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Chapter 10

Island Political Economy

Geoff Bertram & Bernard Poirine

Introduction

In this chapter we build on the observation that island economies, and especially small ones (population below one million), exhibit a remarkably wide range of economic structures built on a correspondingly wide range of development strategies. Common elements of "islandness" may serve to define island economies as a general class, but there clearly exist several distinct "species" within that class, and a corresponding menu of strategic options open to islander communities in relation to the terms of their incorporation into the global economy.

The chapter has two important messages. First, there is no unique path to development. Second, in small economies, the social capital and "institutions" emphasized in the recent development literature (Hall & Jones, 1999; Acemoglu *et al.*, 2002; Rodrik *et al.*, 2004) have to be understood as incorporating the ability to achieve and sustain community-wide strategic consensus around a particular development specialization, along with sufficient flexibility to switch to alternatives as and when the field of external opportunities changes.

We begin by asking what threshold size defines "small" island economies, and why smallness and islandness go together in the modern world. We then review the process of specialization into divergent economic "species" and present a taxonomy built around the available balance of payments statistics. Along the way we review the recent use of concepts such as "vulnerability", "resilience", and "sustainability" in

the context of small islands. The major economic issues of migration, and the economic interaction between the migrant diasporas and their home communities, are treated only briefly in this chapter, since they are covered elsewhere in this volume.

Size, Strategies and Sustainability

Size and Islandness

Any study of island economies confronts immediately the difficulty of securing meaningfully representative statistical data. Many islands lie at or beyond the outer limit of coverage for the major international statistical yearbooks. The vast majority of the world's inhabited islands are statistically-invisible geographical units within larger countries. Indonesia, for example, contains over 18,000 islands, of which around 6,000 are inhabited. Of that country's population of somewhere between 200 and 250 million, the great majority are on four large islands, leaving the remainder of the archipelago with an average population of around 5,000 per island. Similarly, the Philippines comprises over 7,000 islands with the great bulk of the population on the two largest and the remainder averaging less than 5,000 per island.

Arguably, any comprehensive statistical review of the world's small island economies would be dominated by units within these two archipelagos. This chapter, however, excludes them, because statistics at individual-island level are not readily available, and data at national level reveal merely the economic characteristics of large countries in general.

The economies analysed here are that subset of island economic units that is visible to cross-country research. As a general rule, "visibility" means appearing under a separate listing in the *CIA World Factbook* (Central Intelligence Agency, 2006).

The *Factbook* is a modern almanac, whose compilers select places and topics for inclusion on the basis of informal, subjective, strategically-driven criteria which transcend the constraints of conventional statistical reportage. Its mandate is to provide information on territorial locales of

potential interest to the US military and intelligence community, and its selection criteria are unencumbered by category limitations such as human occupation, sovereign statehood, minimum size thresholds, availability of reliable data, or membership of international agencies. The inclusion of a large number of non-sovereign jurisdictional units makes the *Factbook* especially suitable as the basis for this chapter's sample of economies.

The 2005 *Factbook* lists data for 237 locales, of which roughly one third (81 entities) are islands in the sense of having a boundary that consists entirely of marine coastline. (Enclaves which display many "island" characteristics but which have a land border with a contiguous neighbouring territory – Hong Kong, Ireland, East Timor, Brunei, and Macau, to name five in the CIA set - are here excluded.) Islands which have been physically connected to an adjacent mainland by causeways or bridges, such as Singapore, here retain island status.

Eight of these island nations (Indonesia, Japan, Philippines, Taiwan, Australia, Sri Lanka, Madagascar, and Cuba) are large countries with populations over ten million, and another three (Dominican Republic, Haiti, and Papua New Guinea) are medium-sized countries between five and ten million. Scanning the list, it is apparent that the fact of being islands is not the major defining characteristic of the large-country economies apart from Cuba, whose geo-strategic survival as an anti-US bastion in the Caribbean has relied upon its islandness (an advantage conspicuously not shared by Sandinista Nicaragua in the 1980s). In the medium size range of 5-10 million, island geography is more significant, but again not fundamental. These eleven large and medium sized island nations are not clearly set apart, by their islandness, from the other 102 *Factbook* entities in the same population size range.

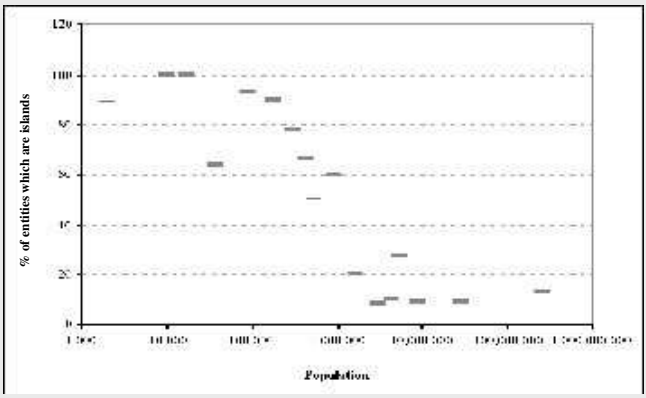
Below a population size of five million, there is a striking correlation between diminishing size and the salience of island entities. Table 1 shows the proportion of *Factbook* territorial entities that are islands at progressively smaller sizes, and Figure 1 plots the pattern. Below a population size of one million, islands are the dominant form of entity found in the *Factbook*. In the population range below 100,000 population,

only two types of entity are found: islands, and six European enclave microstates (Andorra, Lichtenstein, Monaco, San Marino, Gibraltar, and the Vatican).

Table 1: Size and Islandness of *CIA Factbook* Entities

Population	Number of entities	Number of islands	Island %
Over 50 million	23	3	13
10-50 million	56	5	9
5-10 million	34	3	9
4-5m	11	3	27
3-4m	10	1	10
2-3m	12	1	8
1-2m	10	2	20
0.5-1m	10	6	60
0.1-0.5m	30	22	73
50,000-100,000	14	13	93
10,000-50,000	15	11	73
<10,000	12	11	92
Total	**237**	**81**	**34**

Figure 1: Prevalence of Islands at Various Population Sizes



Source: CIA *World Factbook*

As already noted, inclusion in Table 1 requires separable jurisdictional and/or economic visibility. Of the 70 island entities below 5 million population included in Table 1, 63 are "small" in the sense of having populations under one million. (A number of these entities comprise several individual islands, but are here treated as single economic units.) Jurisdictionally they are diverse, ranging from sovereign independent nations to sub-national jurisdictions within larger polities.

Constraints, Endowments and Development Strategies: Specialization and 'Speciation'

The small land area of most island units compels the persistence of social, political and economic units at a size below the normal threshold level for modern states and economies. Very small economic and political units, which on continents would have the status of provinces or local regions, take on a different character when bounded by sea. Islands are physically accessible only by marine or air transport; they are therefore relatively expensive to invade, occupy, and integrate with neighbouring territories to form larger units. The political economy of nation-building has left islands, along with a few European microstates, as the remnant stock of economies still operating at pre-modern scale with fewer than 100,000 inhabitants. Survival of separate small-island jurisdictions reflects the political-economic consequences of being entirely surrounded by sea.

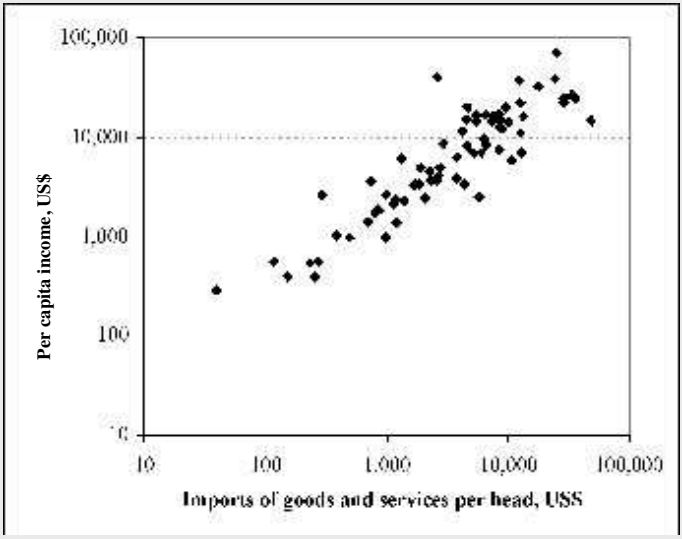
Islands are, in other words, the most common laboratory setting for the very small economy as an ideal-type. The crucial endowment of island economies in the modern world is their isolation, from which flow scale and scope constraints on their economic structure. The network economies and strategic exposure to land transport which bind continental communities into large population units are truncated by the constraint of the sea.

The smaller and more isolated the economy, the greater the need to be open to the world market, and to specialize in a narrow set of income-generating activities in that market. Openness and hyper-specialization follow from the absence of economies of scale, from the lack of a varied

pool of mineral and energy resources to draw from, from the lack of positive externalities associated with the geographical proximity of clients and providers (too many holes in the input-output matrix), and from the fact that sophisticated consumers want to choose from a wide variety of goods not made locally.

The more external resources can be drawn in, the higher the *per capita* income that can be sustained, because the small island economy's import capacity is the key constraint on its sustainable material standard of living; *see* Figure 2. The central strategic choice is not between an outward-oriented development strategy and some inward-directed alternative. It is "what to export": more generally, how to secure foreign exchange to sustain imports. "In a small economy, the constraint imposed on growth by the external sector is a continuing phenomenon" (Demas, 1965: 48; *see also* Hein, 1988: 35).

