

## *Should We Hate or Love MIRAB?*

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A development process where remittances and foreign aid are the main economic resources of the local economy was defined by Bertram and Watters as the MIRAB model (Migration, Remittances, Aid, and Bureaucracy; 1985). Bertram (1986, 1993) suggested that it is a perfectly “sustainable” development strategy, as long as the “rent” from remittances and international aid can be obtained for an indefinite period. But there is a great reluctance on the part of officials and economists, from South Pacific countries, regional institutions, donor country agencies, the International Monetary Fund, or the World Bank, to accept this development model as a valid and sustainable one. Somehow it does not seem right to live off international aid and migrant remittances. There are some good reasons to state a favorable case for MIRAB. Pacific Island peoples and governments should not feel guilty about accepting aid and remittances, because, in a way, such external resources represent revenues from “invisible exports” to industrialized countries. By exporting labor and “geo-strategic services,” small Pacific islands make the best use of the only comparative advantage they may have that allows them to gain from international trade. Donor countries and migrant host countries also gain from this form of international specialization.

In the first section of this paper, I show why some people hate MIRAB. In the second, I show why everyone should love MIRAB.

### WHY DO (SOME) PEOPLE HATE MIRAB?

#### *There Is No Such Thing as a Free Lunch*

Some economists and development experts tend to look at remittance-driven economies with a certain degree of scorn, calling them “rentier

*The Contemporary Pacific, Volume 10, Number 1, Spring 1998, 65–105*  
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economies,” a category akin to the “Dutch disease”—ridden “oil economies.” People from these islands seem to get “money for nothing,” from foreign governments, and from relatives overseas. This privileged situation is surely not sustainable in the long run: there is no such thing as a free lunch in the global free market system. This kind of development process somehow does not seem right, because remittances are not earned by the island population.

Some authors have argued that since MIRAB led to such bad records of growth in gross domestic product (GDP), “Some in the international aid community are therefore recommending a re-examination, if not a reduction, of the ‘A’ and ‘B’ elements of MIRAB in the post cold-war era” (Pollard 1995, 12).

*Remittances: Money for Nothing?*

Another reason economists find remittances a touchy subject is that it seems to be a highly irrational, hence unstable, behavior. The common wisdom is that remittances and all intrafamily transfers are motivated by purely altruistic motives, and as a result, are likely to decline over time as the altruistic feeling might weaken with years away from home. There has been much debate on the motives for private transfers (for a review, see Cox 1987; Cox and Jimenez 1990).

It is often assumed that private transfers to family members, and remittances in particular, are motivated by altruistic feelings (Becker 1974; Becker and Tomes 1979; Cox 1987, 1990; Cox and Japelli 1990; Stark 1991a, 237–238).<sup>1</sup> Some models allow for both an altruistic motive and a self-interested “lending” motive (parents may lend to their children at above-market interest rates [Cox 1990, 191; Cox and Japelli 1990]). Lucas and Stark (1985) and Stark (1991a) proposed an “eclectic model” of “tempered altruism or enlightened self-interest.” Families enter into informal insurance contracts against income shortfalls; altruism, trust, and loyalty between family members help to enforce the contract. The empirical evidence reviewed by Cox and Jimenez (1990) does not give clear-cut conclusions on the subject of altruism or self-interest as a motive for private transfers: some studies have found a positive relationship between recipients’ income and transfer amounts (which contradicts the altruist hypothesis), while other studies have found an inverse relationship (which supports that hypothesis).

If altruistic motives were the main determinant, one would probably

find a tendency for remittances to fall over time, as links to the home country and family became weaker and weaker (the “remittance decay” hypothesis). In the case of Pacific Island migrants, there is evidence to the contrary (see Brown, this issue). Many economists are uneasy with purely altruistic motives, because it is the most irrational way for the typical “economic person” to behave. Even some of the authors willing to propose theories of altruistic models of private transfers expressed doubts about the empirical value of this hypothesis.<sup>2</sup> “Altruism” might hide more selfish motives, and might represent a rational decision of a family group acting as a coalition, a “transnational corporation of kin” (Bertram and Watters 1985) rather than as altruistic individuals:

In the South Pacific setting, migration involves not the dismembering of kin groups but their internationalization (or transnationalization). . . . Family or kin units in the small Pacific societies act and calculate on a transnational scale, especially via the regional labour market. . . . The great majority of households are able to judge the relative merits of wage employment (locally and offshore) and household productive activity on the land or sea. (Bertram 1986)

Economics is a dismal science in more ways than one: for each beautiful altruistic motive admired by an anthropologist, an economist will tend to see a down-to-earth, self-interested motive lurking behind it. When looking at cultural values emphasizing sharing and working unselfishly for the community, the economist tends to assume that they are somehow shaped by the economic necessity of enforcing informal cooperation arrangements between the individuals of the “coalition,” in order for them to benefit from working together. This was stressed by Dasgupta in his book: “We have to investigate what sustains (non-contractual) systems of reciprocity, what encourages people to meet their obligations even when there is no law to enforce them” (1993, 208).

Values of loyalty and solidarity are the tools invented by traditional cultures to make cooperation efficient by reducing the risk of “free rider behavior,” the cost of negotiating and enforcing informal arrangements, and the cost of screening applicants for the coalition. To illustrate this, Dasgupta showed that social norms favoring reciprocity of intergenerational transfers between family members enable individuals to maximize utility by smoothing out the consumption flow over their life cycle (1993, sections 8.6 and 9.7). Norms of reciprocity are more developed in poor countries, where individuals cannot count on social security systems and

old age pensions, nor on individual savings or insurance, because capital, insurance, and annuity markets are imperfect. Therefore, intergenerational transfers act as a substitute for old age insurance, and reciprocal help in case of hardship acts as an informal insurance policy. For these reasons, solidarity links are most developed in the poorest and most isolated communities.<sup>3</sup>

I tend to favor a very restricted view of altruism. Some economists (such as Becker 1974; Stark 1991a; and Cox 1987) suppose that altruists value their family's welfare in their own utility function, and therefore may be willing to sacrifice some of their own welfare to increase that of other family members. I assume, rather, that parents may care about their children's utility and may wish to increase it, but not at the expense of their own welfare. That is, the pareto principle would guide intrafamily decisions as well: the aim of parents is to make children better off, as long as it does not make themselves worse off (than without transfers). Poirine and Brown (1997) show that this "quasi altruism" hypothesis, involving informal loans and loan repayments spanning the life cycle of parents and children, may explain quite well what is going on with private transfers from parents to children and then back from children to parents.

#### *Aid and Remittances Crowd Out "Productive" Investments*

It has often been found that aid and remittances are not conducive to "sustainable development" through family exploitation or small business investment in the remittance-receiving village sector. Aid and remittances keep the domestic economy "frozen" in a state of low productivity (Mines 1981) because of low levels of domestic investment in the private sector. This has been stressed recently by a number of writers, including MacMaster (1993), Duncan (1994), and Browne (1995).

