

Introduction: The MIRAB model in the twenty-first century¹

Geoff Bertram

School of Economics and Finance, Victoria University of Wellington, PO Box 600, Wellington 6001, New Zealand.
E-mail: geoff.bertram@vuw.ac.nz

Abstract: *The papers collected in this volume were originally presented at a conference in February 2004, on the theme 'Beyond MIRAB: The Political Economy of Small Islands in the Twenty-First Century'. Several of the papers in the collection point towards the emergence of a new three-way taxonomy of small-island socioeconomic formations, comprising MIRAB, PROFIT and SITE ideal-types. The key economic flows in the first are remittances and aid; in the second, jurisdictionally-related flows such as tax-haven and money-laundering transactions; and in the third, tourism revenues. All three ideal-types correspond to potentially sustainable temporary equilibria, but in all cases the existing set-up is path-dependent, and subject to regime switch if disturbed. Conceptualisation of the small-island world as a field of multiple equilibria and path dependence points to the future importance of event studies by island researchers. The collection includes also new research on the theory of remittances, and case studies of the MIRAB process and the transnational migrant diaspora.*

Keywords: aid, diasporas, migration, MIRAB, multiple equilibria, remittances, small islands

A quick review of the model

In February 2004, a group of researchers gathered in Wellington, New Zealand, to discuss the current state of research into the political economy of small islands in the world system and, in that light, the future of the MIRAB model.² This edited collection of some of the papers presented at the conference provides a stock-take of the present state of research on small islands, and points the way to a number of avenues for further research.

The MIRAB model originated as an attempt to model the stylised facts of modern economic development in a number of small Pacific islands (Bertram and Watters, 1984, 1985, 1986; Bertram, 1986, 1987; Watters, 1987). The five island economies with which we started in 1984 – Cook Islands, Niue, Tokelau, Kiribati and Tuvalu – were emerging from the colonial era with a variety of constitutional arrangements, but with a common heritage of colonial welfarism.

All had a long history of public-sector-led investment both in infrastructure assets and in so-called 'development projects'. The infrastructure assets served as long-term pillars

supporting the quality of life in the island economies. In contrast, the numerous development projects had short lives, low returns, and were virtually never sustained beyond the life of the original assets.

All five of our case studies lacked the extremes of impoverishment and misery found in sub-Saharan Africa, Latin America and South Asia. All had long experience of coping with, and benefiting from, the forces of globalisation. Long before the Washington Consensus was formulated by the IMF and World Bank, most of these small-island economies had moved beyond it. Trade restrictions were few or absent, capital flowed freely, monetary union with a larger metropolitan economy was the norm, transnational migration was a major determinant of island demography, and aid and remittances underwrote the long-run sustainability of trade deficits and government budgetary deficits which would have been crippling for less open economies.

The nationalistic development models and policies enunciated and promoted by most of the aid-donor community had little leverage in these transnationalised economies, yet all players in the aid and development game engaged (and still engage) in a rhetorical display of alle-

giance to those models and policies, resulting in a radical disconnection of policy discourse from economic reality. The contradiction was most dramatically apparent in the nature of the physical capital stock accumulated in these tiny outposts on the fringe of world capitalism, and in the modes of articulation of local with global markets for labour and human capital.

Take first physical capital. Here was an intriguing paradox: 'productive' capital was unproductive, and 'unproductive' capital was productive. Infrastructure ('unproductive') investments in our island case studies were obviously successful in promoting the physical and cultural welfare of island residents. Schools, hospitals, roads, reef passages, port facilities, airfields, radio communication links, housing, water supply, wastewater treatment (in at least some islands), government buildings, had all been provided (funded) by the colonial powers, and were kept in operation by post-colonial aid. These assets were highly valued by the island communities, as essential means of remaining linked to the global economy and in touch with the ideas and cultures of the outside world. Investment in these public infrastructure assets was originally justified in terms of their ability to supply direct 'use values'³ to the island communities, and they continue today to be valued for their ongoing ability to supply those use values: education, health, administration, air and sea communication, land transport.

In strong contrast, supposedly 'productive' capital assets, installed ostensibly to allow island communities to produce commodities for sale on international markets, were (and are) generally underutilised and run-down. Successful capitalist enterprises in our five small-island cases were concentrated in two main niches: small-scale retail trade supplying (usually imported) goods to the local market, and larger export-oriented ventures kept alive only by ongoing subsidies or special treatment from aid donors (whose own credibility often hinged on case studies of so-called 'development success stories').

In the absence of ongoing subsidies, the quest to realise exchange values by means of commercial export production provided no self-sustaining economic dynamic. Copra (the colonial-era staple) was moribund everywhere. Cook Islands orange juice had disappeared

from the commercial scene (apart from the 'Raro' brand name owned by a beverage producer in New Zealand). Niuean passionfruit was on its last legs. Kiribati's phosphate reserves were exhausted. Tuvalu's main export was postage stamps (printed in Australia, for sale to philatelists).