Figure 2: Relationship between Total Imports and Income, Log Scales



Source: Appendix 1

The constraints of small size and geographical separateness are sometimes presumed to render islands particularly economically "vulnerable" (Briguglio, 1995; Streeten, 1993) but this normative categorization is both conceptually and empirically unsatisfactory. Conceptually, there are advantages as well as disadvantages of smallness and isolation. Empirically, on balance island economies appear quite robust in a globalizing world. Briguglio's "vulnerability index" is positively, not negatively, related to per capita income – the more "vulnerable" the economy, the higher its per capita income (Armstrong & Read, 2002a). Proponents of the vulnerability hypothesis have implicitly conceded the point by introducing a countervailing concept of "resilience", placed in a contradictory dialectical relationship to vulnerability to produce indeterminacy of outcomes (Briguglio *et al.*, 2005).

The resulting vulnerability-versus-resilience paradigm remains flawed in its reliance on the proposition that vulnerability is exogenously-imposed whereas resilience is endogenously created as a response. A review of the components of the two indices reveals that exogenous and endogenous elements are found on both sides of the supposed dialectic. The image of vulnerability may be instrumentally useful in the rhetoric of political lobbying and aid justification, but lacks solid roots in economic reality.

While the vulnerability/resilience dichotomy gives no analytical leverage, the concept of speciation goes to the heart of the economic and geopolitical dynamics of island development. Below a size threshold somewhere around the one-million population mark, economies (including landlocked ones such as the Vatican as well as islands) tend to exhibit extreme specialization into one or two globally-linked leading sectors which, once selected, determine the character of the economy as a whole. The selection process obeys not so much the orthodox theory of comparative advantage (in which an economy responds in passive fashion to exogenous relative-price signals) as a strategic game-theoretic process of self-selective hyper-specialization, here labeled "speciation" to reflect the way in which the structure of the entire economy is adapted to achieve opportunistic colonization of niches of opportunity in the global system. "Speciation" refers to the sort of specialization in which an entire

community takes advantage of a niche of evolutionary opportunity by adopting a particular economic "personality" with its own distinctive set of institutions, policy imperatives, and mutual understandings amongst the participating population. Economic speciation involves a conscious or quasi-conscious collective decision by the islander community to embrace the economic phenomenon of crowding-out, with "Dutch Disease" treated as an evolutionary opportunity rather than a threat (Matsen & Torvik, 2006).

Most islands – especially those with well-established links to metropolitan patron economies (Bertram, 2004; Bertram & Karagedikli, 2004) - enjoy external opportunities which are specific to the particular facts of each island's history as well as to the identity of its patron. In the era of decolonization in the late twentieth century, for example, Britain took a fundamentally different approach to its island territories than did France and Portugal; the USA was different again (Hintjens & Newitt, 1992). The fact that modern island economic structures are path-dependent (Hampton & Christensen, 2002: 1668-1669) - outcomes of specific historical paths, not necessarily able to be imitated or reproduced by others, and commonly representing the accumulation over time of a cumulative series of collective strategic choices by the home community as a whole - renders problematic any uni-dimensional conception of what "economic development" means in an island context (Bertram, 1986; Baldacchino, 1993).

In treating the economic structure of small islands as a matter of strategic behavioural adaptation within the constraints of smallness, isolation and history, rather than of passive competitive response to exogenously-set world market prices, we are implicitly rejecting the idea that there is any simple direct relationship between country size and market power in the global arena. International economics distinguishes between "large" countries which carry sufficient weight in global markets to operate as price-makers, and "small" economies which are price-takers. But the tendency for market power to fall with population size does not extend down to the smallest size categories. At the very small end of the size spectrum, the strategic behaviour that is intrinsic to speciation creates

and reproduces its own form of market power. Many of the market niches occupied by small islands have been endogenously created in the process of speciation, and market power in those niches is one outcome of that process once a niche has been successfully occupied. This is not to say that all attempts at speciation are successful: consider, for example, Vanuatu's attempt in the 1990s to become an offshore financial centre.

Sustainability and Ability to Mutate: Two Examples

A key requirement for sustainability in a situation of hyper-specialization is flexibility and rapid response capability. Retention of the ability to mutate, to undertake a rapid shift to a different "species" in response to shifts in external opportunities, remains a crucial reserve asset in the small island's portfolio of social capital. The greater this evolutionary flexibility, the more extreme can speciation become without endangering the long-run survival chances of the home economy. Cases do emerge from time to time of small islands caught in development culs-de-sac, generally due either to failure to establish sufficient internal social cohesion to coordinate economic activity around a newly-selected strategic node - for example, the stalemate currently apparent in the Solomon Islands - or to situations where attractive transition opportunities are blocked by externally-imposed constraints - for example, the intervention since 1999 of the OECD's Financial Action task Force to restrict the emergence of unregulated offshore financial centres (Hampton & Christensen, 2002; Financial Action Task Force, 2005a; 2005b) and the blockage of all except one of the emigration pathways out of Kiribati in the quarter-century following independence in 1979, which left seafarers as the only outwardly-mobile group in the labour force (Borovnik, 2006).

Two examples of transition from one strategic niche to another - offshore finance in the Cayman Islands, and outsourcing of US garment manufacturing to the Northern Marianas - will illustrate what we have in mind.

Caymans: from MIRAB to Offshore Bank

The Cayman Islands are today one of the world's major financial

centres and tax havens. According to Suss *et al.* (2002), in 2001 the islands, with a population of about 44,000, were home to 49,456 international business companies, 450 offshore banks, 51 banks with offshore affiliations, 502 offshore (captive) insurance companies, 25,000 trust companies, 190 gaming corporations, and 2,298 mutual funds. (Similar orders of magnitude appear in Hampton & Christensen, 2002: 1659). Around US$750 billion was under management by Cayman Island financial institutions. Annual fees paid to the Cayman Islands Government by financial institutions came to US$134 million in 2000, to which can be added perhaps another US$100 million in fees and profits that would have accrued to the private sector, and tourism expenditure (largely by finance-centre customers) of US$500-600 million annually. Aid flows and migrant remittances are zero, and merchandise exports account for not more than US$3 million p.a. The islands' annual import bill of around US$780 million is thus entirely funded by the offshore finance sector and its tourism appendage.

Strategic opportunity for the Cayman Islands arose from a royal charter, dating from the 1790s, which granted the islanders perennial exemption from tax so long as the islands remained governed by the British Crown (Brittain-Catlin, 2005: 14). The charter was converted into a market niche by three events during the decolonization period: separation of the islands from the colony of Jamaica (then moving to independence) in 1959; subsequent entrenchment of Crown Colony status in the 1960s; and the expiry of pre-existing tax treaties with the USA in the late 1960s, which opened the Cayman Islands up as a tax haven for US corporations from medical insurers to Enron.

In the mid-1960s the islands had only a single bank, no telephones, and a population of 8,000 (Brittain-Catlin, 2005: 7). For the preceding half-century, a MIRAB (migrant-remittances and aid-funded bureaucracy; Bertram and Watters, 1985) structure had prevailed, with cash incomes sustained by remittances from seafarers. In 1937, half of the working-age male population was employed in international shipping, and the main post-war employer until the 1960s was a supertanker operator (Brittain-Catlin, 2005: 17).

The transition from migrant-remittance economy to offshore financial powerhouse took only about a decade. The accountancy, legal and business skills required to negotiate financial deals and fine-tune Cayman law to the needs of finance capital were acquired or hired, infrastructure investment completed, and an international reputation for confidentiality and security built up at breakneck pace, even though the new strategic direction was one which had been unforeseen ten years earlier. Dislocation there certainly was, but the Cayman Islands successfully made the transition from one of the poorest to one of the three richest Caribbean island communities (along with Bermuda and the British Virgin Islands). Subsequently, the islands were among the most diplomatically successful offshore financial centres in confronting and adjusting to the OECD's drive to clamp down on rogue tax-haven and money laundering jurisdictions. In 2000, the Caymans secured early exemption from the Financial Action Task Force's list of "non-cooperating jurisdictions" (Christensen & Hampton, 2002: 1670 note 9), by June 2001 they were fully "delisted", and from June 2002 they were no longer subject to FATF monitoring (Financial Action Task Force, 2005: 31).

Northern Marianas

The Northern Marianas are a Commonwealth of the USA. In pre-1945 Japanese colonial times the islands were an agricultural export economy. Following the Second World War they became a US military base, then from the 1970s a tourist destination for Japanese holidaymakers. Tourism, however, peaked in 1996 and thereafter declined as Japanese recession and the Asian economic crisis took hold.

The US Office of Insular Affairs (2006) records that Garments produced or substantially transformed in the CNMI enter into the United States customs territory free of quotas and duties. Under the Covenant, imports into the U.S. from the CNMI receive the same treatment as imports from Guam; however, the CNMI was able to develop a garment assembly industry because it is not subject to U.S. immigration laws, as is Guam. Garment shipments to the United States increased from under US$200 million in 1990 to over US$1 billion in each of 1998 and 1999.

The competitiveness of light manufactured exports from the Marianas rested upon the availability of a low-wage immigrant workforce, recruited mainly from the Philippines and China, and concentrated on the main island of Saipan, where the locally-born population is easily outnumbered by migrant workers. The jurisdictional niche that has enabled the CNMI to become a manufacture exporter is highly specific and a product of the negotiations leading to commonwealth status: the treaty-based absence of visa requirements for migrant workers to enter from Asia, combined with duty-free onward access to the US market for manufactured goods (but not migrant workers). (Migrant remittances flow out from the Marianas towards the source countries in East Asia.)