Aid has alternatively helped island governments to maintain a policy of factor and commercial protection and factor export and to postpone the creation of an economy in support of domestic investment. . . . High levels of aid have reinforced government activity and traditional interests. High levels of aid have lessened the need for alternate private activity, and the same aid has greatly lessened, if not removed, the need to release domestic factors of production. (Pollard 1995, 15-16)

Without improved domestic policy responses from the island states, more liberal migration opportunities will not avert a doomsday scenario. Indeed, it is

possible that increasing the migration options of people in the South Pacific islands might actually discourage efforts to improve domestic policies. (Cuthbertson and Cole 1995, xiv)

These and other authors stressed the crowding-out effect of remittances, combined with “easy subsistence lifestyle,” in various Pacific Island economies:

In the Cook Islands, Tonga and Western Samoa these [remittances] are a mixed blessing as they undermine the incentive to work and are rarely spent on productive investment. They are normally used for unproductive ceremonial purposes or on imported luxury consumption items. (MacMaster 1993, 279)

These remittance inflows have had an adverse effect upon labour supply, leading to higher reservation wages and a corresponding reduction in the production of traditional export crops. (World Bank 1990, 4)

The high degree of dependence on foreign grants and the safety valve of emigration [in Tonga] tends to retard competitiveness through upward pressure on wage rates and loss of skilled manpower. (World Bank 1993a, iii)

On the one end, remittances provide a source of “export” revenue but, on the other hand, they may crowd out other forms of export activity. This is not necessarily a problem, but it is not clear that the net effect of remittances (and aid) is conducive to long term economic viability and prosperity. (Cuthbertson and Cole 1995, xiv)

The relatively low growth performance of Tonga and Western Samoa may in part be explained by the damage done to their export sectors by the distortionary effects of aid and remittance flows and the lack of government policy to offset these effects. (Ahlburg 1991, 39)

[In Tonga] the work force has dramatically declined, i.e., those from 18 to 40 years of age. These are the important people in an agricultural economy and they are migrating. More and more of those who remain are taking up white collar jobs, which are now relatively easy to obtain. Most of the land lies idle. There are fewer and fewer people to work it. Many of the older generation are living off remittances from their sons and daughters overseas, so they no longer have to push themselves to do anything more than grow food for themselves. (Finau 1994, 308)

There is a crowding-out effect of aid and remittances on the local private sector, and at the family level it is likely that investments in educa-

tion of the children for future emigration crowd out capital investment, insofar as the expected rate of return on human investment (with emigration) in the child appears much greater than the expected rate of return on agricultural, industrial, or commercial investment. (This is why emigration takes place: families decide consciously to invest in the education of future migrants rather than in business, farming, or fishing ventures; Poirine 1995b.)

The “booming sector” is the “labor export sector” or “future migrant production” sector, and all other activities are crowded out from labor and capital resources because the rate of return on this activity is higher than on all others. In particular, the reservation wage (or reservation income) becomes higher, leading to less employment in manufacturing, tourism, and “traditional” agricultural exports such as copra, vanilla, coffee, mother of pearl, and the like.

The Tongan economy displays all the characteristic markings of the “Dutch disease,” where a dominant export activity attracts a disproportionate command over resources, pushes up domestic production costs, and reduces international competitiveness. In the Tongan case the “booming” sector has become development assistance and migrants’ remittances. (Sturton 1992, 3)

Aid, as an artificial exogenous shock to the economy supporting government demand, shifts the economy away from the nation’s comparative advantage. . . . the comparative advantage sectors suffer at the expense of others. (Weisman 1990, 20)

This adverse effect of remittances on the traded goods sector, known as the Dutch disease, has been studied by Weisman (1990), Ahlburg (1991), and Sturton (1992):

Aid and remittances are partially spent on non traded goods and this increase in demand puts upward pressure on the real exchange rate (the relative price of non traded goods relative to traded goods), drawing resources out of other sectors, for example, agriculture and manufacturing, and into services, including government employment. (Ahlburg 1991, 37)

In particular, Ahlburg showed by means of regression analysis that in American Sāmoa labor force participation is adversely affected by the receipt of remittances (1991, appendix 2), and that the manufacturing sector in Tonga and Western Sāmoa is less developed than in countries with a similar per capita gross domestic product. Similarly, Weisman, using a computable general equilibrium model, showed that high Australian bud-

get aid to Papua New Guinea “clearly leads to booming sector effects. The production of nontradables increases at the expense of tradables and the country experiences a real exchange rate appreciation” (1990).

In the context of Pacific Island economies, where one of the main potential foreign exchange resources is tourism, the Dutch disease or “booming sector” of aid and remittances, by driving up the cost of resources in this sector, reduces the rewards of investments, and drives out capital.<sup>4</sup> Another adverse consequence of the Dutch-disease effect of remittances and aid is an overvalued currency: “Remittances lead to an ‘overvalued’ exchange rate and may partly explain the relative poor performance of manufactured exports. An overvalued exchange rate may also retard growth in tourism” (Ahlburg 1991, 53).

*Remittances Facilitate Nonproductive Expenditures, Create Dependency on Imports, and Perpetuate Trade Imbalances*

According to many authors, remittances appear to be spent mostly on “nonproductive” housing and consumption expenditure, a fact that seems to reinforce the “rentier economy” theory. People tend to use remittances, not for productive investment, but only to improve their standard of living. “At the national level, estimates for Tonga suggest that about 70% of remittances were spent on imported consumer goods, including tinned and preserved food, beverages and tobacco” (Connell and Brown 1995, 21). As a consequence, if for any reason the remittance flow decreased, the recipients would not be ready to increase local production rapidly and would suffer because of a severe shortage of goods. “Tonga’s poor savings performance can be attributed largely to the private sector, particularly to the prevalence of high rates of personal consumption. The reasons for high personal consumption . . . are believed to be related to high levels of personal transfers, cultural factors that tend to weaken the savings motive, and low per capita incomes” (Fairbairn 1991, 31). This, it is argued, makes the country overly dependent on imported goods, not only for manufactured products, but also for agricultural products including food. (The caricatural example here is Nauru, where agriculture no longer exists, and people eat almost exclusively canned products bought with the revenue from phosphate exports, with the consequence of a very high incidence of diabetes in the local population.)

The fact that the flow of remittances is largely channeled into domestic consumption is said to result in trade imbalance and a savings-investment

gap: remittance dependence increases consumption at the expense of savings, which has a negative effect on domestic investment. "Large private remittances and official grant inflows have enhanced consumption and resulted in negative gross domestic savings equivalent to nearly a quarter of the GDP" (World Bank 1993a, 3).

#### *Are Remittances "Sustainable"?*

Many authors doubt that remittance flows can be sustainable over time, because they believe that remittances are given from altruistic motives, and that those altruistic feelings will weaken over time. If aggregate remittances are bound to decline with time, as would be the case if most new emigrants were children or parents of emigrants reuniting with their relative in the host country, then it is doubtful that the country would be able to count on a sustained flow of remittances. As more and more emigrants have fewer and fewer relatives to send remittances to, the aggregate amount of remittances should in the end decline, at least as a percentage of the total resident and expatriate population.

#### *Accepting Remittances with Apology*

If only remittances were used for *productive* investment, they would acquire some redeeming social value! Recipients could then be pardoned for their sin, anti-MIRAB puritanical missionaries seem to imply. Unfortunately almost everything is spent on imported goods, requiring apologies to comply with economic orthodoxy. Even authors who are not predisposed to be hostile to the remittance-driven economies tend to want to justify them by trying to prove, against all available evidence, that remittance income is saved and invested more than seems to be the case at first glance, and in general more than other sources of income. For example, Walker and Brown (1995) found that remittance-receiving households in Tonga save more (8 percent of their income, against 2.5 percent for non-receiving households), but in Western Sāmoa the reverse is true (4 percent of income for recipients, 10.5 percent for nonrecipients). In any case, the savings ratio for money remittances was found to be 8 percent in Tonga (compared to 8.2 percent of total income for recipient households), and 4 percent in Western Sāmoa (compared to 3.6 percent of total income for recipient households). This means that the average propensity to save is no different for remittances than for total income, and this is just what one would expect, because remittances are just one source of income

among others. Despite this evidence, many writers (James 1991; Brown and Connell 1993) have insisted that remittances are often saved or used to finance investments in housing, farming, or business ventures, such as “flea market” operations in Tonga (selling goods sent by overseas relatives hardly seems to be an investment, insofar as it does not add to the productive capacity of the domestic economy). Faeamani gave another example of the “remittance with apology” opinion:

Through the loss of younger adults, there is a consequent reduction in garden size and production but, by way of substitution, an inflow of cash in the form of remittances and goods, and a greater dependence on the international economy. *While not denying that there are ill effects of emigration and remittance use*, in the last decade Tonga has seen *significant changes at the village level which have been initiated and funded from remittances, many of which have been beneficial*. (Faeamani 1995, 140; my emphasis)

The author had to concede to economic orthodoxy by writing that remittances “have ill effects” in theory, before saying that in practice they have been doing a lot of good.

It is well known that both Tonga and Western Sāmoa exhibit negative domestic savings out of gross domestic product (but positive national savings out of gross national product, including net private transfers; Kioa 1993). Consumption expenditures thus represent 114 percent of gross domestic product in Tonga. Should the Tongans and Western Samoans apologize for this?