Yet amid this wreckage of capitalist modernisers' dreams, strong and vibrant islander communities were getting on with a life which in material, cultural and political terms would have been the envy of most of the world's poor.⁴ The question we asked was: what was keeping this long-standing economic and social system in what appeared to be a sustainable steady state? The answer, we decided, lay in two stock-flow relationships:

- The stock of overseas-resident migrants and their descendants, which sustained the flows of remittances and new migrants
 - The stock of domestic public-sector employment, which was sustained by the flow of aid
- Those two stock-flow nexuses make up the acronym MIRAB: migration–remittances and aid–bureaucracy. These were the locomotives to which was harnessed the rest of the ideal-type MIRAB small-island economy. The sustainability and development prospects of such economies relied upon the continuing operation of stabilising negative feedback loops which kept the aid flowing, the migrants moving, the bureaucrats operating and the remittance networks alive, while the islanders' society and culture were reproduced through time and across transnational space.

From the outset, this analysis cast doubt on the widespread perception that small islands suffered from 'vulnerability' (see, e.g. Briguglio, 1995; Briguglio and Kisanga, 2004). In a globalising world, inhabitants of small islands have open to them a myriad of evolutionary responses to external forces that potentially enable them to seize niches of opportunity in the global economy, and thereby insulate themselves from global economic shocks. Being small means

- Being below the political radar for most large-country policymakers: the benefit–cost ratio for a government of imposing sanctions on an island community is usually low
- Being a price-taker in most global markets: this absence of market power means that

islander migrants face no demand-side constraint on their ability to exploit market niches

- Being able to form solidaristic networks of mutual support in the face of threats or danger: although personality clashes in small communities admittedly can be more corrosive than in large ones, solidarity is nevertheless easier to establish and sustain in small communities in general.

The sustainability or otherwise of MIRAB economies remains an open research issue, because in the long run remittances may suffer decay and aid donors may suffer fatigue. Empirically, however, the originally identified MIRAB economies still fit the model reasonably well. Empirically also, a number of scholars around the world have reported finding MIRAB characteristics in a wide variety of island (and some non-island) settings. Royle (2001: 218), for example, describes the economy of St Helena in the South Atlantic as 'a classic case of a Pacific-style MIRAB economy, but situated in the Atlantic Ocean', and elsewhere (pp. 184–185) mentions St Kitts and the Marshall Islands as further examples.

Cook and Kirkpatrick (1998) modified the original model from Bertram (1986) to allow for on-island unemployment, and for in-migration as well as out-migration of labour. With these revisions, they consider that the model fits well the experience of the Federated States of Micronesia (FSM). Bertram (1999: 114) listed also French Polynesia, Western Samoa, Tonga, Easter Island, the US-associated island groups of Palau, the Marshall Islands, the Marianas and FSM. Treadgold (1999) added Norfolk Island before its tourism boom. Poirine (1998) added the US Virgin Islands, Guadeloupe, Martinique, St Pierre et Miquelon and Mayotte. McElroy and Morris (2003: 49) added Cape Verde, Comoros, and Sao Tome and Principe.

High-level critiques

Papers to the 2004 conference brought forward critiques of the MIRAB model both from 'within' (analysing its internal logic and empirical applicability) and from 'without' (in particular the methodological complaint that the model is a reductionist economic exercise which fails to engage with the richness and detail of social

and economic reality as lived by islanders themselves). The first four papers in this collection (by Baldacchino, Fraenkel, McElroy and Marsters *et al.*) span this range of critique.

Fraenkel

Fraenkel provides a concise review of key economic elements in the MIRAB model, and of the empirical evidence for MIRAB structures and processes, focusing in particular on evidence of crowding-out effects along the lines of the long-standing economic literature on 'Dutch Disease'. He points out that available statistics are patchy in both coverage and accuracy – the latter demonstrated by Fraenkel's own study of the Yazaki plant in Samoa, exclusion of which from the export statistics has caused Samoan export earnings to be understated by about two-thirds (an error which means that the official statistics seriously overstate the country's trade deficit).

Fraenkel's characterisation of the MIRAB model as (i) descriptively accurate for a subset of island economies, but (ii) weak on predictions regarding the future dynamics of economic development, and (iii) unclear on policy prescriptions, presents a stimulating challenge for future research. To take but one example, his description of the sharp upturn in black-pearl exports which followed a reduction in aid transfers to French Polynesia points towards the opportunity for researchers to use an 'event-study' methodology, focusing on the economic trajectory of individual island economies before and after significant events such as resource exhaustion, aid withdrawal, aid introduction, sharp changes in government policy (particularly host-country policies affecting migration access), and shifts in the geopolitical situation in the Pacific. Fraenkel draws attention also to the difficult measurement and classification problems presented by tourism earnings, which can be construed either as rents on natural resources, or as *de facto* export earnings.

Marsters *et al.*: Against reductionism

In the methodology of social science there has always been a methodological gulf between proponents of a reductionist deductive empiricism (first build a logically coherent model, then test it against evidence from a reality which

is assumed to be external to the researcher), and proponents of local meanings and understandings as the starting point from which the social scientist seeks to translate the story of each place and culture in terms that can be understood by the inhabitants of other places and cultures. A critical view of the MIRAB model from the latter methodological perspective is provided by Marsters, Lewis and Friesen. They argue that 'there is much going on in the constitution of identity and remittance practice that resists reduction . . . and is deserving of close scrutiny. If we are concerned with policy and the sustainability of remittances, misreading motivations is dangerous. More generally, it is incumbent upon us to be concerned with understanding what it is that we aim to sustain. . . . We argue for a rethinking of remittances that begins with a different metaphor – the network'.