The above two cases epitomize the close interaction of external opportunity and local strategic response that drives both the initial process of speciation and subsequent mutation as the external field of opportunities shifts. There are numerous other island-specific stories of transition across the range of sustainable equilibrium states. French Polynesia is in the process of adjusting to the end of French nuclear testing in 1996. The Comoros moved between 1975 and 2005 from export economy to MIRAB. São Tomé and Principe is making the transition to an oil economy. In the mid-1980s the Cook Islands was one of the originally-identified MIRAB economies, with imports of US$19 million funded by remittances and aid of US$10 million p.a., commodity exports of US$3.6 million and philatelic and tourism earnings of US$6 million (Bertram, 1986: 815 Table 4, converted at US$0.70=NZ$1). The Cook Islands diaspora in New Zealand had grown from under 1,000 in 1951 to 14,000 by 1981, approaching parity with the home-resident population. By 1996 there were 47,000 Cook Islanders in New Zealand, compared with about 20,000 home residents. Following a financial crisis in the mid 1990s (arising partly from a failed attempt to move into offshore finance), aid from New Zealand dropped by about half between 1995 and 2002, while at the same time tourism earnings roughly doubled and remittances stagnated, then fell away. By 2003 tourism earnings had reached US$64 million compared with imports of US$65 million, aid of US$6 million, and remittances of only US$1.5 million. The Cook Islands had made a full transition out of MIRAB status; Milne (2005:

20 Table 13) estimates that the tourist industry now employs 30% of the Cook Islands labour force.

A central component of the social capital of islander communities is therefore their flexibility and adjustment capacity. In practice the "sustainability" of island economies has very little to do with self-sufficiency or environmental protection, with which it is often equated. The basic sustainability requirement is the social capital – people (including diasporas), institutions, and mutual understandings (Baldacchino, 2005) – that underpins effective collective response to strategic opportunities, and adaptability in the global arena.

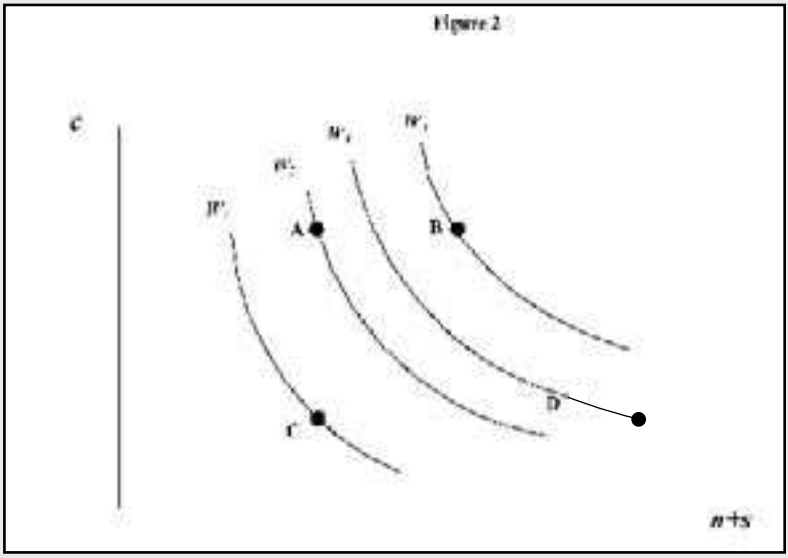
Welfare-maximizing Choice of Development Strategy

Imagine a small island community with a social planner empowered to make a strategic choice amongst alternative "development" options and to choose the option that offers the best payoff in terms of highest material living standard for least sacrifice of non-material values, subject to the particular constraints of the island's resource endowment, political situation, geographic location and past history.

The planner seeks to maximize welfare W in three dimensions: material standard of living, here measured by per capita consumption c; individual quality of life, here modelled as "leisure" n, which implies minimization of the effort expended to secure the income to finance consumption; and the collectively-experienced non-material quality of community life captured here as "social capital" s, comprising more or less intangible aspects of community well-being such as social cohesion, cultural integrity, legitimacy of political institutions, a sense of self-worth and collective autonomy, and sustainable management of key natural resources. In practice this will tend to be measured by community perceptions; for empirical purposes it may be captured by objective analogues such as statistics of educational attainment, crime, suicide, mental illness, nutritional health status and so on.

Thus the social welfare function is: $W = W(c^{t}, n^{t}, s^{t})$. The economic problem is to secure maximum welfare from strategic deployment of the island community's endowment of people, culture, jurisdictional status, geographical location, natural resources, and global brand image (reputation), subject to the constraints of external markets and politics. To draw the multifaceted welfare function in two dimensions, we reduce it to two arguments: material consumption *c*, and non-material quality of life (*n*+*s*).

Figure 3: A simplified version of the welfare function



To see how this model is interpreted, consider the four points A, B, C and D in Figure 3. The W curves form the social indifference map: all points along a given W curve are equally preferred by the community. Points A and B have the same level of material consumption per head, but B is preferred to A because it offers more leisure (less effort) and/or greater preservation and enhancement of social capital. Point A could, for example, represent an island with a labour-intensive export sector that has corrosive effects on the local environment and culture – Nauru in the phosphate era (McDaniel & Gowdy, 1999; 2000). Point B could

represent a situation with a large military enclave which sustains high expenditures but has only limited impacts on local culture and labour utilization – French Polynesia in the nuclear testing era.

A is preferred to C because it offers higher consumption with the same non-material quality of life. C is a situation with a low material living standard and severely depleted social capital; an example could be the Comoros.

D is preferred to A despite a lower material standard of living, because the higher level of leisure and/or social capital outweighs the lower level of material consumption. An example of a thriving traditional society and culture, sustained at a modest material living standard by aid from a metropolitan power, could be Tokelau.

However B would be preferred to D: the higher consumption level would more than outweigh the relatively slight sacrifice of non-material values involved in a switch from D to B. The indifference curve W_3 maps the threshold of willingness, starting from D, to trade off non-material in exchange for material elements of welfare. Point B lies above this threshold.

Figure 3 is drawn (and has been discussed above) as though all island communities bring to bear the same attitudes and tastes when evaluating the trade-off between material and non-material welfare. In fact, the shape and slope of the welfare contours will differ from community to community. Some will exhibit steep slopes of the curves, reflecting a high valuation placed on the preservation of traditional culture and society, and reluctance to sacrifice those values in pursuit of material pleasures. Others will be more relaxed about the loss of social capital, and happy to sacrifice non-material goods in exchange for income and consumption; here the indifference curves will have a shallow slope. Hence differing cultural attitudes towards social capital and work ethics can translate to radically different strategic choices amongst options once those options have been identified as feasible.

Taxonomy: Classifying Economic Species

The Data

In this section we use balance-of-payments data to identify and rank different types (species) of island economies. The rationale is that the territorial border is the place where each island economy's strategic orientation can most readily be observed, described and measured.

A previous effort at classification (Bertram, 2006, Figure 1) resulted in a threefold model comprising MIRABs led by migrant remittances and aid-funded bureaucracy; PROFITs organized around jurisdictional autonomy and the "political economy of success" (Baldacchino, 2006); and small island tourist destinations, SITEs (McElroy, 2006). The present chapter works with a broader classification, built around the variety of ways to secure the material consumption shown on the vertical axis of Figure 3. In Appendix 1 are assembled balance of payments data for 69 island economies (including the large islands Cuba, Madagascar and Sri Lanka), largely but not entirely coinciding with the islands covered by Table 1 (Hawaii has been added; the Channel Islands and Isle of Man have been dropped). The table format follows that used in Bertram (1986: 815 Table 4), being constructed around the issue of funding imports of goods and services, which we here treat as the central constraint on achievement of a high material standard of living. The data set excludes island or archipelagic economies with more than 20 million population.

The first column of Appendix 1 shows per capita total imports of goods and services, and the subsequent six columns show the sources of the funding to sustain those imports. The final columns show population, income per head, life expectancy, and a crude welfare index to be discussed below. Figures are annual averages for the period 1999-2003 wherever possible, or else the nearest available equivalent.

Wherever possible, balance of payments data are from International Monetary Fund statistics and *Staff Country Reports*, and population and income are from the World Bank's *World Development Indicators*, with income measured as Gross National Income. For island economies not

covered by those sources, country-specific data has been used as available, much of it (particularly GDP per capita) from the *CIA World Factbook* and the United Nations *Human Development Report*. Figures for tourist expenditure and aid flows are not clearly identified in the IMF statistics, and have been extracted mainly from the *UN Statistical Yearbook* (United Nations, 2005: 730-746 Table 74 and 811-826 Table 79), supplemented by island-specific data from various sources. In the case of the French overseas territories and departments, the aid estimates correspond either to the official budget deficit of the territorial unit (in the case of the DOMTOMs) or (in the cases of French Polynesia and New Caledonia) to the sum of official transfers and net salaries paid from abroad, as recorded in the Bank of France's balance-of-payments statistics for the overseas departments (Banque de France, 2004a; 2004b).

For each economy, once account has been taken of recorded exports, tourism, remittances and aid, a residual is calculated to bring total credits to 100% of total imports. The interpretation of this residual item will vary from case to case.

A negative residual in Appendix 1 indicates an outflow of funds either on capital account (debt repayment, overseas investment by island residents) or on income account (repatriation of profits, outflow of remittances). Niue and Tokelau both appear to have their large aid inflows largely returned as transfers back to New Zealand. The Northern Marianas exhibit large (unrecorded) remittance outflows from migrant workers employed in manufacturing establishments on Saipan, and probably also large repatriation of profits. Turks and Caicos, Guam and Hawaii have substantial overseas ownership in their tourism sectors with profits repatriated out. The Falklands, Madagascar, Papua New Guinea, Trinidad and Tobago, and US Virgin Islands are export economies from which profits are repatriated to some extent.

A positive residual in Appendix 1 indicates some major additional source of funding for imports, whether capital inflow or current transactions of some sort. The latter is the main explanation for the positive residual in the offshore financial havens – Antigua and Barbuda,

the Bahamas, Bermuda, British Virgin Islands, Cayman Islands, Cyprus, Grenada, St Kitts and Nevis, St Lucia, and Vanuatu. In Kiribati substantial import funding comes from a "revenue equalization reserve fund" (RERF) established to sustain government spending following the exhaustion of phosphate reserves. Other positive residuals appear to be attributable to capital inflow or under-recording of at least one of the five separately-identified funding flows.

