
Total estimated annual value of agricultural and fishing activity	$44,910,000
Estimated number of people in labor force not in waged and salaried employment	17,000
Average annual income per unwaged worker	$ 2,642
Government Accounts (1983)	
Government current operational expenditure (national and state)	$76,970,000
Government revenue (national and state, excluding US contributions)	$ 9,473,000
Expenditure/Revenue ratio	8:1

Source: FSM Office of Planning and Statistics, Pohnpei; Federated States of Micronesia 1985b.

TABLE 2. **Import Statistics for the Federated States of Micronesia for 1977, 1978, 1983, and 1984**[a]

	Food Imports (SITC 0)[b] ($000)	Beverage and Tobacco Imports (SITC 1)[b] ($000)	Total Imports[c] ($000)	Food, Beverage, and Tobacco Imports as % of Total	Food, Beverage, and Tobacco Imports Per Annum Per Capita[d] ($)
1977	6,493	2,370	20,562	43	130
1978	7,109	2,193	19,395	48	130
1983	11,150	6,940	48,890	37	213
1984	13,055	4,319	33,158	52	197

Sources: Trust Territory of the Pacific Islands 1979; FSM Office of Planning and Statistics, Pohnpei.

[a]No statistics are available for 1979 to 1982.

[b]Standard International Trade Clarification as used in United Nations statistics.

[c]There is confusion in the records between whether imports are being recorded f.o.b. rather than the usual c.i.f.

[d]No deflator is available to correct for price increases in foodstuffs in FSM.

Department of Agriculture donations, this suggests there is certainly no tendency for the total of real food imports per capita to fall.

Uncertainty about the data cannot be dismissed, but the robust conclusion can be drawn here that food, beverage, and tobacco imports are not falling in any terms and, for them alone, the FSM spends at least five times its earnings from all merchandise exports in any year. The figures in Table 3 indicate that, even given the data problems, there is

TABLE 3. **Imports by State in the Federated States of Micronesia for 1978 and 1984**

	% of Total Imports		Per Capita Per Annum ($)	
State	1978	1984	1978	1984
Kosrae[a]	55	49	57	241
Pohnpei	45	47	151	252
Truk[b]	49	57	108	155
Yap	54	60	171	201

Source: Federated States of Micronesia 1985b.

[a]Kosrae statistics may be underestimated. Imports may have been first landed elsewhere in the Trust Territory of the Pacific Islands.

[b]Truk is probably the largest recipient of US Department of Agriculture donations.

every reason to believe that no individual state of the four constituent states can claim exemption from responsibility for this unsustainable level of national imports.

The First National Development Plan claimed that in 1983 the bulk of imports were essential items, including food (Federated States of Micronesia 1985b:77). Definition of the term "essential" is always difficult in economics, but three different approaches in the specific area of food imports can clarify policy issues. First, an imported food item is qualitatively essential if it contains a nutritional component that cannot be obtained within the local environment at any price. Looking at high islands and atolls together in the four FSM states, no imported food item is "essential" in this sense (witness the long list of local foodstuffs purchased by the Food Services Office program in Table 7 below) though the vitamins in imported fruit and vegetables may be highly desirable given current food production patterns and seasonal factors.

Second, an imported food item is quantitatively essential if there is no hope of raising production of a nutritional substitute to a level where it is available to the whole population. Again, looking across all types of islands and all states, there is so much underutilized potential in agriculture and fishing beyond the reef that it is difficult to argue the case for essential imports in this sense at this time. However, rice may have become a staple that bananas, breadfruit, and root crops will have problems completely displacing.

Third, an imported food item is distributionally essential if local substitutes will not become available to households without land and with low cash incomes because prices are too high for them to afford. Existing data are not sufficient to assess how many people are exposed to risk in this way in the FSM and no consumer price index exists to monitor the impact of price changes on low-income households. A basic nutritious diet for low-income households may need to be made accessible through a mix of pricing, welfare, and importing policies. However, this can hardly justify permitting every kind of foodstuff to enter the FSM at a nominal 1 percent duty regardless of nutritional content or place in a low-income diet.

If no food imports are clearly "essential" by any of these three interpretations and the overall economic situation demands a large reduction in all imports, then a policy to reduce food imports is highly desirable as part of a development strategy to achieve a viable economy. The next question is whether such an objective can be achieved at a low cost in terms of forgone opportunities.

Increasing Local Food Production

In the Federated States of Micronesia, the direct responsibility for agricultural and fisheries development is a matter for the four states, not the national government. The First National Development Plan, however, does attempt to set out general principles and identify common constraints. For instance, the plan states a commitment to "smallholders as developers of the Nation's agricultural potential" to help attain the objective to "meet the bulk of the Nation's food requirements locally" (Federated States of Micronesia 1985b:143, 85). Among the constraints noted:

> We do not have a large pool of cheap labor for the development of the Nation's agricultural resources based on a system of large commercial estates. . . .
>
> Except for the marketing of copra, no organized system for marketing agricultural produce exists. . . .
>
> [There is a] lack of agricultural research, especially adaptive research to improve the yield of existing crop varieties . . . [and a] lack of effective communication channels to convey information to farmers on new crops and technologies. . . .
>
> While the FSM Development Bank finances viable agricultural projects, there is an absence of short-term credit. (Ibid.:85)

All these statements could be applied to agriculture and fishing in virtually any Pacific Islands country. Raising productivity of labor and yields from land in a small-producer context could be said to define the goal of economic development in many countries in the region. Experience elsewhere suggests no single economic constraint or bottleneck. Availability on suitable terms of labor, access to land or water, technical knowledge, equipment, credit, and markets are all important. An integrated approach is required, but integration must prioritize the various factors at different times.

At this time, the national plan is stressing marketing: what is required to "meet the bulk of the Nation's food requirements locally" is "above all, the development of an efficient internal marketing system for handling local farm produce" and, for fishing, to remedy "inadequate marketing systems [that] hinder commercial production" (ibid.:83, 119).

Such a stress would be understandable if significant amounts of produce were frequently rotting in the gardens or on the quaysides and the local transport system and private trading sector were totally underdeveloped. This does not appear to be the case in the FSM. At this time, production itself appears to be very low, not just marketed supply.

Evidence from around the world over the past twenty years has convinced development economists that small-producers are economically highly rational; that is, they act consistently in the light of available information and experience to achieve specific economic objectives. Applying this view to the FSM suggests three interrelated reasons why more local food, substituting for imports, is not being produced from a relatively abundant natural resource base: it is easy to obtain cash outside the agricultural sector and purchase cheap imported food; a "target income" in kind and cash is being achieved with current prices and outputs; and the implicit rewards to labor, including effort and status, from self-employed food production are low compared with other activities, notably those in the bureaucracy.

The first factor should diminish in impact over time. Cash incomes from other than agriculture will become harder to find as US funding decreases. Imported food will also become more expensive if the national government chooses to increase duties to move closer to a balance on the international and government accounts. The fundamental economic facts of life will tend to stimulate increased food production.