The 'network' concept advanced in their paper involves 'a transnational formation of places, people, beliefs, values and practices, and not simply the nation . . . sustainability might be reinterpreted as less the problem of promoting national economic growth, and more [that of] encouraging the [flourishing] of transnational networks'. In focusing thus on the transnational dimension of islanders' activities and behaviour, Marsters *et al.* give new resonance to the concept of the 'transnational corporation of kin' which appeared in the original formulation of the MIRAB model, and which still fits well within the burgeoning new literature on migrant remittances in the global economy, in which the 'transnational family' appears as a central ideal-type construct (World Bank, 2004: Chapter 7; 2004: appendix A).

The main methodological prescription offered by Marsters *et al.* is to 'broaden the focus from the economic to more meaningfully incorporate the social, the cultural, and the personal'. Poets and novelists, along with anthropologists, geographers and historians, may well have the edge on economists in pursuing a deep understanding of the social processes which underlie the migration and remittance behaviour of islanders.

In self-defence, I would argue that the methodology which led to the MIRAB model was inductive rather than deductive. It began not from any preconceived set of assumptions about

reality, but from the experience of going into the field and the available data, and attempting to translate the meanings and phenomena that we found there into the paradigm of economics. When working in this inductive way using a core of economic theory, it is always important to take seriously the sort of methodological criticism offered by Marsters *et al.*, in order to stay in touch with experience and trends among the islander communities – not necessarily in order to abandon the naturalist-empiricist way of doing social science, but because the world of islands is a fluid and dynamic place where the kaleidoscope can shift with little or no notice. I shall have more to say about path-dependent kaleidoscope dynamics below.

Baldacchino: Coexistence of multiple ideal-types

Godfrey Baldacchino's paper opens a third line of critique of the MIRAB model – that it has limited applicability outside of a subset of the world's islands, because there are numerous island economies which do not exhibit MIRAB characteristics. As he notes, '[t]he citizens of French Polynesia, Aruba, Bermuda and Iceland are counted among the world's top ten richest peoples . . . [O]nly the first can be considered a MIRAB economy'.

Baldacchino outlines alternative possible trajectories that small-island economies might follow, and the different economic and social structures that result. He begins from two premises: that small-island communities are active strategic players in determining their fate (not simply dominated by larger outside powers); and that because they lack a hinterland of their own, they are obliged to treat extra-territorial resources, not interior frontiers, as a substitute 'hinterland' to be colonised and exploited for the benefit of the islander population. For Baldacchino, the defining characteristic of small islands is this absence of the sort of interior hinterland that overhangs the economic and psychological life of larger, continental communities. With retreat into a geographic hinterland foreclosed, out-migration to other countries provides a partial substitute. At the same time, no cultural hinterland inhibits the whole-hearted adoption by islanders of metropolitan cultural attitudes and practices.

A MIRAB strategy is only one of a number of possible ways of exploiting an external hinterland, and Baldacchino locates it at one end of a spectrum of hypothetical strategic orientations an island community might pursue. Seeking to identify and describe the ideal-type alternative strategy at the other end of the spectrum, Baldacchino focuses on the political/jurisdictional dimension rather than the economic. Carving-out and deploying jurisdictional autonomy, he suggests, is an important means of advancing islanders' ambitions, and takes place in a process of carefully mediated interaction with the larger metropolitan partner.

The 'political economy of success' extends to 'discretion over taxation and offshore finance, . . . language policy, shipping registration and property ownership. . . . What we have here is a combination of free-riding by the smaller, island party in the context of (at times deliberate) oversight by the larger, metropolitan party, crafting in the outcome some kind of regulatory legitimacy; while the island faction never completely relinquish[es] the potential resort to the metropole, if and when dire straits so determine or suggest (such as budgetary shortfalls; environmental disasters; over-population; labour surpluses or shortages). In this way, they avoid that chronic vulnerability which results from systemic closure

These essentially political strategies differ from the MIRAB package, Baldacchino argues, in their emphasis on acquiring autonomy and using jurisdictional discretion, within an overarching unity between island and metropole. 'Utilising jurisdiction as a resource is one way of compensating for the dearth of conventional economic assets Hence, the essential characteristics of island elites are 'shrewd survival strategy . . . a flexible and creative diplomacy, adopting free-riding, . . . slipping free through the nets of regulation . . . a skills repertoire that the small and powerless deploy and, being small, get away with it'.

Stopping short of full independence, while negotiating access to spoils within a larger jurisdictional framework, Baldacchino sees as a general strategic orientation which leads to a MIRAB structure in only a subset of island economies. Especially in the context of (nominally) constitutionally integrated territories, local authorities can negotiate and exer-

cise various local powers which unlike the MIRAB quartet, . . . depend much more on the proactive nurturing of specific, local, jurisdictions, capacities, or powers and local 'good governance'.

Five dimensions of local jurisdictional autonomy are laid out by Baldacchino: P (people considerations); R (resource management); O (overseas engagement); FI (finance, insurance and taxation); and T (transportation). Baldacchino thereby constructs the acronym PROFIT – surely no less 'fancy yet meaningless' [his words] than MIRAB, but useful as a title for another pole of the strategic menu.

'PROFIT economies would differ from their MIRAB neighbours by being more interested in: a shrewd immigration and cyclical migration policy; engaging in tough external negotiations concerning the use of local mineral, natural, political and other imaginative resources; securing and controlling viable means of transportation; and luring foreign direct investment via very low/no taxes'. Relative to MIRAB economies, PROFIT ones would have more manufacturing and resource management; a diplomacy driven by procedural considerations rather than a direct quest for aid; a low reliance on aid and remittances to sustain local incomes; and strong financial management.