Remittances in particular are difficult to track accurately. In their recent detailed study of Tuvalu, Boland and Dollery (2005: 32-33) estimate that counting remittances sent in the form of goods ("non-commercial imports") would add 5-10% to recorded money transfers (probably more, given under-reporting of valuations), in addition to which substantial transfers in cash go unrecorded in official statistics. This suggests that probably at least half of the Tuvalu residual item represents unrecorded migrant remittances.

Merchandise Exports as a Leading Sector

Immediately apparent in Appendix 1 is the familiar stylized fact that only a few small island economies fund their import requirements from merchandise (goods) export earnings. Of 55 island economies below one million population in Appendix 1, only twelve have earnings from the export of goods sufficient to cover more than 50% of total imports, and only sixteen more than 40%. Of the five French overseas island departments (Guadeloupe, Martinique, Reunion, Mayotte and St-Pierre-et-Miquelon) none have coverage rates ("taux de couverture") of imports by commodity exports above 20%, and only Martinique scores above 10% (IEDOM, 2006). Four very small island economies in the Pacific (Niue, Tokelau, Tuvalu and Wallis & Futuna) have effectively no commodity exports at all.

The situation is reversed for larger economies. Of the fourteen economies in Appendix 1 with over one million population, only five (Canary Islands, Cuba, Haiti, Jamaica and Hawaii) have coverage rates below 50%, while six are over 75%.

A statistical test shows no significant relationship between per capita income and the ratio of import coverage by merchandise exports.

Table 3 extracts from Appendix 1 the data for the twelve small and nine large island economies with merchandise exports contributing more than half the cost of funding total imports.

Figure 4 portrays the import-funding mix for the 21 economies in Table 3. In addition to export earnings, Aruba also has significant tourism, as do the Northern Marianas (which exhibit also a large negative residual, representing mainly outward migrant remittances and repatriated profits from manufacturing as well as tourism). Greenland benefits from a large official aid inflow from Denmark (and again a negative residual indicating outflow of funds, including investment abroad). Madagascar and the Solomon Islands also have aid flows in the range of 40-50% of import finance. Sri Lanka and the Dominican Republic have substantial remittance inflows, and Bahrain has a large outflow of remittances from migrant workers there.

Figure 4: Import Funding Sources for 21 Merchandise Exporters

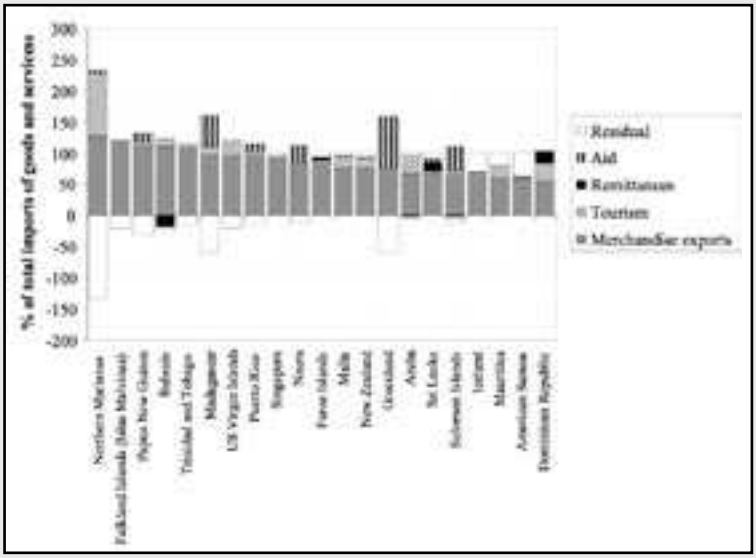


Table 3: Merchandise-Export Island Economies

	Imports of goods and services per capita, US$m	% of total imports of goods and services						Per capita income US$
		Merch-andise exports	Tourism	Remitt-ances	Aid	Residual	Population 000	
				Population over 1 million				
Papua New Guinea	298	**113.0**	4.7	-0.6	13.4	-30.5	5,772	2,600
Trinidad and Tobago	2,925	**107.9**	5.9	1.6	0.1	-15.4	1,301	8,730
Madagascar	40	**97.6**	12.9	0.5	49.5	-60.5	18,113	290
Puerto Rico	12,515	**96.1**	5.2	1.3	12.2	-14.7	3,895	10,950
Singapore	35,944	**92.3**	3.0	0.0	0.0	4.6	4,240	24,760
New Zealand	4,614	**76.3**	14.8	2.3	0.0	6.6	4,061	19,990
Sri Lanka	379	**67.1**	4.2	15.0	5.2	8.6	19,419	1,010
Mauritius	2,287	**60.0**	21.4	-0.2	0.6	18.2	1,234	4,640
Dominican Republic	1,122	**54.4**	28.5	20.1	1.2	-4.1	8,768	2,100

	Population below 1 million							
Northern Marianas	8,551	**127.3**	99.5	0.0	7.1	-133.9	77	12,500
Falkland Islands	28,769	**121.3**	0.0	0.0	-0.2	-21.1	3	25,000
Bahrain	7,243	**111.4**	12.3	-19.7	0.0	-4.0	716	14,370
US Virgin Islands	48,600	**96.3**	25.5	0.0	0.0	-21.7	113	14,500
Nauru	1,932	**83.8**	0.0	0.0	28.8	-12.6	13	5,000
Faroe Islands	12,650	**83.4**	4.0	6.0	0.0	6.6	48	22,000
Malta	9,043	**77.3**	17.3	0.0	0.4	5.0	401	12,050
Greenland	9,500	**75.6**	0.0	0.0	83.8	-59.3	57	20,000
Aruba	29,492	**67.7**	27.8	-1.2	0.6	5.1	99	21,800
Solomon Islands	271	**64.8**	5.7	-3.1	39.5	-6.9	466	560
Iceland	12,198	**60.5**	7.0	1.7	0.0	30.9	292	37,920
American Samoa	10,629	**58.3**	2.6	0.0	2.5	36.6	57	5,800
Borderline:								
Barbados	5,539	**49.0**	47.3	5.9	0.3	-2.5	269	17,000

Source: Appendix 1

Tourism as Leading Sector

A conspicuous foreign-exchange earner in a number of small island economies is tourism - one of the fastest-growing sectors of the global economy, for which the island characteristics of isolation and small size are assets rather than liabilities. Fifteen of the 55 small economies in Appendix 1 derive more than 50% of their import funding from tourism. In two of these (Northern Marianas and Niue) tourism comes second to one of the other funding sources (manufactured exports in the Marianas; aid in Niue), and in several Caribbean cases (especially the Cayman Islands) tourism earnings represent the visible face of offshore finance. In a number of other island economies tourism is likely to be a key future growth pole (McElroy, 2006).

Figure 5 plots the import-funding mix for the economies with over 50% of imports funded from tourism in Table 4, excluding Niue (which is better classified as an aid-led case).