*International Aid: “Money for Nothing”?*

Pacific Island economies receive considerably more aid per capita than any other country or territory in the world (Poirine 1993b, 1995c). Compared to the average aid per capita received by less developed countries (LDCs), small independent islands with a population of less than a million receive 8 times more, independent Pacific islands receive 10 times more, Pacific Island territories or associated states 233 times more, French overseas departments and territories 354 times more, and French Polynesia 366 times more (see tables 2 and 3).

Many authors believe that aid has been doing more harm than good in small Pacific islands. Just like remittances, aid tends to make for a “booming sector” (Weisman 1990; Ahlburg 1991), crowding out productive sector investment, especially when used to boost public sector

employment, and to drive public sector wages above those of the private sector. In French Polynesia for example, housecleaners, gardeners, and janitors can earn at least twice as much as civil servants as they can as private sector employees, a situation that drives up the reservation wage at which people are willing to work in the private sector (Poirine 1993c, 1994).

Ahlburg attempted to measure the “distortionary effect of aid and remittances” on the economy of Tonga and Western Sāmoa. He found that the share of manufacturing in those two countries was, respectively, 8 percent and 12 percent, against a norm of 17 percent and 25 percent respectively for countries with comparable gross domestic product per capita (Ahlburg 1991, 38). He concluded that “in Tonga and Western Samoa the share of manufacturing in GDP is less than half of what is expected for countries at similar levels of GDP per capita.” He interpreted this as a proof of a Dutch-disease effect of aid and remittances on the economies of Tonga and Western Sāmoa. “At least part of this shortfall can be explained by the distortionary effect of aid and remittance flows decreasing the competitiveness of the export sector” (Ahlburg 1991, 38).

Some authors also pointed out the crowding-out effect of aid on the public sector’s human resources: the management of aid requires much time from the best civil servants, which detracts from other important tasks. The brightest among them often accept positions with donor agencies, where they earn much more than with their former employer (Brown 1992). This “time and brain drain” adversely affects the performance of the local public sector.

## WHY WE SHOULD LOVE MIRAB

In this section I would like to answer the arguments exposed in the “hate” section one by one, and then explain why MIRAB may be loved after all.

### *There Is No Such Thing as a Free Lunch*

True! Remittances are not free lunches. They don’t come out of the blue, out of pure kindness of the remitters to the recipients, as I have shown elsewhere (Poirine 1995b, 1997). They represent three kinds of transactions: repayments of a loan made earlier to the remitter by relatives to help finance human capital investment; money lent to young children or other relatives to help them finance their education; and money sent to

prepare for future retirement in the home country. The combination of these three “waves” of remittances during the lifetime of the emigrant make up the observed remittance flow over time, or what I call the *three waves theory of remittances*.

National accounts do not measure investment in human capital, or the returns from it. Expenditures in educating children, which are investments, are recorded as consumption expenditures. These expenditures entail sacrifices (ie, savings in kind, not monetary savings); family members must work more or consume less because children are excused from working for parents while they get an education. This sacrifice is a saving, a loan in kind, which is then paid back when the child reaps the monetary benefits of the educational investment in a foreign country.<sup>5</sup>

Therefore, remittances are just the visible tip of an iceberg that I call the *informal family credit market*. Some of the transactions on this market may be observed only when they happen to be recorded in statistics because they cross frontiers.<sup>6</sup> This is not just “money for nothing.” It is an efficient informal family savings-and-loan system that enables the “transnational corporation of kin” (Bertram and Watters 1985) to get the highest returns on human capital investments. Children educated at a lower cost in the islands are sent to the higher earning foreign labor markets and expected to pay back their debt to the family. Children from Tonga or Western Sāmoa could not borrow from banks for their education because they have no collateral. The *informal family financial market* (Poirine 1995b) enables them to do so at the least cost, while rewarding their family with remittances by paying back the loan with interest (a “family shadow rate of interest,” which should lie between the home market rate on savings deposits and the home market rate on borrowings).<sup>7</sup>

My theory of remittances (Poirine 1995b, 1997) does not rely on altruistic motives. To finance their education, that is, invest in their human capital, future emigrants borrow informally, in kind or in cash, from relatives and pay back their debt over time, with interest. It is all informal of course; nothing is on paper, not even the rate of interest or the duration of the payback period, but people know what they owe each other, more or less, and repay the correct amount with interest, even if the interest rate might be zero at times. Such transactions may be called reciprocal gifts by anthropologists. Some part of the loan is not in monetary form, but in kind. When a family has to give up child labor on the family holding and reduce its per capita production and consumption, this is a loan in kind,

the amount of which is the opportunity cost of forgone child labor. This will have to be paid back also, sometimes partly in kind (goods sent, airfares paid). The child who does not emigrate pays back in kind, by helping the parents until their deaths. The one who emigrates, who cannot be there to help, has to send cash to repay the debt; what was an internal, in-kind transfer then becomes recorded in official statistics as remittances. From the family's point of view, nothing changes. From the national accounts' point of view, there is an increase in imports and domestic consumption (because of remittances), and a decrease in gross domestic product and domestic investment (because there is a decrease in rural production when only the old and the very young stay, while young adults emigrate to obtain higher returns on their educational investment from overseas labor markets where labor productivity is higher than in the home country).

*Aid with Apology, "Money for Nothing," and the Puritanical Ideology*

Aid seems to be blessed when it is used for investment, but condemned when used for private or public consumption. This moral interference in the economic debate was well described by Tisdell: "Donors may have a preference for aid for investment purposes rather than direct income transfers, and especially for aid that supports effort. This is a reflection of the puritanical belief in the Western world that reward should be for effort. Consequently, even investment aid involving a negative return may be preferred to 'direct handouts' " (1990, 148). As I show later, this moralistic tone is clearly misplaced, considering that aid has little to do with handouts and much more to do with trading geostrategic services for cash.

*The Crowding-Out Effect: Distortion or Optimal Allocation?*

It is arguable whether the crowding-out effect of remittances and aid on "traditional" productive activity is a distortion in resource allocation or the consequence of optimal resource allocation. I have cited many authors who have implied that remittances (and aid) crowd out resources (capital and labor) from traditional subsistence or export activities. This argument was dealt with by Bertram and Watters:

The rapid increase in rent incomes of small-island communities over the past three decades has radically changed both the economic incentives and the con-

straints facing island households. This is especially true of sources of cash income. The investment of kin-group labour in the production of an agricultural surplus for sale on uncertain markets is only one of a number of alternative strategies. Kindred can be expected to evaluate the return on such investment relative to the alternatives. On this basis it would be expected that as the alternatives to commercially oriented agriculture would improve, so a reallocation of household effort away from agriculture would take place. (Bertram and Watters 1985, 511)

*This is just what is required for efficient economic behavior: that the family allocates its resources to the highest productive use, even if it happens that this particular use is not “productive” in the “domestic” economy, but rather in a “foreign” economy. Its returns are “invisible,” most of them are “unrecorded,” but families do not care, because they know better than to read inaccurate national account statistics. The Dutch disease may not be a disease after all. These are not “windfall gains” like the gains from the discovery of mineral resources such as oil or phosphates. This economic behavior is a conscious strategy of families and countries: “Families deliberate carefully about which members would be most likely to do well overseas and be reliable in sending remittances” (Gailey 1992, 465). This is a rational and deliberate decision of families to push their comparative advantage in international trade: it is most rational to export labor when the returns on human capital investments are higher abroad than at home, and when they surpass returns on domestic physical investment in traditional subsistence or export activity. “This implies no lack of entrepreneurship, flexibility, or diligence on the part of Islanders—on the contrary, the ‘MIRAB effect,’ like its close relative ‘Dutch disease,’ arises precisely because of the economic responsiveness and flexibility of Island household units in their open-economy situation” (Bertram and Watters 1985, 512).*

What would really be a “bad” allocation of resources, a “waste” of human resources, would be to force bright young Tongans and Samoans to work at home with their parents growing taro or gathering copra, rather than getting a good education and migrating to Australia, New Zealand, or Hawai‘i and sending remittances to their parents.