Any target income will also become harder to achieve in the FSM in the future as the economic fundamentals change. Therefore, local food production might be expected to increase if a producing household with access to land or marine resources wishes to maintain its standard of living. However, a problem will emerge if the response to local food price increases is a reduction in the marketed supply of local food due to producers' being able to obtain a similar income from lower sales. Such a view of possible producer response, the so-called backward-bending supply curve, does have some support among economists writing on Pacific island economies (see, for instance, Fleming and Fearn 1986). With a backward-bending supply curve, the effect of price increases on total production is likely to be very weak, as only the most commercially minded producers respond to the improved incentive. On the other hand, lower prices will discourage these commercially minded producers. While there may be some increased marketing by target-income producers, it would be at the cost of reducing productive investment in food production and mass alienation and resentment, a situation not conducive to sustained increases in production. Thus, processing and

marketing projects can be frustrated if they offer either higher or lower prices to producers, especially with the current underdevelopment of production in the FSM. Raise prices and target-income producers withdraw; lower prices and commercially oriented producers withdraw.

If the economic fundamentals favor increased local food production, but indirect encouragement through improved processing and marketing is likely to be ineffective in increasing supply, then a direct approach is worth consideration. Reducing the effort required to produce food and raising the status of food production by associating it with technological innovation could increase rewards per worker in financial and psychological terms. The aim would be to make producing more attractive, higher-status work. Much of the success in artisan reef-fishing projects in increasing output in the FSM and the wider Pacific is attributable to efforts to improve boats, tackle, and propulsion equipment. Only subsequently and consequently did marketing, storage, and processing bottlenecks arise. This principle may have applicability more widely in marine resources and agriculture, including livestock rearing, providing the fundamental production potential exists.

Such potential appears to exist in Pohnpei State. The state consists of a volcanic island of 334 square kilometers with fertile soil and good rainfall where just over 90 percent of the 30,000 people live. Less than 10 percent of the population live on the five inhabited atolls in an environment difficult for agriculture. The surrounding ocean has a massive potential for protein-rich food. Certainly in the ocean beyond the reef, fishing potential is regarded universally as sufficient to allow a vastly increased catch for local use and export.

On the main island of Pohnpei, a recent comprehensive soil survey found 23,000 hectares of land that could be cultivated indefinitely with soil fertility conservation techniques (US Department of Agriculture 1982). Table 4 shows a summary from that report breaking down this total cultivable area by the number of potential varieties of crops that could be grown out of twenty-three listed crops. Almost half the cultivable area is considered suitable for fifteen or more crops including avocadoes, citrus fruits, mangoes, papayas, pineapples, and watermelons. More than a quarter is also suitable for corn, Chinese cabbage, cucumbers, and green onions. The report also claims that only 30 percent of the total land area was under cultivation at the time of survey—that is, about 12,000 hectares—remarking "the potential of the soils in the survey area for increased production of food is fair to good, partly because many areas are not being used for crops at the present time" (ibid.:23).

TABLE 4. **Cropping Potential on Pohnpei Island**

Number of Potential Crops (maximum 23)	Area of Suitable Land (000 hectares)[a]
1–4[b]	0.4
5–9	3.9
10–14	7.9
15–19	4.3
20–23	6.8

Source: US Department of Agriculture 1982.

[a]1 hectare = 2.4 acres.

[b]Wetland suitable only for rice or swamp taro.

Even if atolls are assumed to have no cultivation potential, which is overstrong, the soil survey suggests there is two-thirds of a hectare of cultivable land for each person in the state on Pohnpei island alone. Using College of Micronesia College of Tropical Agriculture and Science results from research on Pohnpei island as indicative of full potential, two-thirds of a hectare could produce 10 tonnes of taro or sweet potato (1986, April and May). This annual yield is equivalent to 27 kilograms of root crop per day per state inhabitant! But instead of massive food surpluses, Pohnpei State imported about $4 million in food in the 1980s (see Table 5). The proposition that increasing local food production is both physically possible and economically desirable certainly seems to be supported by the evidence.

The Pohnpei State Agriculture Division estimates that there were three hundred commercial vegetable farmers in 1986, whereas there were only twenty-five in 1973. The following quotes from the division's monthly reports (Pohnpei State 1973–1985) also suggest potential for changes in growers' attitudes (and problems) and behavior:

> During the tour it was pointed out to the Congressman that the crux of the problem is the lack of desire to farm by the people and willingness to adopt the new methods of modern agriculture. (March 1973)

> [B]ecause of school lunch programs more farmers are now planting vegetables around their houses all around the islands. (October 1980)

TABLE 5. **State of Pohnpei Food Imports, 1982–1985 ($000, f.o.b.)**

	1982		1983		1984		1985
Item	Actual	Adjusted[a]	Actual	Adjusted[a]	Actual	Adjusted[a]	Actual
Rice	892	678	961	730[b]	814	619	621
Meat	1,086	825	1,174	892	1,459	1,109	1,241
Fruit & vegetables	223	169	240	182	285	217	170
Other foods	2,031	1,544	2,200	1,672	1,952	1,484	1,706
Total	4,232	3,216	4,575	3,477	4,510	3,428	3,738

Source: Pohnpei State Office of Planning and Statistics.

[a]"Adjusted" means—in an attempt to correct for all Kosrae imports probably passing through Pohnpei between 1982 and 1985—that the actual figure has been multiplied by 0.76 on the basis of the relative populations of the two states.

[b]Rice figure for 1983 may be strongly affected by drought conditions in Pohnpei.

> The Division receives numerous complaints regarding the surplus of vegetables on the islands. The markets and the Food Service were not able to buy all the vegetables produced by the local farmers. (November 1980)

More recent, but equally fragmented, evidence is shown in Table 6, where a comparison between 1980/1981 and a part of 1984/1985 (there are no strong seasonal patterns in Pohnpei's climate) suggests a significant increase in seedlings sold by the Agriculture Division.

Indeed, the Pohnpei State Food Services Office managed to purchase almost 83,000 kilograms of local fruit and vegetables in the 1984/1985 school year (Table 7) in addition to imported fruit and vegetables valued at $100,000, according to 1987 program records. However, the sharp rise in total fruit and vegetable imports in 1984/1985 may indicate the service was purchasing from growers who were diverting produce from their own consumption or from the private-sector market. The fall in both Food Services' purchases and imports in 1985/1986 from 1984/1985 levels may indicate a restoration of normal conditions. If this is the case, and an increase in demand of 40,000 kilograms per annum (that is, 2 kilograms for each cultivable hectare on Pohnpei island or 3 kilograms per cultivating household) can only be met by significantly increased imports, then, despite improvements in the last few years, the production situation is still critical.

TABLE 6. **Seedlings Sold by Agricultural Station, Pohnpei State, 1980/1981 and Part of 1984/1985**

Type	1980/1981 (whole year)	1984/1985 (7 months only)[a]
Bell pepper	4,125	7,193
Chinese cabbage	29,271	45,229
Head cabbage	14,294	15,501
Tomato	2,878	3,172

Sources: Pohnpei State 1973–1985.