Figure 5: Import Funding Sources for 15 Tourism Destinations

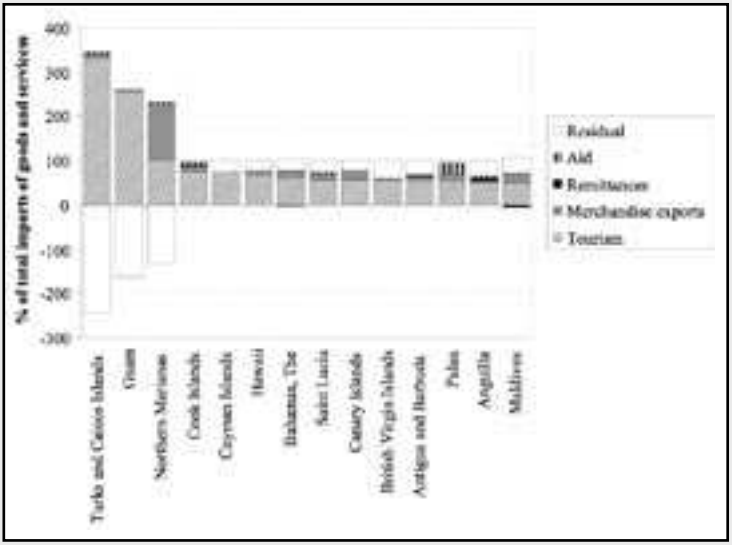


Table 4: Economies with Tourism Earnings over 50% of Imports

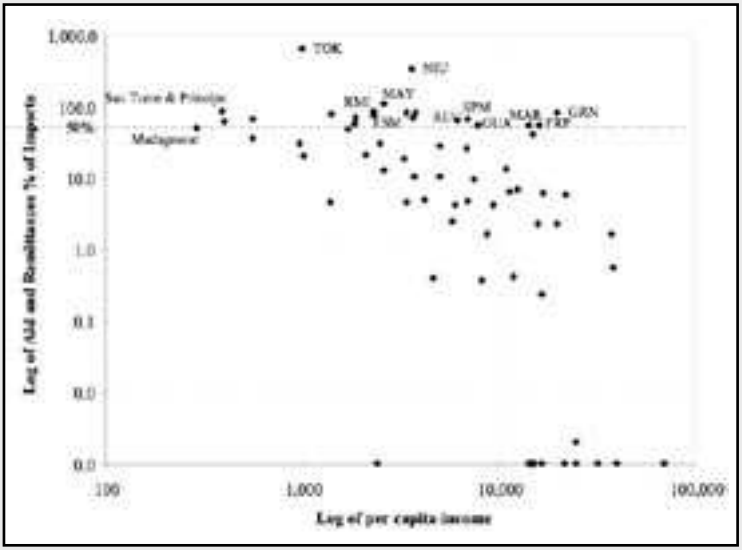
	Imports of goods and services per capita, US$m	% of total imports of goods and services						
		Merch-andise exports	Tourism	Remitt-ances	Aid	Residual	Popul-ation 000	Per capita income US$
	Population over 1 million							
Hawaii	11,878	10.5	67.0	0.0	0.0	22	1,263	40,000
Canary Islands	8,380	20.5	**56.6**	0.0	0.0	23.0	1,694	16,566
	Population less than 1 million							
Turks and Caicos Islands	4,214	7.7	**332.1**	0.0	6.5	-246.3	21	11,500
Guam	4,493	7.7	**254.6**	0.0	0.0	-162.3	167	15,000
Northern Marianas	8,551	127.3	**99.5**	0.0	7.1	-133.9	77	12,500
Cook Islands	2,765	11.2	**75.4**	2.2	8.4	2.9	21	5,000
Cayman Islands	17,773	0.4	**74.6**	0.0	-0.3	25.2	44	32,300
Niue	735	0.0	**62.6**	0.0	347.6	-310.3	2	3,600
Bahamas, The	8,792	15.3	**60.6**	-2.8	0.2	26.7	319	15,100
Saint Lucia	2,693	11.3	**57.2**	0.4	4.6	26.6	164	4,180
British Virgin Islands	24,531	4.7	**56.1**	0.0	0.6	38.7	23	38,500
Antigua and Barbuda	6,337	8.4	**55.5**	2.4	1.8	31.9	80	9,480
Palau	5,956	12.5	**54.9**	0.0	26.6	6.0	20	6,870
Anguilla	8,368	3.4	**51.6**	5.3	4.4	35.3	13	7,500
Maldives	2,087	17.7	**50.7**	-7.0	3.7	34.8	321	2,410
Borderline:								
Barbados	5,539	49.0	**47.3**	5.9	0.3	-2.5	269	17,000

Source: Appendix 1

Aid and Remittances

Remittances and aid are the twin props of the MIRAB model (Bertram & Watters, 1985). Figure 6 indicates that, across the 68 island economies in Appendix 1, there is an overall tendency for the more MIRAB-type economies to be at the low-income end of the scale, but that within the group of economies with more than 50% of imports funded from these sources, the per capita income range is very great, from Sao Tome and Principe's US$390 to Greenland's US$20,000. A number of the economies plotted in Figure 6, identified with the three-letter codes assigned in Appendix 1, are examples of the phenomenon of geo-strategic rent (large aid inflows related either to the ongoing interest of large metropolitan powers in maintaining footholds in these locations, or to residual aid obligations negotiated in the process of pullback from geo-strategic positions). This is the situation with, for example, Micronesia and the Marshall Islands vis-à-vis the USA, and with Tokelau and Niue vis-à-vis New Zealand.

Figure 6: Aid and Remittances: Combined Share plotted against Income per Capita: Log Scales, 68 Economies



Twenty-one of the 68 island economies in Appendix 1 derive more than 50% of their import funding from one or both of aid and remittances, and one other (Cape Verde) comes close enough to warrant inclusion in this group. Table 5 arrays the data for these 22 cases, subdivided between six full MIRAB economies where migrant remittances and aid combine as dominant funding sources, and sixteen aid-reliant economies in which recorded migrant remittances play no significant role, in several cases because aid funding is at a level sufficient to pre-empt remittances by sustaining home-island incomes at a level close enough to migrants' incomes in their host economies to remove the differential that is one of the principal drivers of remittances.

The ability to secure high levels of aid flows per capita is an important attribute of island economies, related directly to their twin characteristics of small size and isolation by sea. Small islands receive on average nine times as much aid per capita as other less developed countries, even though their per capita GDP is much higher on average. Islanders attract far more diplomatic attention per capita, and command more United Nations votes per capita, than the remainder of the world community. There are 191 seats in the General Assembly, of which 31 are held by island states up to the population size of Jamaica (2.7 million). (The number rises to 35 if we include Singapore, Papua New Guinea, Haiti and the Dominican Republic.) These 31 island states hold one UN seat for each 707,000 population. The remaining 160 UN member states hold one seat for each 38.2 million of population. In terms of diplomatic weight, each inhabitant of an island-state UN member is equivalent to 54 people in the rest of the world.

Small islands have a comparative advantage in the production and exportation of strategic services because, in the geopolitical calculations of powerful industrial states, they represent potential military outposts as well as potential allies to gain political influence in international organizations. French Polynesia's importance to the French nuclear testing program resembles the situation of the Marshall Islands, Palau, and the Federated States of Micronesia, where for several decades nuclear tests and strategic anti-missile tests were carried out by the USA. It is

Table 5: MIRAB and Geo-strategic Rent Economies

	Imports of goods and services per capita, US$m	% of total imports of goods and services						Population 000	Per capita income US$
		Merch-andise exports	Tourism	Remitt-ances	Aid	Remitt-ances + Aid	Residual		
Remittance-Aid Economies									
Population over 1 million									
Haiti	155	24.4	8.8	**47.8**	**15.3**	63.1	3.7	8,407	400
Population less than 1 million									
Tonga	847	15.2	12.8	**48.2**	**23.9**	72.0	-0.1	102	1,860
Samoa	832	9.9	30.2	**35.7**	**21.9**	57.6	2.3	184	1,840
Comoros	119	24.5	13.2	**33.9**	**33.8**	67.8	-5.5	588	560
Tuvalu	1,205	0.1	3.4	**31.3**	**47.4**	78.7	17.8	12	1,400
Cape Verde	807	9.8	13.7	**21.1**	**27.3**	48.4	28.1	495	1,720

	Aid Economies Population over 1 million								
Madagascar	40	97.6	12.9	0.5	**49.5**	**50.0**	-60.5	18,113	290
	Population less than 1 million								
Tokelau	496	0.0	0.0	0.0	**674.4**	674.4	-574.4	1	1,000
Niue	735	0.0	62.6	0.0	**347.6**	347.6	-310.3	2	3,600
Mayotte	1,696	1.8	0.0	0.0	**111.1**	111.1	-12.9	172	2,600
Montserrat	4,376	2.8	20.6	-5.6	**89.8**	84.2	-7.6	9	3,400
Marshall Islands	1,221	10.4	5.3	0.8	**86.5**	87.3	-3.1	61	2,320
Sao Tome and Principe	254	11.0	25.9	2.9	**84.7**	87.6	-24.6	153	390
Wallis and Futuna	3,846	0.1	0.0	0.0	**84.7**	84.7	15.2	16	3,800
Greenland	9,500	75.6	0.0	0.0	**83.8**	83.8	-59.3	57	20,000
Micronesia, Federated States of	1,390	13.4	10.4	1.5	**74.9**	76.4	-0.2	110	2,300
Dominica	2,356	28.4	28.9	2.1	**68.7**	70.8	-28.1	71	3,670
Saint Pierre and Miquelon	13,138	7.5	0.0	0.0	**66.8**	66.8	25.6	7	7,000
Reunion	5,627	6.2	8.1	0.0	**64.4**	64.4	21.3	788	6,200
French Polynesia	6,402	11.1	25.9	-0.7	**56.3**	55.6	7.3	253	16,070
Martinique	4,776	13.3	16.5	0.0	**55.5**	55.5	14.8	436	14,400
Guadeloupe	4,791	8.4	13.8	0.0	**54.7**	54.7	23.2	453	7,900

more cost effective, from a big industrialized country's point of view, to invest in a military agreement to dispose of exclusive rights to use the land and airspace of the strategically located small island, than to invest in expensive aircraft carriers for the same purpose.

As Baldacchino has emphasized (2006a), a key determinant of the extent to which particular islander communities have been successful in securing preferential access to aid, migration outlets, and competitive advantages in hosting various specialized economic activities such as tourism and offshore finance, is the extent to which a degree of jurisdictional autonomy is combined with durable ties to larger political hosts. Table 6, from Poirine (1999), shows bilateral aid flows to various sets of islands, and compares these with developing economies in general.

Table 6: Aid to Small Islands in the 1990s

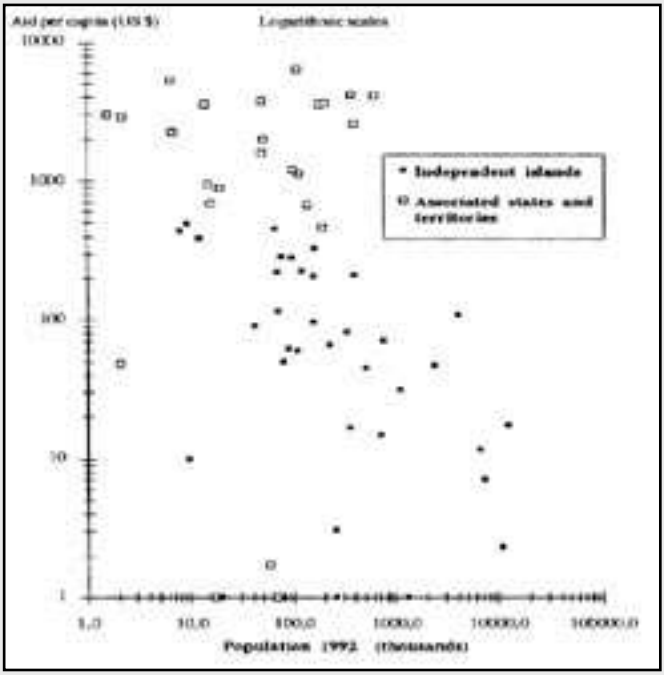
	Aid Per Capita (US$)	% of GDP
Independent islands with a population of more than 1 million:	19	2.3%
Independent islands with a population of less than 1 million:	87	1.7%
Independent Pacific islands	102	10.1%
Island territories or associated states	3,099	32.3%
Pacific Island territories or associated states	3,147	26.3%
French overseas territories and departments	3,542	39.2%
All Pacific Islands	504	20.5%
All developing countries	10	

Source: Poirine (1999: 843, Table 1)

Not only do islands receive more aid on average than non island countries, but (consistent with the geo-strategic discussion above) non-sovereign islands receive 36 times more bilateral aid (US$3,099) than comparable independent island states (US$87). Figure 7 shows that per

capita aid is inversely related to population in independent states, but not much related to population in non-sovereign island jurisdictions.