*The “Bad” Effect of Remittances on Savings and Investment:  
An Optical Illusion?*

Dasgupta addressed this question remarkably, stressing in his book that policies emphasizing the need to promote investment in developing coun-

tries most often miss the mark because savings and investment statistics from national accounts are misleading: "Saving is conventionally taken to mean consumption forgone today for the purposes of greater consumption in the future. . . . it is more appropriate to regard saving as an activity that is undertaken today for the purpose of increasing productivity (of say, labor), and thereby consumption in the future" (1993, 245).

When adults spend less on their own consumption to give to the children, when they forgo a child's labor on the family holding to enable the child to get an education, they are really saving for their old age and investing in human capital. But national accounts do not record this as savings or investment, but as consumption in the household. The accounts record less production and more consumption expenditures on local or imported goods, needed when the household's autarkic production declines because child labor is no longer available. Even though adults save in this way, and children borrow from adults to finance their investment in education, *these savings and investments are not recorded, because they take place inside the household*: the intrafamily saving and investment flows are neglected, except when they happen to cross national boundaries, in the form of remittances. Adults' recorded savings seem low because they don't have to save for their old age, but they have to provide for their parents and their children living in the household through consumption expenditures, to make sure that their children will do the same for them later. Children and young adults borrow less through official financial institutions, because intergenerational transfers within the family act as a substitute for imperfect capital, insurance, and annuity markets (see Dasgupta 1993; Kotlikoff and Spivak 1981).

It is wrong to use conventional national accounting methods to estimate domestic savings as the difference between gross domestic product and consumption in an economy where most of the "production" takes place overseas. If domestic consumption exceeds gross domestic product in countries like Tonga, it is because gross disposable national income, including net transfers such as aid and private money transfers (official remittances) is much greater than gross domestic product. Brown has shown that official private transfers are grossly underestimated in the case of Tonga and Western Sāmoa (1996; see table 1).

In using the national accounts' measure of "consumption expenditure," one should be careful in distinguishing which consumption expenditures correspond to educational investment (that is, forgone savings due to lower production and higher consumption on the family holding while

the child is being educated), and which correspond to returns on past educational investments that were made by sacrificing first period consumption (see Poirine 1997). “Building on the expectation of a high cross rate of return to the joint decisions to educate, say, the maturing son and then ‘expel’ him to the urban sector, migration and the education preceding it thus substitute for the credit deficiency” (Stark 1991a, 212).

For families to invest in human capital rather than in the family holding is a rational and optimal strategy because the rate of return on human capital is greater (thanks to emigration) than the rate of return on investment in domestic activity. In addition, starting with the second generation migrant, the availability of loanable funds from migrants at a “family rate” lower than the market borrowing rate for family holding investment increases the profitability of human capital investment compared to family holding investment (which then entails a higher borrowing cost; see Poirine 1997). This strategy is a better way to achieve sustainable development of the national community, whatever its residence, if international migration is not restricted in any way at the sending or receiving end.

*Dependence on Imports: Good or Bad?*

As for dependence on imports, all islands, and all small economies, for that matter, with standards of living exceeding the subsistence level, rely heavily on imports. It is not pathological but logical. The smaller the economy, the greater the international specialization required to benefit from economies of scale and comparative advantage in international trade (Poirine 1993a, 1995c). The island must have one or two export commodities to pay for the many diverse imports it cannot produce locally because it is too small to do it efficiently. The question is, what is the comparative advantage of a small island economy? Some islands do very well with tourism (Hawai‘i), or tax havens (Bahamas, Cayman Islands, Bermuda); some try tax-free export manufacturing zones (Mauritius, Fiji); some try the export of “strategic services,” such as the Federated States of Micronesia, Palau, the Marshall Islands, Guam, French Polynesia, the Falkland Islands; and some choose a combination of these strategies. And then some choose to export labor. There is nothing wrong with this option, if nothing better is available. The kind of dependence on imports acquired by exporting labor is no worse than the one acquired by specializing in sugar, tourism, or tax havens. The balance of trade seems catastrophic but, as can be seen in table 1 from the examples of Tonga and Western Sāmoa, this is largely because they have invisible exports

Table 1. Official and adjusted current account balance for Western Sāmoa 1992

		Amount (current us\$ millions)	Percent of Gross Domestic Product
a	Gross domestic product	148.4	100
b	Net factor income from abroad	3.1	2.1
c = a + b	Gross national product	151.5	102.1
d = c + i	Gross national income*	194.9	131.3
e = f -g	Merchandise trade balance	-104.2	-70.2
f	Exports	5.8	3.9
g	Imports	110.0	74.1
h	Services (net exports)	17.0	11.4
i	Private unrequited transfers	43.4	29.2
j	Official unrequited transfers	18.5	12.5
k = c + h + i + j	Official current account balance	-25.3	-17.1
l	Unrecorded private transfers†	42.1	28.4
m	Unrecorded imports (goods carried)†	12.2	8.2
n = k + l -m	Adjusted current account balance	4.6	3.1
o = i + l	Exports of labor services	85.5	57.6
p = j	Exports of geostrategic services	18.5	12.5
q = h + o + p	Total services trade balance	120.9	81.5
r = c + o + p	Adjusted gross national income	255.5	172.2

Sources: Pacific Economic Bulletin statistical annex, 10(1) 1995; Brown 1996.

Notes: \*GDP + net factor income + net private transfers

†Computed from Brown 1996, Table 2

instead of visible ones. What really matters is the stability and sustainability of this kind of export, compared to more traditional ones.

*Accepting Remittances without Apology*

There is nothing wrong with the fact that a country spends more than it produces domestically, if it happens that the export of labor is the major resource: this export activity does not appear in the gross domestic product, but the recorded part of it does show up in private transfers, thus contributing to gross *national* product. As a percentage of gross domestic product, recorded private transfers represented 24.1 percent in Tonga in 1993, 23.4 percent in Western Sāmoa (Brown 1996). According to Brown, unrecorded transfers (goods, money carried by relatives, airfares paid to visiting relatives) to Tonga and Western Sāmoa represented respectively 185 percent and 187 percent of official recorded money transfers (1996, table 2). This means that total remittances, or the receipts from the “export of labor services,” really represented 54 percent of gross domestic product in Tonga, and 68 percent in Western Sāmoa.

One could go further in this direction of rejecting conventional national accounting. Insofar as what counts in the end is the overall welfare of the total population born in the country, regardless of its residence, one should really estimate a “gross transnational disposable income” figure, which would add to gross disposable income, on top of official aid, not only private transfers (recorded and unrecorded), but the total disposable income of the population born in the country and residing overseas (regardless of whether or not it is remitted). If such a figure were computed for Tonga or Western Sāmoa, there is no doubt that the per capita transnational disposable income would rank with those countries in the middle-income category, not in the low-income category, as is the case at present.

International aid accounts for approximately 9.6 percent of gross domestic product in Tonga, 10.6 percent in Western Sāmoa. As will be seen, this is not “money for nothing,” but an invisible export of strategic services: aid *is* trade. Therefore, by adding all visible and invisible exports, including labor services and geostrategic services, one gets a very large surplus of the balance of official and unofficial trade of goods and services for Tonga and Western Sāmoa (table 1).

It is not necessary to apologize when using for consumption and housing expenditures the receipts from an invisible export that is itself the re-

sult of a former invisible human capital investment, financed by an invisible loan that originates from invisible savings, recorded as consumption expenditures (to the benefit of children). Just because national accounts see only the tip of the iceberg (the remittances, market expenditures) and not the base of the iceberg (the family's internal financial market, unrecorded savings and loans, and the prior invisible human investments that made remittances possible), there is no reason to make people feel guilty about accepting remittances and using them to better their living standards and increase human capital investments!

### *The Sustainability of Remittances*

I have addressed this matter in detail in another paper (Poirine 1997). It is not at all obvious that, provided no legal restriction prevents emigration, remittances should not grow steadily over time. As long as the migrant population is composed mainly of adults wishing to retire in the home country, it is very unlikely that the remittance flow will decay over time. Only when families tend to reunite in the host country, where children are brought up, and when older emigrants retire there, is the remittance flow likely to decline. Sound economic policies should help to prevent such a trend.