Note: This information, as for all types of agricultural information, has not been systematically recorded across time or by category.

[a]Seasonal differences are not climatically significant on Pohnpei island.

TABLE 7. **Purchases of Local Food by Pohnpei State Food Services Office, 1983 to 1985 School Years (Kg.)**

Type	1983/1984 (total value $207,000)	1984/1985 (total value $354,427)	1985/1986 (total value $456,374)
Staples[a]	50,509	86,661	145,765
Protein[b]	44,966	60,332	77,529
Fruit & vegetables[c]	42,157	82,854	45,350

Source: Records of the Pohnpei State Food Services Office.

Note: An indicator of the spread of purchases is that 4,073 separate payments were made in 1984/1985 and 6,500 in 1985/1986, the maximum number of payments in the same name appeared to be about forty, and the median payment was under $50.

[a]Includes banana, breadfruit, sweet potato, tapioca, taro, and yam.

[b]Includes pork, reef fish, and tuna fish; does not include small amounts of mahimahi fish, shrimp, crab, octopus, chicken eggs, and venison.

[c]Includes eggplant, cucumber, squash, Chinese cabbage, head cabbage, bell pepper, pumpkin, *pahr*, papaya, and watermelon; does not include root crops and banana, small amounts of oranges, pineapple, mountain apple, star apple, pandanus, sugar cane, mango, lemon, lime, snake cord, palm shoots, beans, guava, sweet corn, tomato, green onion, and local green vegetables.

The production potential of Truk State appears less promising. Truk has not only the largest population of all the FSM states, with an estimated 46,160 people in 1985, but also one of the smaller land masses—only 127 square kilometers. The resulting population density of 362 people per square kilometer is four times the density of Pohnpei State. Also, whereas 90 percent of Pohnpei State's residents live on one large island

encircled by motorable road, the most heavily populated island in Truk State, Moen, the state center, has only about a third of the state's population (even allowing for considerable immigration since the 1980 census) and sea journeys are necessary for most intrastate communication. The Truk lagoon, as the major marine resource area for the state, is vulnerable to overuse despite its relatively large size, given the population dependent on its exploitation.

In terms of developing human resource potential, the current population growth rate in Truk State is estimated at just over 3 percent (3.08 percent in Federated States of Micronesia 1985b). As would be expected with a relatively high level of population growth, the age structure in 1985 is believed to have included 44.5 percent of the population as being between the ages of 0 and 14 years (Truk State 1986). Education has dominated government expenditure in the 1980s, taking more than 40 percent of the state's total government operational expenditure during the last year of the trusteeship period (ibid.). One thousand school teachers constituted 17 percent of the wage- and salary-earning work force in 1985.

Despite the relatively tight natural resource constraint and the efforts in the human resource field, there has been no strong development of employment opportunities outside low-productivity, self-employed farming and fishing. Only 5,764 Trukese were recorded in waged and salaried work in 1985. About a thousand young people leave school each year, and so the probability of getting a waged or salaried job is small. Studies elsewhere suggest that a moderate level of schooling can be an important factor in higher agricultural productivity, so it would be wrong to regard schooling as wasted if school-leavers do not obtain waged or salaried employment. But schooling may reinforce negative attitudes toward farming and fishing. Some FSM curriculum material is specifically directed at farming and fishing, but generally the curriculum has been criticized for being based too rigidly on US standards (Cantero 1984; Colletta 1980). Concern with overacademic schooling, however, is a Pacific-wide problem that goes well beyond the FSM classroom and relates to the whole way in which development priorities are determined. The primary challenge appears to be one of improvements at the point of production, not in the market or the classroom.

Access to potentially productive land and marine resources in Truk appears to be widely spread among the population, though precise rights of individual and communal ownership or control can be disputed or complex. Land is held in small plots and these plots can often be fragmented (see Castro 1984 for a description of Pohnpei's differing,

but also complex, land tenure system). On the other hand, property rights over marine resources appear to be very few or weak, which leaves these resources vulnerable to abuse and overexploitation—most dramatically in the practice of using explosives for fishing. Opportunities exist for increasing production from land and from the sea, but the problematic inheritance from the past one hundred years needs to be faced. The tangle of property rights through which people can both neglect land and abuse marine resources appears to need determined policy action. A fast-growing population needs feeding now and in the future; both cultivable land lying idle and reef fish stocks irreparably damaged by explosives are not compatible with that need.

However, foreign exchange is bound to be limited for any use as economic pressures grow. As seen above, the FSM overall has chronic balance of payments and government budget problems and these problems look even more intractable for Truk State taken alone (see Table 8). The twin problems of moving some way towards balancing both the international account and the government budget are bound to dominate

TABLE 8. **Economic Indicators for Truk State**

Balance of Trade

Year	Imports[a] ($000)	Exports[b] ($000)	Trade Deficit Per Capita[c] ($)
1983	16,246	663	339
1984	13,631	679	289

Government Budget

Year	State Govt. Operational Expenditure ($000)	Total State Govt. Income from Non-US Sources ($000)	Deficit Per Capita ($)
1982	19,082	1,668	379
1983	19,050	1,729	377

Source: Truk State 1986.

[a]F.o.b. is "free on board" at the port of dispatch; transport and other expected associated costs could add 20%-plus to the import total.

[b]Tourism probably adds about $500,000 to overseas earnings; and a share of international fishing fees should also be included, which would amount to about $1 million on a pro rata population basis.

[c]Gross state product per capita is about $1,300.

decision making over the next fifteen years and set tight economic constraints on what can be done. Choices, between import substitution and export promotion, between large-scale and small-scale programs and projects, will have to be made.

Import Substitution versus Export Promotion

Import substitution in consumption terms does not have to mean producing locally an identical commodity to what was previously imported. Certainly the experience of problems with rice cultivation in the 1970s on Pohnpei island (though production by Japanese settlers in the 1930s may have been more successful) or with the Solrice Company on Guadalcanal in the Solomon Islands does not suggest that direct substitution of a local for an imported item is always a desirable approach. Consumer convenience is undoubtedly a major factor in preferences for imported food, but if convenience has an increasing cost, other factors will gain significance. Nutritionally, the customary root crops are substitutes for rice; fresh or smoked fish and shellfish are substitutes for canned meat, frozen meat, and canned fish; dried and other simply processed snacks and flavorings produced on a small scale from local products are substitutes for those produced in factories abroad; and coconut products can substitute for soft drinks and cooking oils.

But import substitution as an approach to development itself has a poor general reputation. In the drive for industrialization by many less-developed countries in the 1950s and 1960s, import substitution came to be identified with low-quality, expensive products produced by firms importing all their nonlabor inputs, working at undercapacity behind high tariff walls. The main reasons for these problems was that import substitution was attempted using totally imported technology with an efficient scale of production greater than the domestic market. At that time, few less-developed countries were food importers and the idea of import substitution for food imports was being advocated in industrialized countries like the United Kingdom, not agriculturally based, less-developed countries.