McElroy: Tourism as an engine of growth

Baldacchino's PROFIT ideal-type applies most readily to islands which operate as offshore banking centres, tax havens, ship registries and military outposts. What, though, is to be made of islands dominated by international tourism? The rapid expansion of tourism as a leading sector was not predicted in the original MIRAB model, and has opened the way for development of a successful profit-oriented private sector in island economies previously devoid of local development options. The deliberate attraction of tourist visitors by island communities in one sense belongs in the same basket as offshore financial centres and tax havens as a source of cash income derived from exploitation of local resources and comparative advantage.

In the case of tourism, however, those resources include intangibles such as remoteness and weather as well as tailor-made institu-

tional arrangements to facilitate ease of transacting (the latter include no-visa requirements at airports, use of metropolitan currency to avoid the need for exchanging money, and acquisition of familiarity with the language of the main tourist source areas). Tourism, in short, promises to be the face of a post-MIRAB, or non-MIRAB, commercially successful economic future for at least some small islands.⁵

McElroy's paper assembles comparative data for 36 small-island tourism destinations and argues that 'small, tourist-dependent islands represent a useful cluster or special case of island development', to which he attaches the newly coined term 'SITES' (Small Island Tourist Economies). McElroy notes that independent sovereign juridical status is potentially as much of a handicap for tourism development as it seems to be for MIRAB economies. Dependent political status finesses problems of currency, visa requirements and travel arrangements. Eight of McElroy's nine most developed resort islands (as measured by his Tourism Penetration Index, TPI) are political dependencies, while six of the eight least developed are sovereign states. Small size also emerges as an asset: larger islands (in terms of land area and population) have lagged behind in tourism development. McElroy's most highly developed tourism destinations overlap into Baldacchino's PROFIT category, while several of his sample of islands with the least developed tourism sectors exhibit MIRAB characteristics. Thus, the set of tourism-dependent small-island economies overlaps both the other two ideal-types, while overlaps between MIRAB and PROFIT cases are rare or non-existent. This suggests a three-way taxonomy.

At the low end of the tourism-penetration spectrum lie islands which fall into the MIRAB category such as Tonga, Comoros and Tuvalu. They exhibit not only relative under-development of their tourism sectors, but also a tendency for much of the measured tourist activity to be for reasons other than 'true holiday-making', such as business travellers and family visits by migrants. The observation that tourism is weak in these MIRAB economies, with hotel rooms occupied less than 50% of the time and only tenuous international transport and promotional linkages, raises a real issue for the 'lifecycle' model utilised by McElroy, with

its implicit assumption that there is some natural progression from low to high tourism penetration. An alternative explanation of his cross-sectional evidence on the TPI would be that some islands simply do not have the preconditions for high tourist penetration, and are as likely to move down as up the TPI ranking.