Figure 7: Bilateral Aid Per Capita and Population for Small Islands



Source: Poirine (1999: 844).

In Table 5, Greenland exhibits a strong export share alongside its aid inflow, and in Madagascar aid is actually overshadowed by exports. Several of the small aid-led economies – Tokelau, Niue, Greenland, São Tomé & Principe, and Dominica – have large negative residuals, indicative of remittance and/or profit outflows, and consistent with the absence of remittance inflows to these economies at the prevailing levels of aid, even though most of them have substantial emigrant diasporas. Niue's and Tokelau's negative residuals are best interpreted as unrecorded reverse remittance flows to migrant diasporas in the metropolis (New Zealand).

Remittance-led Economies

Remittances have recently come to the forefront of the international statistical agenda (World Bank, 2003, Chapter 7). By 2005 migrant workers' remittances had risen to become the biggest and fastest-growing single category of international financial flows, easily outstripping official development aid. The estimated worldwide stock of migrants rose from 79 million in 1960 to 191 million in 2005 (United Nations, 2006), and remittances had reached an estimated US$233 billion annually by 2003 (World Bank, 2006: 3). Of this global total, Appendix 1 indicates that roughly US$5 billion is officially-measured flows into island economies from their migrant diasporas, and roughly US$3 billion is remittance outflows from a number of islands, especially Bahrain (outflow US$1.8 billion).

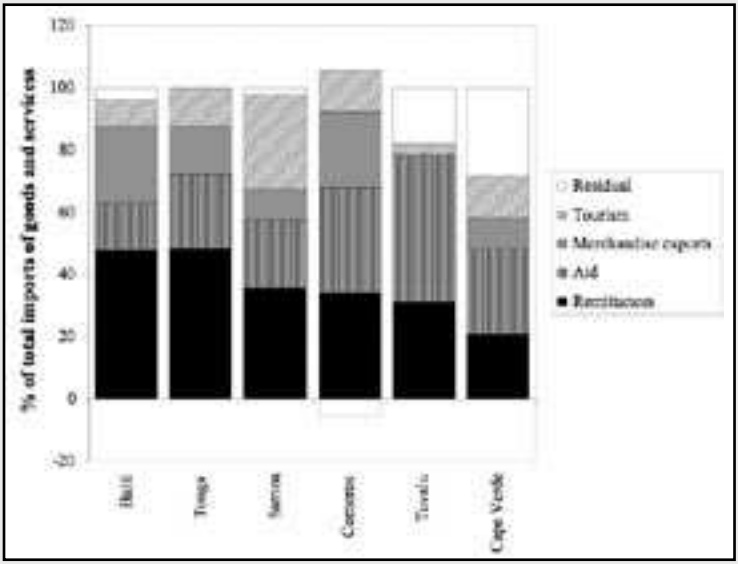
The informal character of most remittance flows, besides putting them into the same economic arena as terrorist funding and criminal money-laundering (FATF, 2005a) means that to a considerable extent they have been unmeasured, or inadequately measured, by the existing international statistical reporting system.

Many islands receive significant amounts of remittances from diasporas of emigrants. In some cases, the diaspora outnumbers the resident population, as in the Cook Islands, Wallis and Futuna, Cape Verde, and the Azores. Remittances represent 25% of GDP in Samoa (Chamon, 2005; Muliaina, 2006). Many islands exhibit a very high rate of emigration of skilled labour: 36 to 80% among people with tertiary education (Docquier & Marfouk, 2004).

Figure 8 plots the import-funding mix for the six, fully-articulated MIRAB cases in Table 5.

An example of recent transition into MIRAB status is the Union of the Comoros, three islands (Grande Comore, Anjouan and Moheli) in the Mozambique Channel, with a population of about 600,000. Population growth is high (2.7%) and the islands are one of the world's poorest countries. At independence from France in 1975, the Comoros

Figure 8: Import Funding Sources for Six Remittance-Aid Economies



were a plantation economy with high population density, severe erosion problems in peasant agricultural zones, and most land in the hands either of old-established Arab families or colonial company owners (Newitt, 1992: 77-78). 40% of the islands' foodstuffs were imported. Population pressure had already led to migration in search of employment in Madagascar, Zanzibar, South Africa or France, which "provided a relief for over-population and led to a flow of remittances which were of great assistance to the economy" (*ibid.*: 79).

Comoran migrants were driven out of Madagascar in 1976. The arrival of these 17,000 refugees was followed by a volcanic eruption in 1977; French and South African mercenaries seized power in 1978 and held it through the 1980s, and the following two decades were marked by political instability, falling per-capita income, and collapsing export performance through the 1990s. From US$27.6 million in 1990, export earnings had fallen to US$6.3 million by 1996 and US$5.9 million by 1998, as a political crisis over the attempted secession of the island of Anjouan disrupted the economy. Official aid grants helped keep the

economy and government afloat in the 1980s and early 1990s, at which time remittances were only a minor part of the balance of payments; but aid flows fell away during the mid-late 1990s and a remarkable burst of remittances suddenly filled the yawning gap from 1996 on. "Private transfers" were about US$5 million per year in the mid 1990s; by 2001 they were over US$14 million per year (Da Cruz *et al.*, 2004: 4 Figure 4).

Fiscal retrenchment, falling aid grants, and an ongoing decline in per capita income and stagnation of export volumes effectively "crowded-in" private remittances, more as a village-level survival strategy than as a positive development option. An upturn in prices for the three export crops raised export earnings briefly again in the early 2000s, but prices collapsed again in 2004-05, leaving remittances the leading source of foreign-exchange income (IMF African Department, 2005: 22). The 2004 balance of payments statistics (Van Den Boogaerde *et al.,* 2005: 32) show imports of goods and services at US$40 million, exports at US$5.8 million, tourism receipts at US$7 million, and 'private transfers' (one component of remittances) US$14 million.

Puig (2004: 59) remarks that "the Comoros ranks high in international comparisons of remittances. It is in the top fifteen countries in terms of remittances received per capita, and in the top four in terms of remittances in relation to GDP, exports, and growth of remittances". By 2003, according to Da Cruz *et al.* (2004), "an estimated 20-25% of the people of Comorian origin live abroad, i.e. some 150,000 to 200,000 people, of which between 85,000 and 150,000 are living in metropolitan France, many with French citizenship. This diaspora maintains strong ties to the Comoros and remits over CF16 billion (over US$ 36 million) annually, in addition to US$ 15-20 million in goods transfers. By 2003, remittances stood well over 2½ times the level of merchandise exports, and approximately 12% of GDP".

The 2004 World Bank study concluded that "remittances define the economy and society of Comoros. They are sustaining consumption levels which have been above 100% of GDP from the mid-nineties onwards.

Remittances also play a crucial role in the balance of payments, enabling Comoros to run a high trade deficit. With this high level of remittances, the incentive to invest in the local economy, or to work and produce in the Comoros, is limited. Families focus their wealth accumulation strategies on facilitating out-migration of family members with the expectation of transfers in return" (Da Cruz *et al.,* 2004: 12).

An implication of the Comoros example is that on the downside, the migration option provides the most fundamental safety net for an island economy – ultimate protection against being driven below the subsistence threshold in the face of the most severe negative shocks. In the cases of Samoa and Tonga, in contrast, migration appears to be motivated more by a quest for upward mobility, launching from a well-established subsistence home base.

A full discussion of the motivations of migrants and the drivers of remittance flows is beyond the scope of this chapter (*see* Amueda-Dorantes *et al.*, 2005, Grieco, 2003, LaPointe, 2004; Poirine, 1997; 2006). At a minimum it is clear that a variety of separate sets of motivations operate simultaneously, often in contradictory ways. Docquier and Marfouk's (2004: 32 Table 3) data on skill levels of migrants seems to suggest a very high migration propensity amongst skilled workers: 82.5% of the total stock of island-born skilled workers in Jamaica, 81.6% in Haiti, 78.4% in Trinidad and Tobago, 74.2% in Tonga, 71.8% in St Kitts and Nevis, 70.9% in Antigua and Barbuda, 69.1% in Cape Verde, and 66.6% in Samoa. Given the higher rewards to skill available to emigrants and the widespread practice of sharing those rewards via remittances, this so-called brain drain is probably rational not only individually but also collectively.

The controversial issue of remittance sustainability versus remittance fatigue remains an active research frontier. Multiple motivations interact with widely-varying case-specific factors such as relative incomes in host and home economies, relative growth rates, and demographic patterns. The outcome is remittance fatigue in some cases, sustainability and growth in others. A priori speculation based on individualist assumptions

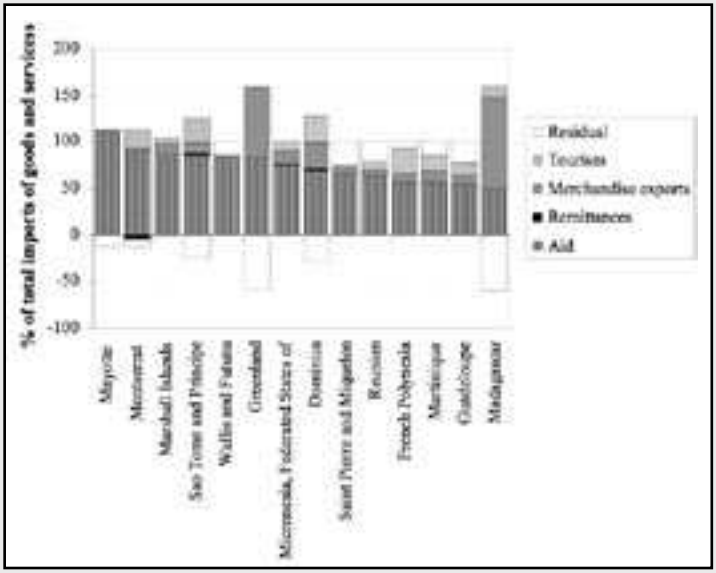
makes for poor economic theory, and recent work has begun to tease out systematically the elements for an economic theory of remittances (*for a bibliography, see* Bertram, 2005).