For import substitution in a broader sense to be successful, economic factors need to be moving in a supportive direction. Three major economic factors are income, relative prices, and marketed supply. In the period of the US trusteeship, these economic factors tended to be unsupportive to import substitution (in addition to any educational/cultural influence towards a Western diet). The economic situation may be

expected to change over the next fifteen years, under the Compact of Free Association.

Income levels, especially incomes in cash, have probably risen greatly in the past decade. No estimates of aggregate economic activity exist for the period, but a crude indicator of growing relative affluence even in the depressed 1980s is shown in Table 9. Not only did the number of registered motor vehicles in Pohnpei State rise by about 76 percent, but also the 1985 total of 1,854 represents one motor vehicle on average for every two households in the state (though with household sizes of more than eight people it is understandable that pickup trucks are a very popular form of vehicle!). If incomes have risen, it might be expected that imports would rise generally; and among food imports, meat and other nonstaple imports would rise in particular (see Table 8). Under the compact arrangements between the US and the independent FSM, cash incomes will likely fall, which will tend to reduce imports, including food imports.

Food prices have been dominated by cheap US imports coming in with a nominal tariff. Also, food donations through the US Department of Agriculture have been significant since 1975. Under these circumstances, locally produced food appears comparatively expensive as well as less convenient for consumers. In the future the FSM national government, on behalf of itself and the states, is likely to be forced to raise tariffs, and consequently prices of imported food, as part of an attempt to balance federal and state government budgets and to assist the international balance of payments.

Marketed supply is itself closely related to income and price factors.

TABLE 9. **Private Motor Vehicle Registrations in Pohnpei State, 1981–1985**

Type	1981	1982	1983[a]	1984	1985
Pickups	471	558	612	832	998
Sedans	296	269	283	366	485
Jeeps & station wagons	78	80	58	104	148
Buses	18	25	18	35	60
Other (including motorcycles)	191	217	169	172	173
Total	1,054	1,149	1,140	1,509	1,854

Source: Pohnpei State 1986.

[a]Probable year of greater pressure on incomes due to impact of drought.

If a household can sell its labor directly for cash and purchase imports at a rate of exchange better than using its labor to cultivate or fish and selling the product, then rationally it will do the former. The crucial question in Pacific island situations is whether food production responds to encouraging economic factors so weakly (including price inelasticity) that food imports will be hardly affected by changes in economic fundamentals. The experience of the Pohnpei State Food Services program over the last three years as shown in Table 7 gives some reason for optimism in this area. During this time the program offered producers the full retail price in an active effort to increase the proportion of local food in school meals (which are available free to all school-age children) and other smaller feeding programs.

With this policy, local items purchased under the heading "staples" increased dramatically and the amount of fish increased significantly in the "protein" category. The extent of local purchases was limited by budget and US Department of Agriculture donations, so the figures may well underestimate total supply available at highly advantageous prices. Also, households may have been selling local produce at the higher prices and purchasing imported food for consumption instead of selling to private-sector retailers, which raises difficult questions about the net impact of the policy. The amounts involved in 1985/1986 were still small, with only about 12 kilograms of staples and 6 kilograms of protein food per school-age child in the year. This raises a question of scale if a much larger supply was desired. Nevertheless, the evidence does indicate significant elasticity of supply (if not production) response to higher prices.

The background economic conditions may be tending in a positive direction as far as consumer substitution for imports is concerned and producers have shown some responsiveness in the past, albeit starting from a very low base. Policy action is needed, however, if the economic signals of income and prices are to be kept moving in the right directions. What is needed are consistent, long-term national and state government policies that resist political pressures to pretend that the uncomfortable economic reality of the difference between trusteeship dependence and compact independence can be ignored. Getting prices, incomes, and markets right is only a small part of the task, though. The states' Agriculture and Marine Resources divisions need more resources to directly assist small-scale food production. Current positions on resource allocation between export promotion and import substitution need to be reexamined as well.

Table 10 attempts to summarize the development resource-allocation

TABLE 10. **Indicators of Agriculture and Marine Resource Priorities in Pohnpei State Draft Five-Year Development Plan, 1985–1989**

Agriculture	Allocation ($ over 5 years)	Marine Resources	Allocation ($ over 5 years)
Local Production Oriented			
Crop research and development (50%)[a]	325,000	Reef reseeding (50%)[a]	33,000
Agricultural extension	110,000	Economic Development Authority[b] small loans scheme and co-op support	750,000
Livestock feed	120,000		
Outer Island agriculture development	75,000	Other EDA activities (insulated fish boxes, outboard repairs, navigation aids, ice plant repair, refrigerated truck)	280,000
Farm loans	500,000		
Total	1,130,000		1,063,000
Processing & Marketing			
Commodity price support program	375,000	Cannery	3,500,000
Commodity processing	200,000	Fish drying & smoking	36,500
School lunch program	7,500,000		
Public market	100,000		
Total	8,175,000		3,536,500
Export Oriented			
Export commodities (general)	50,000	Reef reseeding (50%)[a]	33,000
Crop research and development (50%)[a] (notably pepper)	325,000	Sea cucumber processing	36,000
		High-quality fish export	80,000
		Seaweed extension and promotion	192,000
		Freezing and cold storage plan	1,300,000
		Purse-seiner vessels	3,325,000
Total	375,000		4,966,000

continued

TABLE 10. *Continued*

Agriculture	Allocation ($ over 5 years)	Marine Resources	Allocation ($ over 5 years)
Other			
Quarantine and disease control	90,000	Education on conservation and management	85,000
Information and agriculture promotion	125,000	Turtle ranching	10,000
Total	215,000		95,000

Source: Pohnpei State 1985.

[a]Divided between local and export oriented.

[b]The Pohnpei Economic Development Authority (EDA) also has responsibilities and finance for marine resource projects. In 1986, the EDA was responsible for repairing outboard motors, provision of ice chests and other fiberglass work, a small freezer plant, a credit scheme for artisan fishing involving 70 loans, and operation of two small vessels. EDA expenditure in 1983/1984 was $345,000, of which $200,000 was spent in setting up the credit scheme, all of which should be repaid to finance new loans. The future of the EDA was in some doubt at the time of the consultant's visit.

situation as laid out in the draft Pohnpei State Development Plan 1985–1989, showing that, in practice, exports, processing, and marketing dominate resource allocation. Over five years, the plan suggests less than $6,000 total direct development assistance for each household for farming and fishing. Also, operational resources include only one agricultural extension officer per five hundred cultivating households.

Priorities expressed in the Truk State Draft Overall Development Plan 1985–1989 do appear to show concern for pursuing import substitution within the agriculture and marine resources chapters. For instance, objective 2 for agriculture is to "increase the availability of local food products to ensure adequate nutrition for the increasing state population with special attention to those islands or regions within the state which do not now have adequate production capabilities," while objective 3 is to "provide for the production of selected agricultural products which can be substituted for imported items." Objective 1 for marine resources is to "complete the development of small-scale fisheries as a major component of the state's economic base" and objective 4 is "provide for secure subsistence for a significant proportion of the population" (Truk State 1985). But these statements exist alongside others stressing export promotion. In the final analysis, it is allocated resources

that reveal priorities and, as the figures in Table 11 indicate, export promotion is given the higher priority.