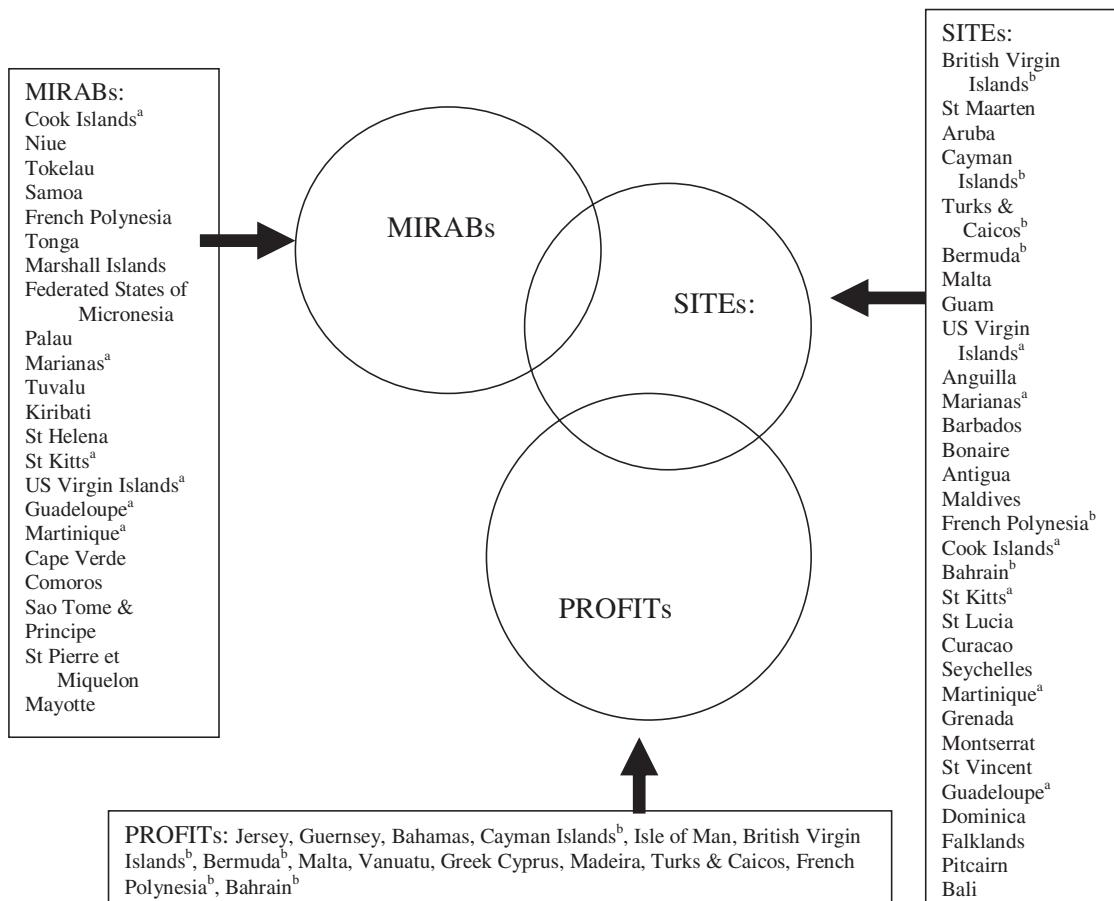
Towards a new taxonomy of islands

Figure 1 below sets out a provisional classification of 50 small islands into the three ideal-types discussed above. Six of the 22 MIRAB economies (Cook Islands, Marianas, St Kitts and Nevis, US Virgin Islands, Guadeloupe and Martinique) have significant tourism development, while five of the 14 PROFITs (British Virgin Islands, Cayman Islands, Bermuda, French Polynesia and Bahrain) combine significant tourism with offshore financial or military features. There is a conspicuous absence of overlap between MIRAB and PROFIT cases.

Starting from a taxonomy such as that in Figure 1, further comparative research can shed light on the transition probabilities from one ideal-type to another. How many of the PROFIT economies, for example, were previously MIRAB or SITE structures? How many SITEs started out as PROFITs or MIRABs? What common characteristics predispose an island economy to one or other of these structures? A rich research agenda clearly remains to be explored.

Insularity, remoteness, size and dispersion

Small islands have, obviously, no monopoly of migration or of remittances,⁶ which raises the question whether the MIRAB model might apply to non-island entities. For example, Sri Lanka's rapidly increasing flows of migrant remittances bear a family resemblance to the MIRAB model (Shuaib, 2004), while Royle (2001: 185) has noted that 'Lesotho is probably more dependent upon remittances than any island state' and suggested extending the MIRAB concept to include such small land-locked states. Certainly it is true that across the world economy as a whole, aggregate officially measured migrant remittances have risen steeply, being now double the level of development aid and bilateral assistance and rapidly approaching parity with direct international



Notes: a. Overlaps between MIRAB and SITE lists.
 b. Overlaps between SITE and PROFIT lists.

Figure 1. A taxonomy of small-island political economies

investment flows (World Bank, 2004: Chapter 7, 2004: appendix A). The past three decades have witnessed the emergence of huge remittance flows from the USA to Latin America and from Saudi Arabia and the Gulf to South and Southeast Asia – flows which dwarf the remittances flowing to small islands. It is still, however, reasonable to ask whether small size (of population and/or area) and insularity exert a positive or negative influence on the interaction of aid and remittances with economic development.

Recent statistical work confirms earlier intuitive suggestions in the MIRAB literature that smallness helps rather than hinders in achieving and sustaining relatively high living standards, and that sovereign independence, however good it may feel, is a recipe for relative poverty. Armstrong and Read's paper here builds on their

previously published findings that small states display stronger economic performance than an orthodox development economist would expect (Armstrong and Read, 2002), that small dependent territories outperform sovereign small states (Armstrong and Read, 2000), and that island small states outperform landlocked ones. Their new work investigates the relationship between economic performance of small states and territories and four dimensions of physical geography: insularity, remoteness from major markets, mountainous topography, and archipelagic dispersion across multiple small-island niches.

In bivariate analysis using both the full World Bank dataset for all sizes of states and their own larger dataset, Armstrong and Read find a systematic tendency for small economic units to be clustered in the higher-income bands. Their

tables present what appears to be a fractal relationship between size and income: as the analysis focuses more and more narrowly on smaller states and territories, the tendency for size to be inversely related to income per capita remains evident.

Turning to remoteness, their bivariate analysis shows a negative effect on income, with what appears to be a U-shaped pattern in the data (extreme remoteness may raise per capita incomes relative to moderate remoteness, but in the worldwide dataset, moderately remote economies underperform relative to economies less than 3000 km from a global core market.) The Pacific islands in the dataset, however, do not display as clear an inverse relation as the rest of the world, indicating that remoteness is less of a handicap in the Pacific than elsewhere. Insularity and topography *per se* seem to have no clear effect, although there is some weak evidence that insularity is positive but archipelago status is negative for income. Being landlocked, as distinct from coastal or island states, is clearly negative in its impact.

Before staking too much on bivariate relationships, econometric wisdom cautions us that where many causes operate simultaneously, particular hypothesised relationships have to be tested in a statistical setting where 'all other things are equal' – that is, the multiple other explanatory variables must be controlled for when looking for significant relationships between, for example, insularity and income.

When Armstrong and Read apply such multivariate regression analysis to their global dataset, they fail to find strong statistical significance for four of their five geographical explainers. The signs remain as predicted from the bivariate tests surveyed above (islandness is positive, archipelago status is negative, being landlocked is negative and mountainous topography is ambiguous) but none of the *t*-statistics allows us to give credence to those signs unless we drop to or below the 90% significance level (in which case being landlocked creeps into view in two of the four regressions, and being an archipelago is significant in one of two regressions). Only remoteness emerges as unequivocally significant (with a negative sign).