Geo-strategic and Other Aid-led Economies

There are a group of island economies, dominated by French territories and departments but including Greenland (linked to Denmark) which sustain quite high per capita incomes, and associated imports of goods and services, on the basis of aid transfers which reflect directly the geo-strategic interests of the metropolitan partner. To this group should be added Tokelau and Niue, which receive high levels of aid per capita but are recorded as low-income economies on the basis of their very limited onshore productive activity. The Tokelauan and Niuean communities taken as a whole (including migrants) have better living standards than the GDP data in Table 5 would suggest. These two economies have been excluded from Figure 9 to render the remainder legible, given that aid is 674% of imports for Tokelau and 348% for Niue.

The "geo-strategic rent" economies are here distinguished from the other MIRAB economies. Haiti, Tonga, Samoa, Comoros, Tuvalu, Cape Verde, Micronesia, Dominica, the Marshall Islands, and São Tomé & Principe are typical members of the latter group, all with per capita incomes below US$5,000. Their future prospects vary enormously depending on particular strategic factors applying to particular islands. São Tomé and Principe is in transition to becoming an oil export economy, on the basis of large offshore oil deposits which are to be divided between the islands and neighbouring Nigeria. The former US Trust Territories in the Pacific are faced with sinking caps on their aid flows from the US Government and few prospects of new non-MIRAB revenues, but large-scale migration to the USA remains an option, as does a potentially massive increase in geo-strategic aid from Japan and/or China as those Asian powers seek to extend their influence in the Pacific. Dominica is one of the least-developed tourist destinations in the Caribbean as measured by its Tourism Penetration Index, but has one of the fastest-expanding tourist sectors (McElroy, 2006, Tables 2 & 3). Any attempt to generalize about development potential, in short, is fraught with danger.

Figure 9: Import Funding Sources for 15 Aid-Led Economies (Niue and Tokelau Excluded)



Other

In Table 7 appear data for five island economies in which the "residual" item is the leading source of import funding (here using a threshold of more than 45% of import funding rather than the 50% criterion used thus far), and ten which have no sector accounting for more than 50% of total import funding. Seven of these fourteen economies, plotted in Figure 10, are offshore financial centres with associated tourism sectors. Bermuda, Netherlands Antilles and Cyprus are high-income economies. St Kitts and Nevis, St Vincent and the Grenadines, and Grenada, are less successful examples of this strategy, and Vanuatu is the low-income outcome of a largely unsuccessful attempt to colonize a niche in global finance.

Figure 11 plots the other eight economies from Table 7. Five of these combine exports with tourism as leading sectors (with remittances also important in Cuba and Jamaica); two combine exports and aid. The last case, Kiribati, is an extremely poor country reliant upon a

limited flow of rental income from a trust fund set up at the time of decolonization. The absence of other major sources of foreign-currency funding confronts Kiribati with a tight constraint on its import capacity and hence its ability to raise incomes domestically. Aid and remittances from temporary-migrant seafarers are a significant additional source of income, but Kiribati remains firmly at the bottom of the income ranking in Table 7.

The Development Ladder

Bearing in mind inter-country differences in the shape of the social welfare function drawn in Figure 3, one can think of a "ladder" of strategic specialization options in terms of expected levels of combined material and non-material societal welfare, to provide a conceptual framework for classifying island economic species.

Figure 10: Import Funding from Offshore Finance Plus Tourism

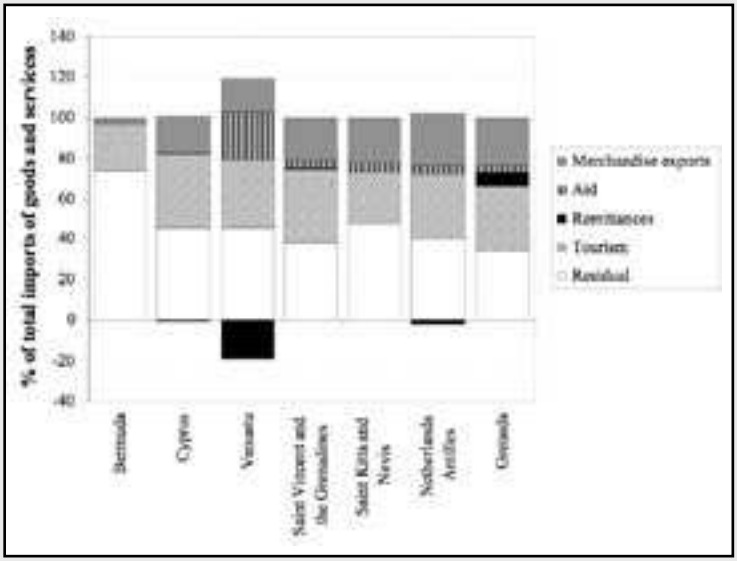


Table 7: Residual-led and Diversified Economies

	Imports of goods and services per capita, US$m	% of total imports of goods and services					Population 000	Per capita income US$
		Merchandise exports	Tourism	Remitt-ances	Aid	Residual		
Offshore Finance plus Tourism								
Bermuda	25,081	2.8	23.1	0.0	0.0	74.1	64	69,900
Cyprus	6,519	17.5	36.7	-0.6	0.8	45.6	826	16,510
Vanuatu	699	16.5	33.3	-19.4	24.1	45.5	207	1,390
Saint Vincent and the Grenadines	1,850	21.1	36.0	0.9	3.8	38.3	118	3,400
Saint Kitts and Nevis	5,150	22.3	25.4	0.4	4.5	47.4	47	6980
Netherlands Antilles	13,301	25.3	32.3	-1.8	4.1	40.1	181	16,000
Grenada	2,651	23.4	31.7	7.2	3.3	34.3	106	3,750
Exports plus tourism								
Barbados	5,539	49	47	6	0	-3	269	17,000
Fiji	1,319	47	21	1	3	27	841	6,000
Cuba	460	33	33	15	2	17	11,383	3,500
Seychelles	6,639	39	27	-2	2	34	84	8,190
Jamaica	1,718	32	28	19	0	21	2,645	3,300
Exports plus aid								
New Caledonia	8,461	40.9	10.6	-0.1	41.5	7.1	230	15,000
Saint Helena	5,798	41.4	0.0	2.3	29.0	27.4	8	2,500
Trust-Fund Financed								
Kiribati	999	10.3	1.4	13.2	17.5	57.6	98	970

Figure 11: Remaining Cases

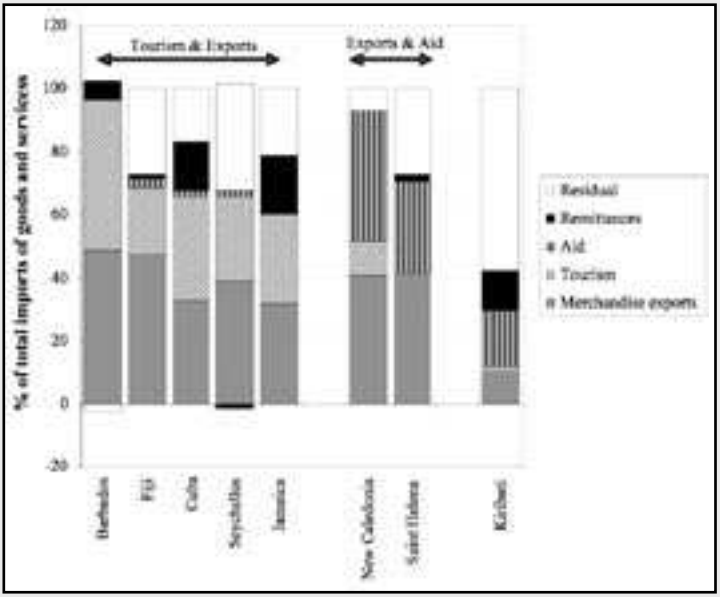
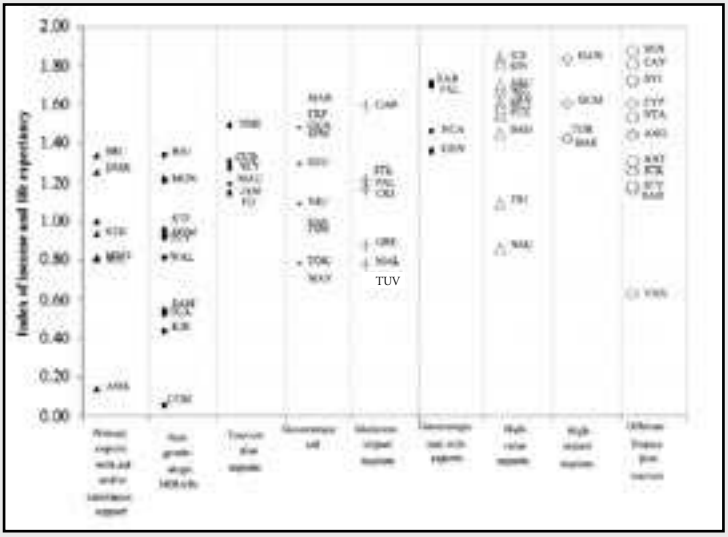


Figure 12 arrays our 68 island economies in two dimensions. Along the horizontal axis are listed nine "species", distinguished according to their import-funding strategies. Up the vertical axis appears a rough first approximation to a welfare index, constructed from two of the dimensions used by the United Nations in its Human Development Index: per capita GDP, and life expectancy at birth. (Literacy and school enrolment, the other components of the HDI, were not collated for the full set of economies covered here.) The index adopts the UN methodology (UNDP, 2005: 341), calculating a welfare index using the logarithm of each country's GDP per capita relative to the minimum and maximum values in the sample, and adding this to an index of relative life expectancy, to obtain a composite index. Life expectancy admittedly is a poor proxy for the non-material factors represented in Figure 3, and development of an improved welfare index deserves further research.