Placing the greater real priority on export promotion suggests that current levels of food imports are necessary or desirable and can be expected to remain at about present levels. But these two propositions can both be challenged. First, some food imports are not nutritionally desirable or necessary. Foods and beverages containing refined sugar, salt, and concentrations of animal fats or alcohol may actually cause ill-health. Reduced imports may mean reduced refined sugar, salt, animal fats, and alcohol in the average diet and more dietary fiber. When root crops replace imported "energy-dense" staples, it can also mean fewer calories for the overweight. Noncommunicable diseases associated directly with diet or indirectly through obesity would be expected to become less prevalent. If the federal government is forced to impose duties on all imported goods, as it probably will to try to reduce the balance of payments and the government budget deficits, then people in

TABLE 11. **Indicators of Priorities from the Draft Truk State National Plan, Budget Allocations 1985–1989**

Sector	$000	%
Agriculture		
Export related (copra)	3,251	48.4
Local production (staples, fruit, vegetables, livestock)	1,826	27.2
Extension/research	836	12.4
Processing (food and feed-mill)	547	8.1
Other	258	3.8
Total	6,718	99.9
Marine resources		
Export related (Dublon Island fisheries complex, purse-seiners, bait-fish projects)	11,990	79.9
Local production (pole and line boat, fishing cooperatives, small-scale cannery, fish production data collection, boat repair facility, mariculture reseeding, ice production, etc.)	3,010	20.1
Total	15,000	100.0

Source: Truk State 1985.

the FSM will have to choose which imports no longer to purchase. Nutritionally more desirable imports such as fruit and vegetables and cheap sources of protein could then be at risk alongside the nutritionally undesirable imported food items, as well as nonfood items.

Unfortunately, reducing food imports is not unproblematically associated with better nutrition and better health. Apparent "overnutrition" in the form of obesity among adults in some affluent groups in Pacific societies does not rule out "undernutrition" for children and poorer adults when only a higher-cost local diet is available. Also, if "undernutrition" deficiency is specific to certain diet components—e.g., certain vitamins or minerals—then the whole population can be at increased risk, regardless of body weight in proportion to height, when imports containing those components are reduced.

Physical measurements of students in six schools by Pohnpei State Food Services officials suggest that on average 8 percent of students could be categorized as significantly underweight for their height by international standards. Of the six schools, one elementary school on Pohnpei island had 14 percent of its children in this category (Trust Territory of the Pacific Islands 1985). On Pingelap atoll in 1983, Hargreaves (1984) reported diets for seventy-seven children aged 0 to 4 years. In the three days before the survey, a third had eaten only rice, and only twelve children had eaten any fruit or vegetables. In 1975, another study is reported to have expressed concern about widespread nutrition-associated ill-health among young children and remarked on the absence of vegetables and fruit (other than bananas) from children's diets (Demory 1975).

Some children in Truk State also show signs of not being well-nourished in quality or quantity of food. The draft state plan remarks "the average family does not consistently include fruit or vegetables in its home meals" (Truk State 1985). Measurements of height and weight by state Food Services Office officials in forty-five schools found that 10 percent of younger children were below the range generally considered to be adequately nourished. In twelve schools, more than 15 percent of students were below this range and have now been put on a special school lunch program. These schools were located in both the state center and on outer islands, suggesting diet inadequacy is widely spread. In fact, the data suggest that undernutrition decreases as students get older, at which time a significant part of their diet is provided by the Food Services program with its heavy use of imported food (probably 70 percent by value in 1985 if an estimated value for US Department of Agriculture donations is added).

Within a general strategy of substantially reducing food imports, an

active policy on reducing particular food imports and encouraging local production of all types of food at federal and state levels is needed to ensure that supplies of nutritionally desirable food items are actually increased and consumed widely by the whole population. Increasing local supplies of protein-rich and vitamin-rich food, as well as staples, and substituting them for less nutritious types of imported food is a way of helping the balance of payments and achieving the wider development goal of a healthy population.

Large-scale versus Small-scale Production

To clarify the elements in the choice between large-scale export promotion and small-scale import substitution, a comparison is made here between the reasoning behind the actual development of a fisheries complex on the island of Dublon in the Truk lagoon and a hypothetical broad, community-based extension officer program. The intent is to bring out the broad strategic aspects of the choice, not to appraise the two as alternatives. In terms of a project cycle, the intention is merely to identify the broad parameters of a possible choice, not to actually make the choice.

The attractiveness of heavy investment in a plant and machinery for storing, processing, and exporting tuna such as envisaged on Dublon island (Kondo 1985) can be broken down into a number of aspects:

1. The raw material, tuna, is abundant and no competing resource ownership claims exist locally.
2. The technology is known and can be installed immediately.
3. Aid or joint-venture finance is likely to be forthcoming for some part of the capital cost.
4. Economic appraisal is relatively straightforward as international prices can be used.
5. The scale of operation means only one decision is needed to make a substantial impact.
6. Food for local consumption can be expected as a by-product.

The associated disadvantages have become very clear in the operation, and current nonoperation, of the freezer already on the site:

1. Catching tuna in sufficient quantity and quality requires further heavy investment in fishing vessels, crews, and equipment or attracting foreign vessels at a price attractive to them.
2. The technology assumes an infrastructure of large-scale, cheap

availability of energy, water, and waste disposal; other priorities in these areas have to be overridden to service the investment.
3. Operating expenses may fall largely on local investors with no possibility of financial return on these elements for five years or more.
4. International prices can change, often downwards, bringing demands for subsidies that are hard to resist with the heavy investment already sunk.
5. If the one decision is economically a wrong decision, then retrieving anything from the situation is very difficult; also, a single large investment is vulnerable to loss through a single accident.
6. The need to overcome high freight costs pushes export-oriented projects towards high value/low bulk products too expensive for the local market.

For a small economy, a single large-scale export-oriented project can preempt choices by continually demanding large supplementary, seemingly consequential, investments in activities downstream and upstream from the original investment, even if the original investment was totally financed externally. A large freezer demands a purse seiner to fill it and a cannery to use its product, which in turn demands new electricity- and water-generating capacities. Finally, the question becomes whether Truk State runs Truk Fisheries Company or vice versa.

The net foreign-exchange consequences of the large export-oriented project are unclear even if it does make profits. Some inputs will be imported. Local workers on the project will be able to afford to buy more imports, including food imports. The state will have a share of the profits, which could, or could not, be used for development, for example, a feeding program or the promotion of local food production or more nutritious imports. By-products may be sold locally but probably at the same price and quality as equivalent imports. The net foreign-exchange and nutritional impacts are uncertain. No child in Truk will necessarily be consuming more protein, especially locally produced protein, at the end of the project than at the beginning.