What do the Armstrong and Read results contribute to discussion of the MIRAB model? Basically, their work guards the flanks, by

empirically refuting orthodox nostrums about the systematic economic vulnerability of small islands, whether mountainous or not, archipelagos or not. Their strong finding that sovereign independence is negatively related to income confirms other recent work on this relationship (Bertram, 2004),⁷ and underpins the MIRAB proposition that political relationships determine to a significant extent the ability of small islands to access migration-remittance and aid-bureaucracy opportunities.

Economic theory: The microeconomic underpinnings of remittance behaviour

Empirically, an outstanding stylised fact of the global economy in the new century is the rapidly rising importance of private, often informally mediated, flows of remittances from migrants to their relatives back home. These transnational networks of unrequited transfers now dwarf official development aid and rank alongside private direct investment as a source of global development finance. For economic theorists, explaining these individually small but collectively huge financial transfers is a major challenge.⁸ Poirine's paper in this collection explores the economic logic of remittances driven by altruistic motives on the part of the sender, and identifies a number of testable predictions.⁹

Poirine's migrant workers gain pleasure both from consuming goods and services themselves, and from observing their relatives back home consuming additional goods and services. They therefore divide their income up between their own consumption spending, and remittances to those relatives to boost their purchasing power. Standard neoclassical assumptions enable Poirine to determine analytically the existence of an optimal amount to be remitted by each individual migrant and, by aggregating up across all migrants originating from a particular community, to determine the total amount of money that his model predicts will flow back to the home territory.

For a given degree of altruism among migrants, the model predicts that the amount remitted will be adjusted until a target ratio is established between migrants' real consumption and the real consumption of their back-home relatives. Thus, if back-home incomes rise rela-

tive to migrant incomes, remittance effort is predicted to fall, and vice versa. As the number of emigrants per family rises, per-migrant remittances are predicted to fall, because the burden of income support is spread across more remitters. Three factors then determine the time-path of per-period total remittances: the growth rates of the non-migrant and migrant populations, and the trend in the relative per capita pre-transfer incomes of migrant and non-migrant groups.

Once these three are known, the model identifies the factors which determine whether aggregate remittance flows passing across the home territory's international balance of payments will rise or fall over time. If 'sustainability' of remittances is defined as a non-decreasing per-period flow of aggregate remittance transfers, then sufficient conditions for sustainability are that the non-migrant population does not decrease in number, and that income grows more rapidly in the migrants' destination country than in their territory of origin. The second of these automatically makes the migrants' destination economy the pace-maker (in effect the growth locomotive), with per capita post-transfer income in the territory of origin being pulled up by an increasing flow of remittances.

If, on the other hand, incomes in the destination economy grow slowly relative to those in the territory of origin, then aggregate remittances flows will tend to fall unless the non-migrant population is growing very rapidly relative to the migrant diaspora. Similarly, if the non-migrant population decreases in number, the aggregate remittance flow may fall even when the economy which hosts the diaspora is growing rapidly relative to the economy of origin.

All of these determinants of remittance volumes in Poirine's model are empirically measurable, which makes the model suitable for econometric estimation. The model also yields important hypotheses to be tested in questionnaire survey work among migrants and/or their home-resident relatives – in particular, the prediction that under altruism, as the proportion of migrants in each transnational family rises, remittances per migrant will fall. In direct contrast, under self-interest assumptions (which underpin models of remittances as repayments of informal family loans) this decline ought not

to be observed, at least until each loan has been fully repaid.

Poirine's rigorous approach to modelling remittances is implicitly a valid criticism of writers such as Bertram (1993, 1999) who have talked loosely about the 'sustainability of remittance flows' at the level of the aggregate balance of payments, without exploring the microeconomic underpinnings of those flows.

Is the problem simply bad governance?

In their review of the results achieved by US aid to the FSM and the Republic of the Marshall Islands (RMI), Emil Friberg's team from the US General Accounting Office argue that 'institutional constraints such as poor governance and a lack of accountability over assistance have played a major role in inhibiting FSM and RMI growth . . . [I]t is the alleviation of these institutional constraints to improved aid effectiveness that will be necessary to sustain the FSM and the RMI economies'.

These analysts agree that the MIRAB model provides an accurate description of the economic structure of the islands studied, but they regard these structural outcomes as having been caused and sustained by the failure of local governance institutions. The MIRAB outcome, they imply, could be overcome by stronger accountability by island governments for the use of aid resources, and more focus by island elites on achieving agreed development goals.

A large-scale inflow of US aid into the FSM and RMI followed the signing of their Compacts of Free Association in 1986. The stated intention was to achieve economic development and self-sufficiency so that the need for ongoing US aid would gradually disappear leaving the islands to stand on their own feet. From 1987 to 2003 the total aid flow was \$2.1 billion to a total population of 160 000–\$13 135 per capita over 13 years. The amended Compact extends beyond 2020 with the per capita annual aid amount projected to fall from \$687 to \$476 for FSM and from \$627 to \$303 in RMI.

Compact aid funding has been used to invest in a considerable number of projects intended to become profitable traded-goods producers, but Friberg *et al.*'s paper lists no success stories – just a series of 'failures' which

have left fish-processing plants and clothing plants built but standing empty (examples of my earlier remark that 'productive' capital tends to be unproductive in MIRAB systems).