The sustainability of aggregate remittances rests crucially on the extent of migration. Too much emigration will in the end "kill" the aggregate remittance flow to the home country. Relatives are likely to reunite with remitters in the host country, and older emigrants might increasingly choose to retire in the host country where their children live. Such decisions will weaken the motive for remitting, insofar as fewer and fewer relatives will be left at home to help. If one plots on an X-Y graph aggregate remittances against the share of emigrants in the total population, the result is a "hill": the curve will rise at first, starting from zero remittances (when there are 0 percent emigrants), then reach a maximum (for a share of M percent emigrants), and finally fall to zero when there is nobody left on the island to remit to (100 percent emigrants; Poirine 1997). It is important to know if a country's position is on the left or the right of the top of the hill. If on the left, it can continue to expand emigration and obtain more aggregate remittances; if on the right, it will have already passed the maximum. Then if the proportion of emigrants continues to rise (that is, if the emigrant population rises faster than the nonemigrant population), *aggregate* remittances will decline (even though they don't decline *per capita in the receiving country*, because there are fewer and

fewer recipients and more and more remitters). In other words, there is a law of diminishing marginal productivity of emigration in the production of aggregate remittances. Therefore, emigration should be used moderately if the aim is to generate a sustainable flow of remittances. It is in the home countries' interest, in particular, to limit family reunions and retirements in the host country, because this is the main cause of a fall in remittances sent by emigrants to the home country. To maximize remittance amount per emigrant, sending countries should encourage children to stay (by lowering the cost of education and improving its quality) and retired emigrants to return (by preserving emigrants' rights to own and inherit land, and by securing agreements with host countries to preserve the right of former emigrants to receive their pensions in their home country).

Provided this rule of moderate use is observed,<sup>8</sup> and migration outlets are kept open in the host countries, even if a country has reached point M, the flow of aggregate remittances may still grow with time, at a pace set by the rate of total population growth (emigrants plus nonmigrants), plus the rate of growth of income per capita of emigrants in the host country.

The recent experiences of the Cook Islands, Tonga, and Western Sāmoa seem to show that remittances are rather more stable and sustainable over time than are receipts from agricultural exports or tourism. Therefore, it is probably an optimal policy to specialize in "labor export," as long as agreements between the governments of the receiving and sending countries ensure that legal immigration outlets are secured for the Islanders in the long run. This is more likely to happen for Pacific Islanders than for other immigrants because their total populations are small compared to those of the host countries: their share of total immigration is very small in most host countries, even if emigration is widespread in the sending island country or territory.

*The Benefits of (Visible) Capital Investment Are Not Higher than the Benefits of (Invisible) Human Capital Investment*

There is a universal tendency to overlook the benefits of human capital investments compared to those of "productive," "physical," "private sector" investments, because the latter appear in national accounts figures, while the former do not. There is no reason to privilege "physical" investment over "human" investment in economic development. Quite the contrary. Many grandiose projects in the third world have turned out to be great wastes of money because the human capital factor was overlooked.

As a result, projects that looked good on paper, financed out of international aid, could not be put to productive use, and became white elephants.

It isn't merely saving that matters, it is also the productivity of investment. . . . During the 1980s the rate of investment in even low-income sub-Saharan countries (excluding Nigeria) averaged somewhere around 18 per cent of their aggregate output. However, the rate of growth of output averaged only 1.4 per cent . . . among the poorest countries, there has in fact been a negative correlation between saving rates and rates of growth of national income per head. (Dasgupta 1993, 249, quoting Stern 1989).

Many economic success stories, like those of Hong Kong and Singapore, prove the importance of the human capital factor. Empirical studies on the factors of growth tell the same story: the quality of the labor factor is more important, in many instances, than the quantity of capital in explaining the rate of growth.

When this investment in human capital pays off in a foreign country, through emigration, it seems to be "lost" to the sending country. But this is not so, because remittances represent precisely the return on this investment. Moreover, moneys not sent but saved in the host country may ultimately benefit the sending country at a later stage, when emigrants retire home, for example, or come back to set up a small business.

The productivity of investment, and therefore its pattern, is what matters, more than its size as recorded in national accounts. Expenditures on health care, education, housing, and nutrition enhance future labor productivity: therefore they are investments, although national accounts record them as either private or public consumption expenditures, which leads to biased policy recommendations on the part of international experts from donor organizations, who invariably favor more investment in "hardware." Investments in education have very high returns, because they pay off after emigration overseas to an industrial country where the productivity of labor is much higher than in the island. In such a setting, where emigration to a rich country is easy, it is an optimal choice to favor human investment instead of domestic capital investment, even at the expense of growth in gross domestic product. It follows that one should not be sorry about the minimal growth record of the Pacific Islands following the MIRAB pattern of development, since gross domestic product is not the appropriate indicator of Islanders' welfare.

When economists criticize Pacific Islands' dependence on aid and

remittances (eg, Pollard 1995), they ignore the hidden past investment in human capital that led to migrant remittances, and the hidden export of present and future geostrategic services that brings about a steady flow of international aid to island countries and territories. To specialize in geostrategic export and in labor service export, to invest in family human capital for migration purposes instead of private sector capital investment is the optimal strategy if it corresponds to an international specialization according to the comparative advantage of the Pacific Island countries.

### *The Welfare Gains from Emigration*

What are the benefits of migrations? As the level of education in the home country increases, the higher rate of growth in the quality of the country's human capital allows a higher rate of growth per capita, provided emigration is internal, from villages to cities. If emigration is international, remittances improve both the standard of living and the balance of payments in the sending country. In the long run, the better educational level, arising from the inducement families have to send their children to school because of the availability of emigration opportunities, is always a positive factor for the country: emigrants send remittances if they are away, and if they return the island countries benefit from the education and working skills acquired abroad. This is especially true of island countries with a narrow resource base and very small markets, such as most of the Pacific and Caribbean islands. Domestic development opportunities are limited by transport cost, the impossibility of reaching large-scale economies and agglomeration economies, the limited land surfaces, and the very small internal markets.

In this context, emigration may well be the only option for improving the population's welfare level in the long run, when other attractive options, such as tourism, military bases, tax havens, or fisheries, are not available. It relieves families from the law of diminishing returns by preventing higher and higher population density on the land they work, and it offers them an alternative source of cash income, enabling them to import consumption goods unavailable on the island, such as motorcycles, outboard motors, cars, or television sets. The same level of imports, reached through the development of manufacturing exports, the acceptance of large foreign military activities, or of tourism on a very large scale, might be far more disruptive of the indigenous culture and might have some social and psychological costs for indigenous popula-

tions, as the examples of Hawai'i, Guam, French Polynesia, and others seem to show.

Welfare gains from emigration have been shown to be a very general extension of the welfare-gains-from-trade theorem: all individuals from the sending and receiving countries can be made to benefit from those gains, provided there is a compensation scheme whereby emigrants pay nonmigrants of their own country of origin a (carefully calculated) compensation, thereby ensuring that no individual is made worse off than before emigration occurred (Kemp 1993). This is, in effect, more or less what remittances achieve. Thus, policies to counter the Dutch-disease effect of emigration and remittances on private domestic savings and private domestic sector investment might be superfluous or, even worse, detrimental to the "national" welfare of a community made up of "transnational" families.

Another welfare gain from emigration cannot be measured. The MIRAB system opens up the set of available opportunities to Islanders. All individuals may exercise more choice over their lifestyle and be freer to choose their geographical, cultural, social, and economic environment at different stages of life, according to personal tastes, which may vary with age. Many young people, for example, will want to emigrate to see the big cities of the world. Many older adults will want to retire to their home village. Those who find it hard to adapt to western ways will come back sooner and live a more traditional, modest but unhurried lifestyle on the island, with imported amenities that could not exist without remittances from relatives. This model gives Islanders a choice. They can have the best of both worlds—better living standards in the islands, and a fallback village sector for emigrants who have had enough of the "rat race" of the western industrial cities. This very important welfare-enhancing feature of the migration network system is hard to measure, but it should not be neglected. Most people living in the industrial states don't have this choice (or think they don't).