Import substitution for food imports need not involve large-scale or imported technology and thus can avoid the problems of larger-scale production. Distributional and nutritional problems are solved immediately and directly through small-scale production in which the distance between producer and consumer is kept small, becoming zero when the producer consumes the product. But attempting to raise productivity in the small-producer food systems of the Pacific islands has its own special problems as outlined earlier.

1. If the policy raises prices to give producers incentives, then some producers may simply take the extra revenues and not increase sales, or they may sell more but then purchase imported food for themselves. Either way there is no increase in total output.
2. If the policy lowers producer prices to allow a processing or marketing margin, then the more commercially minded producers or ones with alternative cash-income possibilities will withdraw from the market as sellers and may even enter it as purchasers, again with no total output gain.
3. Offering processing, transport, or market facilities may produce sporadic interest but timing, quantities, and quality will be unpredictable and tend to be below the capacity of the facilities offered.
4. Offering credit may not find any security given the nontransferability of many property rights. The loan can disappear into a maze of social obligations and neither be used productively nor repaid.
5. Offering sensitive, attentive extension assistance to producers in their communities will work while the adviser is present but not when the adviser is absent.

Some observers have argued that the problem in various Pacific countries is intractable and that land consolidation and private individual property rights over land and marine resources should be pursued as matters of priority (Young and Gunasekera 1986 provides useful insights into this debate). Given political realities, however, it is likely in the FSM (as elsewhere in the Pacific)—where producers are still rooted in communities with strong reciprocal rights and obligations—that only a marginally reformed small-producer system will emerge in the foreseeable future. Such communities are desirable for spreading benefits and providing a minimum consumption level for the vulnerable.

Experience suggests small-producer systems in the Pacific islands do not respond well to pricing, marketing, credit, and processing policies taken singly and managed solely from the center. Continuing contact and information on all these factors is necessary but not sufficient to increase output. It is more important to see producers as people with actual production problems and not just inadequate deliverers of supplies to markets. This would suggest a priority of building a "community extension worker" scheme aimed directly at increasing production, which would function like "barefoot doctor" schemes in providing services in answer to simpler questions and acting as a referral system for complex queries. Listening and problem identification would be as important as advising and problem solution for such workers. Whether

community extension officers could combine nutrition, agriculture, and marine resource activities as many actual producers do would merit investigation. (A variety of relevant small-scale programs are descibed in Bamford 1986, though the stress there tends to be on training individuals rather than assisting groups of producers.)

Production credit and loans have been a special problem in the FSM. Several schemes have broken down completely, occasionally bringing down government institutions with them. Properly identifying producer needs through a community extension service would help, especially if needs can be put in tangible forms, such as capital equipment. If social obligations on an isolated borrower are seen as a major problem, then establishing a loan as a collective responsibility for a group of producers assisted by the community extension worker may help the individual resist pressure, and as a by-product ensure high utilization of equipment. The Truk Maritime Authority loan scheme for fishing appears to work in this fashion, though it is still to be tested over time.

Also, to minimize nonrecoverable loans, it is important to foresee, and hopefully avoid, "debt trap" scales of activity when assessing project proposals. Between backyard operations using part-time family labor and fully commercial operations with a full-time manager and an accessible accountant are a range of "debt trap" scales of operation. A "debt trap" can occur when the cash flow moves into such large deficit over a long period of time due to initial capital outlay and subsequent cumulative operating expenses that a small external disturbance causes the part-time owner/manager to give up and go out of that business. This analysis may apply wherever there is a choice: first, of set-up costs; second, of family or wage labor; and third, of other income sources for the borrower. The effective economic choice is between very small scale and a monopoly structure (as for many products the whole FSM market would be easily controlled by less than ten producers); in between appears to lie a range of scales where the actual risk of failure is higher.

Working on the smaller scale with small-producers in the FSM to reduce food import bills permanently demands locally trained labor and needs a steady release of resources over time, not expatriate experts and an immediate injection of joint-venture foreign aid or investment. The Federated States of Micronesia has an underemployed labor force and a large education system that could be partially reoriented to provide suitably motivated trainees. The compact arrangement with the United States provides resources over a fifteen-year period. Therefore, the costs of increasing local food production would be low and the bene-

fits of success would be a healthier economy and, more importantly, healthier people.

A Strategy for Promotion of Import-substituting, Small-scale Farming and Fishing

Improving access to productive inputs as a priority in agricultural and fisheries development policy can be seen as a sequence of interconnected steps: invention and design; promotion and adoption; credit and loans; and distribution of benefits.

Invention and design of new inputs requires careful investigation of existing practices and discussion with producers, using local research institutions' results. Currently used tools and implements need assessment in terms of energy use (human and mechanical) and appropriateness. The ability to manufacture locally and maintain new and improved equipment is also important if maximum local gains are to be achieved.

Introducing new implements and equipment into small farming or fishing systems invariably raises questions of scale. Full utilization often requires sharing among several existing production units, though one design criterion must be to keep scale of efficient operation down to a minimum given the commitment to small-producer systems. Encouraging groups of small numbers of producers to become contractual sharers of indivisible inputs is a necessary part of the adoption process.

Credit and loans to adopting producers, individually or in groups, will need to be available, given the low level of labor productivity in FSM agriculture and fishing. Loans for relatively durable investment goods should have advantages for the creditor, as the items involved cannot be easily diverted to consumption purposes and should be repossessable. Even if the original borrower gives or sells the equipment to a relative or neighbor, the stock of productive assets is undiminished. This does not solve the financial problem for the lending institution, of course, but the importance of increasing the real capital stock should not be underestimated (for a case study, see Young and Gunasekera 1986). Production loans also provide the means to make work easier and pressure to raise marketed output in order to make repayments.

Improving labor productivity through even minimal mechanization may have undesirable distributional consequences in a society with high unemployment. The First National Development Plan estimated unemployment in 1980 as 22 percent (Federated States of Micronesia 1985b) and the unemployment rate is unlikely to have fallen since then. But,

with widespread access to underutilized land and marine resources, it is difficult to interpret FSM unemployment statistics. Certainly they reveal genuine frustration with a shortage of waged and salaried jobs, when the alternative is uncomfortable physical labor for uncertain rewards. But this frustration may decrease if the alternative is made more pleasant and the rewards more predictable. If people are more willing to work currently underutilized resources after introduction of an innovation of some sort, then the work-sharing attributes of FSM society will tend to remove distributional problems. Even without work-sharing, consumption-sharing will still operate to reduce such problems. In addition, new local employment in manufacturing and maintaining the equipment could also act to spread benefits.

Building an industry to provide improved equipment for local food small-producers in the FSM requires effort to make the following links:

1. The link between research and development and manufacture and adoption
2. The link between manufacturing, which tends to have large efficient capacity per producing unit per year, and food production, which is primarily a small-producer system dispersed over the whole of the FSM
3. The link between financial credit and technical advice
4. The link between production experience and business experience

One existing organization, the FSM Development Bank, has the mandate and scale to make such links that cross the boundaries of sectors and states. Within states, various semigovernment authorities have mandates to cross sectoral boundaries and provide loans but generally possess the capacity to reach only a small number of producers with highly aid-dependent projects. As any efficient manufacturing industry would need the whole of the FSM small-producer market of about 12,000 units to sustain continuing production of investment goods, a national perspective is justified in this instance. Working closely with state-level organizations, however, especially in agriculture and marine resources, is crucial to successful identification and implementation.