Friberg *et al.* note also that the private sector is largely made up of services and distribution activities that support (or are dependent on?) the public sector, and they acknowledge that migration is open as a option in response to falling domestic income as Compact funding winds down.

Institutions have undeniably moved to the forefront of the economic development literature in the last few years, and in several studies of long-run growth in history it has been argued that institutions explain why, for example, Europe developed early but Asia, Africa and the Americas did not. However, the level of accountability and quality of decision-making in small-island governments is not in fact uniformly poor, and it is always possible that cultivation of a MIRAB structure could be the deliberate strategic choice of a local government. When Friberg *et al.*'s paper is set alongside those of Baldacchino and McElroy, the issue which it raises is how easily the governments of RMI and FSM might have been able to pursue with success either a PROFIT or a SITE (or some alternative) economic structure.

Case studies

The collection concludes with three empirical case studies set within the analytical framework of the MIRAB model: Ahlburg and Yong Nam Song on the improving economic fortunes of Pacific Island migrants in the USA; Brown and Connell on the remittance behaviour of migrant nurses in Australia and New Zealand; and Borovnik on the flow of remittances to Kiribati from its expatriate seamen.

Ahlburg and Yong Nam Song on migrant fortunes in the USA

A MIRAB economy has two poles: the home-resident population, and the migrant diaspora. Not only does the model posit an equilibrium relationship between these two (in the sense that individual members of the transnational islander community are optimally dispersed across global space, and that remittance flows

are explained by microeconomic models such as those of Poirine discussed above); it also has a dynamic dimension, in that the equilibria are not stationary but are expected to evolve through time depending on relative growth rates of income and income-earning opportunities in various locations, and the emergence of new accessible niches in the global labour market, as host countries change the extent and enforcement of their immigration laws.

A MIRAB growth process includes all members of the transnational islander community or network. Average wealth and average income are to be measured across the entire network, not simply in its island-resident pole. In the various host economies occupied by the Pacific Island diaspora, there is a large field for future research using census data to trace the fortunes of various island diasporas. The paper presented by Dennis Ahlburg to the February 2004 conference makes a path-breaking contribution to this literature.

Ahlburg and Yong begin by identifying in successive US censuses the US-resident communities of peoples from the Pacific: Samoans, Tongans, Fijians and Micronesians. The census data enable these diasporas to be identified by several dimensions: race, place of birth, language spoken at home, ancestry. On all criteria there has been rapid growth over the two decades. The 2000 census found 170 000 islands-born residents in the USA, of which 100 000 speak Pacific languages at home. On the basis of ethnicity, there were 270 000 Pacific Islanders, so that second-generation (US-born) individuals make up nearly half the US-resident diaspora when measured by ethnicity/ancestry.

The authors chose their sample group on the basis of the ancestry identifier, which includes both first-generation and US-born migrants. For statistical reasons they grouped all Pacific Islanders together, and observed changes between 1990 and 2000 in the proportion of islanders:

- Holding a good job (in terms of the relationship of the wage to the poverty line: 100%, 150%, 200% and 300%)
- Not living in poverty

In 1979, the average household income of Pacific Island migrants in the USA was 70% of the US average, a difference resulting from

higher unemployment, lower human capital, and low ranking on the occupational ladder. In the 1990s, the diaspora significantly improved its status. The poverty rate among Pacific Islanders fell from 20% to 16%, and at the margin employment status improved: the participation rate rose 2%, the proportion of islanders earning 'middle class' incomes rose from 45% to 49%, the proportion of 'working poor' fell 4%, and the proportion of employed householders with 'middle class' jobs rose from 51% to 58%. Thus, insofar as success in securing work and increasing the quality and remunerativeness of jobs held were essential issues for the sustainability of remittances back to the home-resident island populations, the US-resident diaspora was successful in maintaining and improving its economic position while its numbers doubled. Longer residence in the US (higher human capital in the form of experience) was positively related to job quality. 'Over the 1990s the average Pacific Islander household acquired an extra year of education and an extra year of work experience'.

Ahlburg and Yong conclude that Pacific Island families were successful in their strategy of sending family members overseas to work and to acquire human capital, while transferring some of the benefits to the home residents by remittances.

Brown and Connell on migrant nurses

Brown and Connell here build on their earlier work on migrant nurses, emphasising the highly tradable nature of the human capital possessed by this occupational group, and suggesting that nursing skills go together with a relatively positive attitude towards remittance-sending: nurses are more generous and consistent in their remittances than other migrant groups. Consequently, nurse training both fits the comparative advantage of migrant-sending island economies, and provides a secure payback in terms of remittances from emigrant nurses.

Borovnik on Kiribati

Borovnik's paper reports on a small sample survey of seafaring migrants and their families, combined with data extracted from the records of German shipping companies and the Kiribati

branch of Westpac Bank. Seafarer migrants from Kiribati and Tuvalu differ from many other migrant groups in the explicitly circular nature of their migration trajectory, concluding with a predetermined return home. This migration pattern seems to provide an incentive for remittances to be used to capitalise small businesses run by ex-migrants, as well as financing the construction of housing in Tarawa.

Predicting multiple equilibria: The kaleidoscope

The new generation of economic research on small islands seems to point towards a new, more comprehensive taxonomy which puts the MIRAB model into a wider context.