If it were possible to compute the gross *transnational* disposable income of Tonga, including not only remittances, but the total overseas income of the emigrant population (45,000 people abroad compared to 100,000 living in Tonga in 1992), it would probably reveal a hefty rate of growth per capita for the last twenty years, instead of the dismal growth exhibited by current gross domestic product (0 percent per year between 1985 and 1990; World Bank 1993a). Whether or not the corresponding

income was spent in Tonga or elsewhere is irrelevant; in the end the overall welfare of the whole community is what counts.

The resources of Samoans, Cook Islanders, Niueans, Tokelauans, Tuvaluans, I-Kiribati, Fijians, Indo-Fijians, and Tongans, are no longer confined to their national boundaries. They are located wherever these people are living, permanently or otherwise. . . . Although this flow of goods is generally not included in official statistics, much of the welfare of ordinary people of Oceania depends on an informal movement along ancient routes drawn in bloodlines invisible to the enforcers of the laws of confinement and regulated mobility. (Hau'ofa 1994, 156)

Would it be better today if Tonga, the Cook Islands, or Western Sāmoa had followed the standard recipes for “self-sustained” development, by specializing in agricultural exports, for example (a very risky venture especially when cyclones seem to strike almost every other year), or by attempting to develop mass tourism, at the risk of provoking great disruptive changes in the local cultural and social structure, and of living at the mercy of a very whimsical clientele (cyclones are also a handicap here)? People chose instead to emigrate to relieve their islands from the law of diminishing returns to labor when land becomes scarce, and to visit and establish themselves in overseas countries instead of trying to lure overseas travelers for a living. Is not this a wise choice in the end, from the collective welfare point of view?

Material welfare is not the only thing that matters, of course. Communal living, the reciprocity system, are all part of a culture that emphasizes shared values. These values conflict with private sector development because of “the expense of meeting communal commitments from any business profits. Available funds from businesses are often spent on extended family commitments, ceremonial expenses, church contributions, travel and gifts” (MacMaster 1993, 9). But “taxing” business people and civil servants, who represent the modern sector, to subsidize communal and family activities in the traditional sphere, is perfectly rational, in the end. “Let the neo-colonial bureaucrats or the development economists complain as they may, this is neither ‘waste’ nor ‘backwardness’. Precisely *it is development* from the perspective of the people concerned: their own culture on a bigger and better scale” (Sahlins 1992, 26). The traditional sector in the Pacific Islands produces some material welfare, such as food and mats and so on, *and* (as a by-product) immaterial welfare, such as

ceremonies, gatherings, dancing and singing contests, and a relatively carefree way of living.

People who live in the traditional sector “tax” those who choose the modern sector (businesspersons, civil servants, emigrants), for the same reason taxpayers in the modern industrial states have to subsidize public parks, natural reserves, museums, ballet, symphonic orchestras. The natural environment and the arts representing a cultural heritage are believed to represent a welfare value above and beyond their market value. They should be subsidized because they bring about “positive external effects” for the community. The same is true for “traditional sector activities” in Pacific islands.

If one assumes that traditional activities produce positive cultural external effects, then it is easy to show formally, using a “collective welfare function” with both material and “cultural” welfare components, that a tax on the modern sector to subsidize traditional sector activity is required to reach the optimum resource allocation necessary to maximize welfare (Poirine 1993a). This is just what is done informally in Pacific islands, through remittances from emigrants and payments made to the extended family and village community by businesspersons, professionals, and civil servants. It may lead to a lower gross domestic product, but, in theory at least, to a higher collective welfare level, if welfare is considered the result of both material and cultural outputs from a community.

#### *Aid without Apology: Aid Is Trade*

International aid is also a receipt from an invisible export of geostrategic services (Poirine 1993b, 1995c), and there is no reason to apologize for or feel guilty about receiving it. It has proved a rather stable source of revenue, especially for the sparsely populated islands, and for those that have maintained the closest political ties with their former colonial power, even though the end of the cold war has probably diminished the “world price” of this geostrategic “commodity.”

One of the main arguments against aid is its “booming sector effect,” which “shifts the economy away from the nation’s comparative advantage” (Weisman 1990, 20). But what if the nation’s comparative advantage was aid, or, more precisely, the export of geostrategic services traded against aid? Many scholars have studied the motives for bilateral aid, and most of them have found, by means of regression analysis, that aid seems guided more by the “donor’s interest” than by the “recipient’s needs.”<sup>9</sup>

Why do islands, especially small islands, Pacific islands, and nonindependent islands, receive much more bilateral aid per capita than do other countries? (Poirine 1995c). Table 2 shows that island territories and associated states receive \$3,063 per capita, while independent islands of less than one million people receive \$83 per capita, that is, 37 times less. French island overseas territories and departments receive \$3,542 per capita, 354 times as much as the average of \$10 per capita received by all less developed countries. Tables 3 and 4 show that American Sāmoa receives 5 times more aid than Western Sāmoa, New Caledonia receives 17 times more aid than Vanuatu (a former joint French-British territory), and Guam receives 17 times more aid than does Kiribati.

Islands have more strategic importance than continental countries of equivalent land area. They command great surfaces of ocean; they are often just off the coast of great continental countries; they are ideal “aircraft carriers,” missile bases, or radar bases in case of war. The big industrial states know by experience that it is of utmost importance that no rival power be able to install strategic bases or even to make agreements with island governments to allow for future possible authorizations to do so in case of a crisis.<sup>10</sup> The third world war, had it happened, would have occurred because of the Cuba missile crisis: Cuba is an island, strategically located off the coastline of the United States. The declining geostrategic value of Cuba since the breakup of the Soviet Union and the end of the cold war has meant a sudden and catastrophic fall in the amount of aid received by Cuba from its former donor. The next to last war in which the British army and navy were involved took place in the Falkland Islands in 1982. Many lives were taken there not long ago, and quite a few mighty vessels were sunk, just for a very small island off the coast of Argentina. A year later (1983), nineteen American soldiers were killed in Grenada in order to drive the Cuban army out of this island. Australia gives most of its aid to its closest island neighbor and former colony, Papua New Guinea.

Other world powers want to use islands for atomic or ballistic experiments, because they are “out of the way” and difficult to spy on by rival powers, and because their isolation minimizes the risk of such experiments for the home population. Nonindependent islands (territories, associated states) have more strategic value for the donor country because it retains sovereignty rights over defense matters, whatever the legal arrangement through which this is obtained (such as the Compact of Free Association in the case of the United States and the Micronesian states of the Republic

Table 2. Average aid per capita and Aid/GDP ratio according to geographical and political status (1992)

	Population		Bilateral aid received		Compared to LDCs = 1	Gross domestic product		Aid/GDP	
	thousands		\$ millions	Per capita		\$ millions	Per capita	Percent	Percent
Independent islands of more than 1 million people	45,676		866	19	2	37,602	823		2
Independent islands of less than 1 million people	5,402		471	87	9	27,143	5,024		2
Independent Pacific islands	5,511		563	102	10	5,580	1,013		10
Island territories or associated states	2,813		8,716	3,063	306	26,983	9,593		32
Pacific island territories or associated states	839		2,540	3,028	303	10,047	11,975		25
French overseas territories and departments	1,898		6,722	3,542	354	17,169	9,047		39
All Pacific islands	6,350		3,203	504	50	15,628	2,461		20
All less developed countries	4,278,384		43,067	10	1				

Sources: OECD 1994; World Bank 1994; Belorgey and Bertrand 1994; Evrard and Vigneron 1994; IEOM 1993; IEDOM 1993; ITSTAT 1995; Bank of Hawaii 1995a, 1995b, 1996a, 1996b.

of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau).

This is why islands receive much more aid per capita (especially Pacific islands, which eloquently demonstrated their strategic value in the last world war, even though they seem extremely remote), and why territories and “associated” islands receive even more.

It is neither moral, nor immoral, to receive aid from industrial states, if nothing immoral is asked for in return. An island has strategic value, it can sell “strategic services” to world powers. It is its comparative advantage in international trade. The only problem with this is the sustainability of aid. When the rivalry between great world powers is less acute, as has been the case since 1989 and the end of the Soviet Union, then the demand for strategic services falls somewhat. There is less competition between the buyers of this commodity on the world market. In many cases there is now a monopsony (only one buyer), which is not favorable for the sellers. Revenues from strategic services might be less stable than those from remittances, in the end-of-the-cold-war context, as Cuba, French Polynesia, and the Micronesian islands associated with the United States now seem to be experiencing at their expense. (For a formal “theory of aid as trade,” see Poirine 1993b, 1995c.)