Unfortunately, the FSM Development Bank has suffered from a close association with a previous institutional failure: "The delinquency rate on old Economic Development Loan Funds was down from 97% when the FSM Development Bank took over their collection in 1983 to 43%" (Trust Territory of the Pacific Islands 1984:15). But this success had its cost. In such circumstances, the bank's relatively conservative lending

pattern between 1982 and 1985, shown in Table 12, is not surprising, with production-oriented loans falling to under a quarter of the annual total. Also, the loans to productive enterprises numbered only sixty in the whole period, with an average amount loaned of $14,600. The level, number, and average size of loans for productive purposes is not consistent with a commitment to economic self-sufficiency derived from a small-producer system of production.

If investment funds provided under the compact are to be used productively to increase self-sufficiency, a reorientation of the FSM Development Bank is required towards actively supporting mass manufacturing and distribution of inputs for the thousands of food small-producers in close cooperation with strengthened state extension agencies. The dam holding back increased local food production may well be upstream of the small-producer in terms of new inputs and credit rather than downstream in processing and marketing.

With respect to providing a macroeconomic environment for food import substitution through small-scale activity, two possible policy options exist. One is to ban or impose quotas on certain imports judged to be actually harmful nutritionally. This should not be ruled out, though it is up to nutritionists to make the case. The other is to raise duties differentially over time, taking into account nutrition, produc-

TABLE 12. **Loan Amounts by Sector Approved by the FSM Development Bank, 1982–1985**

	1982		1983		1984		1985	
Sector	$000	%	$000	%	$000	%	$000	%
Agriculture	56.5	24.3	14.0	3.0	88.8	14.5	146.7	8.5
Fishery	39.9	17.2	101.1	21.5	43.5	7.1	0.0	0.0
Manufacturing	42.0	18.1	58.9	12.5	28.7	4.7	255.2	14.7
Subtotal	138.4	59.6	174.0	37.0	161.0	26.4	401.9	23.2
Real Estate	0	0	228.2	48.5	185.8	30.4	997.0	57.4
Commercial	94.1	40.4	68.7	14.7	263.6	43.2	336.6	19.4
Subtotal	94.1	40.4	296.9	63.2	449.4	73.6	1,333.6	76.8
Total	232.5	99.9	470.9	100.2	610.4	100.0	1,735.5	100.0

Source: Federated States of Micronesia 1985b.

Note: Total numbers of loans approved between 1982 and 1985 were: agriculture 32, fisheries 13, manufacturing 15, real estate 16, commercial 31.

tion, and consumption factors. Duties have the advantages of raising government revenue even if they fail to reduce imports, unlike quotas where financial benefits go to private traders.

Without data on trader and consumer price responsiveness it is impossible to predict the impact of increasing duties. An indication of possible levels of duties is shown in Table 13, where the actual rates of duties plus related charges for three small South Pacific countries in mid-1986 are listed. To estimate the orders of magnitude of the economic impact of raising duties and related charges on food imports in the FSM to the levels in the Solomon Islands, Tonga, and Vanuatu, it will be assumed here that people in the FSM do not reduce their consumption of imported food in response to increased duties. Such an extreme inelastic price response could have raised government revenues by almost $3 million in 1984 as calculated in Table 14. This would have been about a 30 percent increase in total 1984 government revenue. If people did insist on consuming the same quantities of imported food and all the duties were passed on in the form of higher prices without money incomes increasing, then the average standard of living would fall by about 5 percent (assuming 20 percent of income spent on imported food with an average duty of 25 percent). In such circumstances other imports would take virtually the whole pressure of reduced incomes and have to fall by up to $5 million, that is, about 15 percent of the 1984 balance of payments deficit. But these figures can

TABLE 13. **Ranges of Duty and Associated Charges on Foodstuffs in the Solomon Islands, Tonga, and Vanuatu, 1986 (Percentages)**

Item[a]	Solomon Islands[b]	Tonga[c]	Vanuatu[d]
Rice	20	17.5	5–15
Wheat	25–50	17.5–32.5	5–22
Fish	55–70	42.5	22–60
Meat	30–50	17.5–37.5	22–60
Sugar	70	17.5	42
Fruits and vegetables	50–70	32.5–42.5	25–42
Others	20–80	17.5–42.5	5–60

Sources: Communication to author from Customs Offices in Honiara (Solomon Islands), Nuku'alofa (Tonga), and Port Vila (Vanuatu), 1986.

[a]In general terms, range includes a variety of forms of the basic product.

[b]The Surcharge Tax of 20% has been added to the basic rates of duty.

[c]The uniform Port and Service Tax of 17.5% has been added to the basic rates of duty.

[d]The Service Tax of 5% has been added to the basic rates of duty.

TABLE 14. **Hypothetical Government Revenue from Increased Duties and Associated Charges on Food Imports, Assuming Consumers Maintain 1984 Consumption Levels**

Item	FSM Imports in 1984 ($000)	Assumed Rate of Duty (%)	Increased Govt. Revenue[a] ($000)
Rice	2,399	10	216
Flour	513	10	48
Canned meat	1,178	30	342
Canned fish	1,240	30	360
Sugar	513	50	251
Cereal preparations	338	40	132
Frozen meat	2,104	30	610
Other	4,749	20	902
Total government revenue increase			2,861

Sources: Communication to author on 1984 imports from FSM Division of Statistics, Pohnpei; author's calculations.

[a]Total revenue less current 1% duty.

only be taken as indicating the crudest order of magnitude under extreme assumptions.

In practice a mixture of responses could occur, leaving farmers and fishers better off; all imports, including food imports, reduced; and government revenues increased. On the negative side, wage and salary earners would be worse off and nutritional vulnerability would increase for poorer, cash-dependent households. Traders totally dependent on selling imports would have to redirect some of their efforts to locating and nurturing local producers if they wish to maintain income levels. It is also to be expected that a significant number of people would end up healthier.

The four state governments, urged and supported by the FSM national government, have produced plans to improve the economic situation through investment in potential exporting and import-substituting activities. These activities are expected to increase employment and productivity, and produce revenue for government. But a lack of experience in commercially competitive economic activities compared with competitors, the continuing international economic recession, and the relatively vast gaps to be closed mean that the FSM will need some very special factors in its favor to achieve economic viability by the year 2000.

Conclusion

So far, this article has developed an argument for a particular approach to economic policy in the FSM as if the only constraint on policy choice were that mysterious quality of local "political will," which Petersen (1986b) suggests is present for greater economic self-sufficiency. But even the boldest import-substituting and small-scale economic development strategy would require external assistance in light of the current macroeconomic fundamentals.