MIRAB, PROFIT and SITE are ultimately taxonomic ideal-types that can be utilised to classify different economic structures that are to be found on islands around the globe. They also take us one level deeper in explanatory terms, because each can be elaborated as a system of economic flows and stocks in a short-run equilibrium configuration. They enable researchers to predict, within limits, and on the basis more of informed judgement than of sophisticated modelling, the trajectories that particular island communities are likely to follow over the next decade or so, but they probably do not give good long-run forecasting or predictive ability.

In common with the MIRAB structure, the PROFIT and SITE economic structures constitute temporary equilibria in a field where other possible equilibria exist, and where movement from one equilibrium to another (or to a new one) takes place when for any reason positive feedback shocks overcome the stabilising negative feedback that sustains each equilibrium.

The small-island world, in this view, is one of multiple possible equilibria coexisting within the one global space. Government can be either a reinforcer of the built-in stabilisers which sustain actual structures – or may trigger a switch to another mode of articulation with the global system. External forces and circumstances dictate the set of opportunities open in the short and long run, but islanders and their institutions choose the actual trajectory. Social scientists can document this 'from within' the process itself, or stand back and attempt to model it

from outside, but we do not have a good crystal ball.

Islands researchers should therefore cultivate (i) openness to the new and unexpected; (ii) demystification of the concept of sustainability, whose opposite is not the bogey of 'unsustainability', but simply transition to a new and different equilibrium; and (iii) awareness that change within a given steady state is seldom dramatic or extreme – but that once positive feedback operates and cumulative network externalities start to drive the transition to a new pole, some islands may make quite sharp transitions.

The economist readily assumes that the collective and individual choices made by islander communities represent an optimising response to the external field of threats and opportunities – which is really the only basis on which one can evaluate the old and the new steady states as 'better' or 'worse'.

I think a good metaphor for thinking about this is the child's toy called the kaleidoscope. Hold it up to the light and look through the eyepiece and you see an orderly, stable pattern. Change the external situation by rotating the instrument, and a shift takes place, quickly settling into a new stable pattern which persists for as long as the tube is held still. Turn again, and yet another new pattern appears. Each successive pattern is stable in the short run, and each is path-dependent in the sense that it is formed by rearranging the same elements as were present in the previously observed pattern. But it is not possible to retrace the path – change is irreversible. Turning the tube backwards does not restore the previous pattern; instead, yet another new pattern appears. The kaleidoscope moves inexorably to a new pattern each time it is disturbed. There is no mathematical limit to the number of orderly patterns that can be produced by even a simple kaleidoscope; yet there is a finite sequence of actual patterns produced by any given kaleidoscope through time as it is turned repeatedly, and repeatedly shifts to a new sustainable temporary equilibrium. There is no *necessity* determining the outcome of each shift, and the new pattern cannot be predicted until it appears. Only the likely fact of its appearance can be predicted, not its substantive character.

The evolution of island economies and societies is in many respects a kaleidoscopic process. One can observe stability in the present, and one can tell the story of the past sequence of temporarily stable patterns. One can predict that a new stable temporary equilibrium will emerge from the next change in external circumstances, and that the new pattern will incorporate all the elements of its predecessor, but what the new pattern will be cannot be predicted. It can be described only once it has appeared.

Seen from this standpoint, the MIRAB model is a taxonomic description of a state of island political economy which has been, and is, but has no deterministic guarantee of continued existence. The historian, the geographer and the political scientist have as good a chance as the economist of predicting what the future holds for any individual island community. Having acknowledged that, I do think that the MIRAB pattern will be with us for a fair way into the new century.

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Notes

- 1 An early draft of this paper was presented at the biennial International Small Island Studies Association conference, 'Islands of the World VIII: Changing Islands, Changing Worlds', Jinmen, Taiwan, November 2004. I thank participants at that conference, in particular Godfrey Baldacchino, Harvey Armstrong, Robert Read, Norman Girvan, Naran Prasad and Christine McMurray for wide-ranging and constructive criticisms and suggestions. Remaining errors are entirely my own.
- 2 The model was originally set out in Bertram and Watters (1985) and Bertram (1986).
- 3 Use value is a term first popularised by Marx in the opening chapter of *Capital*: 'The usefulness of a thing makes it a use value . . . [T]his usefulness does not dangle in mid-air. It is conditioned by the physical proper-

- ties of the commodity, and has no existence apart from the latter . . . Exchange value appears first of all as the quantitative relation, the proportion, in which use-values of one kind exchange for use-values of another kind . . .' (Marx, 1976: 126). In the recent economic literature, the term use-value is found most commonly in environmentalist work which emphasises the direct use-value of threatened species and biodiversity as an essential component of social cost-benefit analysis alongside their market values as commodities.
- 4 Kiribati was from the outset an outlier in the five-country sample; already impoverished and faced with a bleak future as a non-mobile population pressed against tight resource constraints. (Non-mobility, be it recalled, was externally imposed, via the absence of permitted migration access to any metropolitan economy.)
- 5 Treadgold (1999) has suggested that Norfolk Island is an example of tourism-led escape from a MIRAB structure.
- 6 Indeed, few island economies are even mentioned in the explosively growing new literature on migration and remittances at global level.
- 7 An important new study by Betermier (2004), however, suggests that causality may run from economic weakness to sovereign independence, not the other way around.
- 8 An early paper addressing this issue is Cox (1987). For recent data see World Bank (2005).
- 9 Earlier work by Poirine (1997) analysed the implications of self-interested motives to remit.
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