## CONCLUSION

There is no reason to hate or love MIRAB, to judge it evil or good. It is neither moral nor immoral. It is a pareto-efficient, welfare-maximizing strategy to export labor services and geostrategic services when this is in line with the comparative advantage of a given country. Dutch-disease effects of the revenues from such export activities are predictable by-products of this strategy, as resources are redirected toward their most efficient use, that is, the production of future migrants by investment in human capital, which entails housing and consumption expenditures, not “physical investment,” or the production of geostrategic services involving more public sector jobs in military bases or in government. The welfare of the whole community, whatever its residence, grows as a result of this international specialization strategy, as it should in every case when a restriction on the free international trade of goods and services is removed. Labor is just another good, and therefore the welfare gains from emigration are just a particular case of the welfare gains from trade liberalization (Kemp

Table 3. Population, bilateral assistance, and gross domestic product for small islands, 1992

Island territories and associated states	Population	Bilateral aid		Gross domestic product		Aid/GDP	Status
	thousands	\$ millions	Per capita	\$ millions	Per capita		
<i>Pacific Islands</i>							
American Samoa	49.0	78.0	1,592	270	5,500	29	US territory
Cook Islands	19.5	11.8	605	56	2,889	21	NZ associated state
Federated States of Micronesia	114.0	128.0	1,123	287	2,516	45	US associated state
French Polynesia	203.7	746.4	3,664	3,147	15,449	24	French overseas territory
Guam	139.0	684.0	4,921	2,913	20,958	23	US commonwealth
Republic of Marshall Islands	52.0	102.5	2,000	85	1,640	120	US associated state
New Caledonia	178.0	630.5	3,542	2,668	14,990	24	French overseas territory
Niue	2.5	4.5	1,800	7	2,825	64	Self-governing in free association with NZ
Northern Mariana Islands (CNMI)	50.0	189.6	3,789	574	11,472	33	US commonwealth
Republic of Palau	15.6	10.7	686	18	1,162	59	US associated state
Tokelau	1.8	5.3	2,963	1	667	444	NZ territory
Wallis and Futuna	13.9	49.0	3,528	21	1,500	235	French overseas territory

*Atlantic and Caribbean Islands*

American Virgin Islands	102.0	644.6	6,320	1,612	15,800	40	US territory
Bermuda	58.0	0.1	2	1,334	23,000	0	UK colony
British Virgin Islands	16.6	2.1	126	166	10,000	1	UK colony
Falkland Islands	2.1	0.4	190	17	8,200	2	UK colony
Guadeloupe	400.0	1,022.2	2,555	2,816	7,040	36	French overseas department
Man	70.0	0.1	1	840	12,000	0	UK colony
Martinique	369.0	1,537.1	4,166	3,117	8,447	49	French overseas department
Montserrat	12.0	4.7	392	48	4,000	10	UK colony
Dutch West Indies	192.0	88.9	463	1,536	8,000	6	Netherlands' territory
Saint Helena	7.0	15.2	2,171	14	2,050	106	UK colony
St Pierre and Miquelon	6.4	34.0	5,305	16	2,500	212	French colonial territory
Turks and Caicos Islands	12.0	23.8	1,983	36	3,000	66	UK colony
<i>Indian Ocean Islands</i>							
Mayotte	99.8	118.8	1,191	100	1,000	119	French colonial territory
Réunion	627.0	2,583.8	4,121	5,284	8,427	49	French overseas department
Total territories and associated states	2,812.9	8,716.1	3,099	26,983	9,593	32	

*Sources:* OECD 1994; World Bank 1994; Belorgey and Bertrand 1994; Evrard and Vigneron 1994; IEOM 1993; IEDOM 1993; ITSTAT 1995; Bank of Hawaii 1995a, 1995b, 1996a, 1996b.

Table 4. Population, bilateral assistance, and gross domestic product for independent island states, 1992

Independent States	Population		Bilateral aid		Gross domestic product		Aid/GDP	
	thousands	\$ millions	\$ millions	Per capita	\$ millions	Per capita	Per capita	Percent
<i>Pacific Island States</i>								
Fiji	750.0	54.1	72	1,566	2,088	3		
Kiribati	77.4	22.0	284	59	760	37		
Nauru	9.6	0.2	21	123	12,800	0		
Papua New Guinea	3,920.0	348.9	89	3,214	820	11		
Solomon Islands	335.0	27.4	82	198	590	14		
Tonga	92.0	19.7	214	116	1,262	17		
Tuvalu	9.4	8.4	894	4	376	212		
Vanuatu	156.0	32.4	208	183	1,171	18		
Western Sāmoa	162.0	49.9	308	118	730	42		
<i>Atlantic and Caribbean States</i>								
Anguilla	9.0	3.5	389	9	1,000	39		
Antigua and Barbuda	67.0	4.0	60	454	6,770	1		
Aruba	71.2	29.9	420	781	10,970	4		
Bahamas	262.0	0	0	3,162	12,070	0		
Barbados	259.0	0.8	3	1,694	6,540	0		
Cape Verde Islands	389.0	82.0	211	331	850	25		
Cayman Islands	20.0	0	0	440	22,000	0		
Cuba	10,713.0	24.9	2	10,177	950	0		
Dominica	72.0	8.3	115	176	2,440	5		
Dominican Republic	7,321.0	52.0	7	7,687	1,050	1		

Grenada	91.0	5.6	62	210	2,310	3
Haiti	6,593.0	76.9	12	2,505	380	3
Iceland	261.0	0	0	6,233	23,880	0
Jamaica	2,396.0	112.7	47	3,211	1,340	4
Saint Kitts Nevis	41.6	3.8	91	166	3,990	2
Saint Vincent and Grenadines	109.0	6.5	60	217	1,990	3
Santa Lucia	155.0	15.0	97	453	2,920	3
Sao Tome and Principe	121.0	27.0	223	44	360	62
Trinidad and Tobago	1,268.0	0	0	4,996	3,940	0
<i>Mediterranean States</i>						
Cyprus	718.0	10.6	15	7,051	9,820	0
Malta	357.0	6.0	17	2,606	7,300	0
<i>Indian Ocean States</i>						
Comoros	510.0	23.1	45	260	510	9
Madagascar	12,366.0	215.5	17	2,844	230	8
Maldives	229.0	15.0	66	115	500	13
Mauritius	1,099.0	34.7	32	2,967	2,700	1
Seychelles	69.2	15.4	223	378	5,460	4
TOTAL INDEPENDENT STATES	51,078.4	1,336.2	26	64,746	1,268	2
Total of independent states with population < 1 million	5,402.4	470.6	87	27,143	5,024	2
Total of independent states with population > 1 million	45,676.0	865.6	19	37,602	823	2

Sources: OECD 1994; World Bank 1994; Belorgey and Bertrand 1994; Evrard and Vigneron 1994; IEOM 1993; IEDOM 1993; ITSTAT 1995; Bank of Hawaii 1995a, 1995b, 1996a, 1996b.

1993). Remittances are a cultural device that help make everyone better off after specialization in labor export, by ensuring compensation for the nonmigrants from the sending country. If they did not exist, welfare economists would invent them. Fortunately, the people of Oceania did not wait for economists to invent the MIRAB way to obtain welfare gains along the pareto optimal rule: making no one worse off after emigration, but a lot more people better off. They will probably keep on doing it as long as they find it benefits them.