Given this requirement, it is appropriate to consider why the FSM should not be forced to go through a process of "Structural Adjustment" in the 1990s similar to that imposed in Jamaica in the 1980s. Three reasons can be advanced for FSM's being permitted to enjoy a "softer landing" than many other countries. First, the structural reality of the FSM is that no post–Structural Adjustment economy can be imagined at this time. Any attempt to bring the economy into equilibrium through market forces would totally destabilize the FSM politically, even if any elected politicians emerged to attempt this path. Second, blame for economic and political destabilization would unambiguously lie with the US, which has dictated policy in the islands for more than forty years. The US may well be willing to pay a price for avoiding such embarrassment and wait until blame can be placed on local political leadership. Finally, the islands have a geopolitical role in the world system rather than an economic role. This role is weaker for the FSM than for the Marshall Islands and Belau as no specific requirements for US bases exist in the FSM. But the concept of "strategic denial" still has some meaning and the US's concern to contain the USSR, evidenced in fishery negotiations with South Pacific countries, does suggest that an economic "rent" can be charged for such denial.

These considerations seem to have underlain the compact agreed upon between the FSM and the US for assistance over the next fifteen years, granting the FSM sufficient funding to give apparent room for maneuvering in development strategy. The compact between the FSM and the US to replace the trusteeship relationship involves a fifteen-year virtual guarantee of budgetary support and development payments (the term "aid" is used, though the FSM is giving the US considerable control over aspects of foreign policy in return for the funds). The total annual payments start at $70 million but are due to be reduced significantly after the fifth and tenth years and to stop after the fifteenth year. Also agreed upon is the FSM's right to be a part of US customs territory with respect to some products under specified conditions.

The compact provides for $40 million per annum of budgetary support payments over the first five years (US Government 1986). An element of indexation partially protects this aid against price inflation. This total sum is similar to that paid as a pre-compact grant by the US Department of the Interior, but $20 million of program-specific current expenditure by other US federal departments are immediately in jeopardy, and will at best be phased out over three years. Therefore, a substantial reduction in recurrent public-sector activity in the FSM is required even with this level of budgetary aid.

Development aid is due to account for 40 percent of total compact funds expenditure, that is, around $30 million in the first five years and much less subsequently. Additional payments may be made in the first three years to complete existing projects and allow for transition. With pressure on the established bureaucracy through budgetary tightening, there is a real risk of true development activity being eroded and funds leaking into operational expenditure. Nevertheless, compact development payments do represent a significant opportunity in the medium term. Unfortunately, the total lack of experience in the FSM with productive investment projects suggests caution is appropriate in appraising the long-term benefits.

Exporting without duties to the US appears to be a very attractive option for a small economy. Even the 30 or 35 percent local value-added requirement is not an insuperable obstacle for joint ventures with non-US companies, and, indeed, is desirable to ensure some local employment and income generation. Unfortunately if, as seems likely, textiles, garments, electronics, and other relatively successful less-developed-country exports to the US are formally excluded, the option is in reality very narrow. The internal obstacles to producing agricultural, livestock, and fish products in quantities, quality, and regularity for the difficult US market probably outweigh the customs-duty advantages.

Thus, budget support and trading concessions from the US are not overwhelming in their generosity. But there is some external room to maneuver, which brings us back to the question of the internal political will to use that room productively. Here it is difficult not to be pessimistic. The bureaucracy is large but experienced only in administering welfare programs planned and managed by expatriates. Politicians are emerging from either customary leadership with a distributional claim based on tribute and a status based upon donation, or from the merchant sector deriving profit from distributing imports (Petersen 1986b argues that merchanting is also closely integrated into "traditional" society). Both the will and the ability to initiate active development of

productive forces must be in doubt, and factional patron-client politics is already developing (see Kanost 1982).

Three likely futures seem possible:

1. Uneven entry by international capital, possibly in the tourism sector, allowing one or two of the states or even islands to meet local financial and international deficits and thus encouraging secessionist movement, leaving options of US military intervention or collapse of the federation and a period of realignment at different distances from the US
2. A drift into bankruptcy for the whole federation and a request to put aside the compact's "free association" arrangements (an option available to either side at relatively short notice) and negotiate for a closer association with the US on a similar basis to that accepted by the Northern Marianas
3. Extensive use of the right of emigration without visas to the US for FSM citizens that is included in the compact

International migration is a fact of life for many smaller Pacific Islands nations. For several countries, more nationals now live outside than inside the national boundaries. The FSM states were spared this drain of people during the trusteeship period. The risk is now that the pressures felt at the household level, if the bureaucracy contracts and new cash-income earning opportunities do not emerge, will engender an emigration response, with residents taking advantage of the right to migrate freely to the US. From such migration will come a flow of remittances and invitations for others to follow. The economy will move towards balance by losing consumers and gaining remittances. It will also lose potential producers, of course, and the process will tend to be cumulative.

The greater food self-sufficiency and nutritional implications of such a response to economic pressure are clear from the experience of other nations. The migrants will have gone to the major source of imported food (about 80 percent of food imports come from the US). They will inevitably consume even less traditional food with likely loss in nutritional and health status, especially as the migrants will be relatively poor by US standards (see Coyne 1981 and Thaman 1983 for attempts to summarize the literature on migration and nutrition as part of the general urbanization issue). Also, migrants' remittances (and evidence from other nations suggests remittances will be substantial) will pay for continuing consumption of imported food in the FSM diet. Remittances

will take over the role of a portion of the US government grants during the trusteeship period. Continuing high levels of food imports to the FSM and associated ill-health for Micronesian people (at home and in the US) will be an undesirable feature of moves towards the migration, remittance, aid, and bureaucracy (MIRAB) based economy, widely observed in the South Pacific microstates (Bertram and Watters 1985).

The little discussed migration aspect of the compact may prove to be its most important economic restructuring element, but with negative social development side effects. Avoiding, or minimizing, this outcome through a "virtuous spiral" of direct action aimed at increasing local food production in small-scale units to provide more incomes to keep people in the FSM and healthy might appear to be a better alternative. History in the region seems to be against it, though. An element of cultural autonomy and political independence may be maintained, as in other MIRAB economies, by people going to capital as migrant workers rather than capital coming to the people, but this would be at a severe cost in terms of national economic dynamism.

NOTES

1. The thanks of the author go to the many informants in the Federated States of Micronesia who generously gave their time, to the Food and Agricultural Organization of the United Nations under whose auspices the author visited the FSM in 1985–1986, and to the referees of this journal who gave useful comments. Naturally, only the author is responsible for the content of this article.

2. The fieldwork for this article was undertaken in 1985–1986 in the states of Pohnpei and Truk as then constituted. This resulted in the neglect here of the important, though much less populous, states of Kosrae and Yap. Since 1986, the formal name of the state then called Truk has been changed to Chuuk. Given that Truk is used in all the official document references, the author decided to use the old name Truk throughout to avoid confusion. The author apologizes for both these deficiencies.

3. All sums in text and tables are given in US dollars, the actual currency in the period 1945 to the date of this study.

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