As for dependence on international aid, if one recognizes that aid *is* trade, then the exhortation to “trade, not aid,” is clearly misplaced. Aid is no more unstable or unsustainable than any other kind of export revenue. Some islands are dependent on export revenues from one or two commodities, such as sugarcane, phosphate, or tourism; this dependence may be much riskier in the long run. There is no reason to feel guilty or to apologize about receiving aid money, as some puritanical moralists would suggest. It follows from another comparative advantage of small islands: a privileged geographical position that enhances their strategic value, a small population that enables this “geostrategic service” to earn more dollars per capita. Small islands should go on accepting aid without apology, and even though this kind of export may give unstable revenues over the years, it is probably far more reliable than crop exports (risky for cyclone-prone tropical islands and with highly unstable world prices) or tourism (a very whimsical and cyclical business). The amount of aid may be negotiated and planned in the long term (see Micronesia’s fifteen-year compacts of free association and French Polynesia’s ten-year *pacte de progrès*, from 1996 to 2006).

The smaller the island’s population, the closer its political and military ties with world or regional powers, the higher its comparative advantage in geostrategic service production.

The Dutch disease or “booming sector” effect of aid and remittances is not a disease after all. It is just an optimal resource allocation process, whereby resources are made available to the “booming sectors,” where the rate of return on (capital and human) investment is much higher, thus crowding out resources available to the “traded goods” sectors: agriculture, industry, and tourism, where returns are lower. This is just what is required for a globally efficient economy, provided the receipts from exported labor and geostrategic services are sustainable. This is now the

heart of the matter, however, because since the end of the cold war and the collapse of the Soviet Union, the geostrategic value of islands like the Marshall Islands, Palau, the Northern Marianas, Guam, and French Polynesia seems to dwindle rapidly. The end of the “geostrategic rent” is predicted for 2001 in the former trust territory of Micronesia (2003 for Palau), and for 2006 in French Polynesia.<sup>11</sup> These islands should take measures now to take into account this shift in their comparative advantage, by boosting other export industries, such as tourism. Such a radical change, from military activity to tourism, was successfully accomplished by Hawai‘i and Guam, for example. It requires a strong political will and a far-sighted economic policy, when the population has been used to relying on “geostrategic rent” for a very long time (the problem is similar to that of oil- or phosphate-dependent countries when the natural resource is depleted). The failure to adapt in time to the changing comparative advantage is really the disease that must be feared. The Dutch successfully recovered from their natural gas boom, Hawai‘i and Guam from their “geostrategic boom.” It is to be hoped that Micronesia’s and French Polynesia’s economies will also adapt to the new reality of the post-cold war era. Pearl farming and tourism are two possible alternatives to replace geostrategic rents.

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I WISH TO THANK *John Lodejwicks and the Centre for South Pacific Studies, University of New South Wales, for inviting me to the centre, where the first draft of this paper was written. I am most grateful to Linley Chapman for her extensive editing of my manuscript. I apologize for any remaining imperfections; my command of the English language is far from perfect.*

## Notes

1 Another theory is that remittances are motivated by a desire to minimize risk by pooling income from several geographically diversified labor markets, remittances being viewed as insurance premiums against shortfalls in income, with family members striking an implicit co-insurance contract (Stark 1991a, chapters 4,5,6; Rempel and Lobdell 1978; Lucas and Stark 1985; Kaufmann and Lindauer 1986). Other authors have explained private intrafamily transfers by

an exchange of cash for private in-kind services (Bernheim, Sheifer, and Summers 1985; Cox 1987). This exchange can be contemporaneous or extended over the life cycle: "Cash transfers given today might be repaid, in cash or in kind, in future years" (Cox and Jimenez 1990, 209).

2 For example, Stark proposed a model of purely altruistic behavior (1991a, 237–238), then rejected it, but retained the possibility that some part of remittances may come from "enlightened self-interest" or "tempered altruism." "But this does not deny that altruism may be an important or even critical component. Rather, the evidence in this chapter lends support to a more eclectic model, which is labeled tempered altruism or enlightened self interest" (Stark 1991a, 248). Another example is Cox: "Two motives are considered: altruism and exchange. Evidence presented here casts doubt on the altruistic model of transfer behavior" (1987, 508).

3 By contrast, family solidarity seems to vanish in the welfare states, where mutual help between generations has been institutionalized and has become in most cases monopoly of the mandatory pension and social security systems.

4 A good example of a contrast between aided and nonaided development is given by Réunion and neighboring Mauritius in the Indian Ocean. While manufacturing and tourism stagnate in the French Department of Réunion, an island heavily subsidized by the French government (\$4,121 per capita; see table 3), they are booming in Mauritius, where aid per capita is more than a hundred times lower (\$32; see table 4).

5 In modern welfare states, people pay back through social security payments to the elderly or pay for pensions, and those payments replace help to parents and grandparents. But people pay anyway, through a complicated, very elaborate (and costly) national transfer system.

6 Most of them are unrecorded (see Brown 1995a).

7 See Poirine (1995b). Foster (1995) found a strong negative correlation between remittances and the borrowing rate of interest in the case of Tonga and Western Sāmoa. This is evidence in favor of the "informal loan" theory of remittances: when interest rates rise for borrowing, home families tend to save less for human capital investment for children, and more for capital investment (housing, farms), to save the opportunity cost of the higher interest rate on borrowing. This lowers the "home" supply curve of loanable funds for human capital investment, and therefore raises the "shadow family interest rate." Children then borrow (informally, through their home guardians) from emigrant parents, siblings, or relatives, to finance their education. Emigrants are willing to increase their supply of loanable funds because the shadow family interest rate has gone up and compares favorably with the market interest rate on savings in the host country.

8 In practice, to follow these rules, countries like Tonga and Western Sāmoa should bring the growth of new migration under control, since they are currently experiencing a natural growth rate in the vicinity of 2.5 percent, while the island resident population is growing at a rate of only 0.5 percent, which means that the emigrant population grows much faster than the resident population. That is, the share of emigrants in the total population is continuously increasing. Since 1990, private unrequited transfers have been declining in Tonga, where expatriates numbered 45,000, while the resident population numbered 95,500 in that year, which translates to a 32 percent share of emigrants in the total population. Private unrequited transfers have been steadily increasing in Western Sāmoa, where the expatriate community numbers 100,000 while the resident population numbers 160,000, which translates to a 38 percent share of emigrants in the total population (Cuthbertson and Cole 1995). In Tonga, however, remittances have declined as a percentage of gross domestic product, from 40 percent in the mid-eighties to 28 percent in 1989. Ahlburg made a different estimate for emigrants: he stated that in 1989 there were 39,400 Tongan-born nationals and 76,200 Western Sāmoa-born expatriates (1991), which translates respectively into 29 percent and 32 percent of the total resident and expatriate population.

9 For a recent review of the literature on bilateral aid, see Gounder (1994). Among the authors who found empirical support for the “donor’s interest” theory, are Maizels and Nissanke (1984) and McKinlay and Little (1977), and for island states and territories, Poirine (1995c).

10 One of the main provisions of the Compact of Free Association between the United States, the Republic of the Marshall Islands, the Federated States of Micronesia, and Palau is to deny any other power the right to use their territory for strategic or military purposes. In exchange, the United States will provide for fifteen years an amount of aid much greater than an independent non-“associated” island would receive.

11 The “*loi d’orientation pour le développement de la Polynésie française*” provides French Polynesia 18 billion Pacific francs (US\$180 million) a year from 1996 to 2006, to compensate for the loss of an equivalent annual amount from military transfers provided before 1996 and linked to military spending in connection with French nuclear testing in the Pacific, which came to an end in April 1996.

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1994 *World Tables 1994*. Washington, DC.

### *Abstract*

Bertram and Watters defined the MIRAB model (Migration, Remittances, Aid, and Bureaucracy) as a development process where remittances and foreign aid are the main resources of small island economies. Bertram suggested that it is a perfectly “sustainable” development strategy, as long as the “rent” from remittances and international aid continues. But there is a great reluctance on the part of officials and economists to accept the model as valid and sustainable. To them, it does not seem right to live off international aid and migrant remittances. A favorable case can be made for MIRAB. Pacific Island peoples and governments should not feel guilty about accepting aid and remittances, because such “external resources” may be seen as representing revenues from invisible exports to industrialized countries. By exporting labor and geostrategic services, small Pacific Island states make the best use of the only comparative advantage they may have in international trade. Donor countries and migrant host countries also gain from this arrangement. In this paper, I look at reasons why some people hate MIRAB, then show why everyone should love MIRAB.

KEYWORDS: aid, migration, remittances, small island states, sustainable development