The combination of offshore finance and high-quality tourism stands out as the strategy of the most successful island economies, but not as a

guarantee of success – Vanuatu conspicuously ranks in the lowest half-dozen economies of the entire sample despite adoption of this orientation. (Vanuatu's per capita GDP is only US$1,390 compared with Bermuda's US$69,900.) At the other end of the scale, the non-geo-strategic-rent

Figure 12: Welfare Levels and Economic Strategies for 68 Island Economies



Source: Appendix 1

MIRAB and low-income members of the primary export group (several of which are quasi-autarkic) occupy the lower rungs of the ladder. MIRAB status has here been separated from the group of economies sustained by geo-strategically-motivated aid flows. All of the latter are currently or recently dependent territories linked to France, the USA, New Zealand, Denmark and the UK.

A feature of Figure 12 is the wide range of options open to island economies, amongst which conventional export-led development is included but is by no means dominant. The strategic orientations in the chart by no means exhaust the list, and one or two of the classifications undertaken reflect the need to compress what might have been a still more detailed picture.

Table 8: Average Income Indicators for the Nine Groups in Figure 12

	Income per capita US$	Income/life expectancy index
High-value exports	17,859	1.6181
Primary exports plus geo-strategic rent/aid	16,925	1.4787
High-impact tourism	33,629	1.7470
Moderate impact tourism	12,968	1.4136
Offshore finance plus tourism	15,604	1.3812
Aid economies: geo-strategic rent	8,631	1.3504
Tourism plus Exports	3,750	1.2607
Primary exports with aid and/or remittances	1,120	0.6628
MIRABs	552	0.1728

Kiribati, for example, with its heavy balance-of-payments dependence upon rental income from its Revenue Equalization Reserve Fund, has been left in the "MIRAB" group to which it was originally assigned in Bertram and Watters (1985) but in fact provides the template for a possible future group of island economies living off overseas investment incomes – a pure rentier category whose emergence relies upon the accumulation of financial assets by islander communities (and which probably already exists to some extent with the relevant flows disguised as remittances). Nauru appears under "high-value exports" only because its 1980s strategy of building up a reserve fund and making a post-export-economy transition to rentier status collapsed due to poor investment decisions and misappropriation of funds during the 1990s, and because the data which underpin Figure 12 marginally pre-date the exhaustion of phosphate reserves. Nauru is now effectively bankrupt (Connell, 2006) and sliding into pure aid dependence, which implies reclassification to the MIRAB group (a geo-strategic opportunity to provide refugee internment services for Australia has been exploited in recent years and may serve to underpin future aid).

In an abstract sense, it is possible to sketch out a rough preference order amongst the speciation strategies analysed in this chapter (*see* Table 8). The general goal is to secure the best results for the least effort, with a long-run eye on the importance of sustaining the islands' social and natural capital. In each case there will be particular constraints of location, climate, resource endowment, and history to be borne in mind.

- Pure rent-led:
    - The oil-economy model: natural-resource rents from exports of oil, phosphate, fish produces and other primary commodities, where it is possible to have the enclave operated by outside capital and labour while retaining the rents for the islander community;
    - Military or strategic rent, involving the profitable export of invisible services: military bases, nuclear testing, future strategic interest, diplomatic services (votes at the UN assembly or on the International Whaling Commission);
    - Rents derived from constitutional rights negotiated by non-sovereign territories with their metropolitan partner
- Service exports: high-quality tourism and/or financial services, which require more effort than pure rent, but yield generally higher reward for effort than the production for export of either primary or manufactured goods;
- High-return export production, requiring deployment of both local labour and capital and high levels of technology and human capital;
- High-economic-return migration, involving the relocation of high-skilled individuals overseas into high paying professional and business opportunities, and subsequent accumulation of financial wealth in the host economy to provide a long-run basis for rent transfers back to the home island;
- Moderate-impact tourism and/or services exports, representing a fallback option for islands which lack the crucial endowments needed for the high-impact versions;

- Manufactured export production, possibly with special legal status for key firms along the lines of Mauritius' export processing zone (Lall & Wignaraja, 1998; McDonald & Yao, 2003; Subramanian & Roy, 2001; Treeboohun, 2004);
- Primary commodity exports, combined as possible with securing aid support for living standards;
- Labour exports of migrants seeking regular wage and salary employment in host economies and sending remittances back to an extent dictated by factors such as income relativities, relative opportunities for investment in the host and home economies, and the extent of need in the home community;
- Autarky or near autarky, with as much aid as possible.

If rent is available in sufficiently high amounts per capita, there is no need for other resources, and the Dutch Disease which keeps the economy from diversifying into other exports is not necessarily unwelcome. Traditional exports of primary products can be allowed to dwindle; tourism can stagnate, and only if rent ceases – for example, when military bases shut down - will the economy need to turn to another specialization. Dutch Disease then cures itself by the economic feedback effects of the military's departure.

Tourism is the easiest and highest-yielding fallback from rentier status – examples are Hawaii, Guam, and the Northern Marianas in the 1980s. It requires more effort than rent receipt but often pays higher wages and yields higher per capita income than the export of goods, either primary or manufactured.

Success with manufactured goods exports in small locations often requires competitiveness to be ensured by low wages or special skills ring-fenced into export processing zones. Primary exports require more effort again.

International mobility of professionals and the business elite is an established reality of the modern world in which islanders participate along with their peers. Participation in the global arena sharply raises the

pay-offs to education and saving by islanders. It is therefore important not to limit any analysis of "development" achievement to those who remain, but to keep a clear focus on the quality of life achieved by the islander community as a whole, including the diaspora. (The use of GNI and GDP statistics in the present chapter unfortunately has precisely this effect of confining the analysis to only a subset of the full economic and social unit that is an island economy.)

Below the professional and business level, simple labour migration can be either an upward-mobility opportunity or the last resort for very small and isolated islands with no other option (too remote, dull or ill-equipped for tourism, no high-value natural resource, too far from markets for manufactured exports). The fundamental requirement is access to a higher-wage labour market, whether through formal or informal channels. Securing such migration outlets is a central strategic concern for policymakers in many islands; visas may well be more valued than either aid or trade. However, the life chances of migrants in their destination economies depend upon the wage levels they are able to access. Upwardly-mobile migrants starting with good education and health status are likely to do best, while last-resort migrants from poor island economies tend to accumulate at the bottom of the host economy's labour pool.

Autarky or near-autarky is the worst fate, to be avoided if at all possible unless emigration is blocked or restricted. The lowest material (and often also non-material) standards of living coincide with higher levels of autarky: Haiti, Solomon Islands, Vanuatu, parts of Papua New Guinea. The only comparative advantage that could make autarky an even marginally attractive strategy would be to gain eligibility for aid from NGOs and international aid agencies. But no island community with the other options open would rationally choose to go it alone. Island economies are, as an ideal-type, open as well as small. Large population is generally a handicap, along with limited migration outlets and lack of trading opportunities.

Conclusion

Flexible specialization is the key attribute of island economies (Bennell & Oxenham, 1983; Schmitz, 1989), and is more easily achieved the smaller is the population involved and the greater the degree of cultural and social cohesion within that population. Small island economies are best thought of as entrepreneurs in the spirit of Marshall (1890), actively engaged in seeking out opportunity and deploying their scarce resources to maximize rents and quasi-rents from the exploitation of any market niches they can find and develop. The common tendency of observers to treat island economies as though they are marginal or unemployed workers and beneficiaries in the world economy is not only demeaning to islanders but profoundly misleading as the basis for economic theorising about their development potential.

A strategic, game-theoretic conceptualization brings into focus the active role played by island actors in securing their economic place in the world. The statistical record shows a low incidence of poverty; genuinely destitute island economies are few, and those which do exist are mostly searching out dynamic escape paths. Fiscal management is generally solid, and democratic institutions are more secure and widely encountered than in continental comparators. Health status and literacy – two indicators of human welfare not analysed in this chapter but implicit in Figure 3 – are generally good, endowing islander migrants with a well-grounded start towards employment and success in large host economies. Resilience and adaptability are long-established traits nurtured by the conditions of island life, and the application of these to the economic problem of securing material and non-material welfare in the twenty-first century global economy gives ample cause for optimism about the future of island economies.

References

Acemoglu, D., Johnson, S. & Robinson, J.A. (2002) 'Reversals of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution', *Quarterly Journal of Economics*, Vol. 117, No. 4, pp.1231-1294.

Armstrong, H.W. & Read, R. (2000) 'Comparing the Economic Performance of Dependent Territories and Sovereign Micro-states', *Economic Development and Cultural Change*, Vol. 48, No. 2, pp. 285 –306.

Armstrong, H.W. & Read, R. (2002a) 'The Phantom of Liberty? Economic Growth and the Vulnerability of Small States', *Journal of International Development*, Vol. 14, No. 4, pp. 435-458.

Armstrong, H.W. & Read, R. (2002b) 'Small States, Islands, and Small States that are also Islands', *Studies in Regional Science*, Vol. 33, No. 1, pp. 1-24.

Armstrong, H.W., De Kervenoael, R.J., Li, X. & Read, R. (1998) 'A Comparison of the Economic Performance of Different Micro-states and Between Micro-states and Larger Countries', *World Development*, Vol. 26, No.4, pp. 639-656.

Baldacchino, G. (1993) 'Bursting the Bubble: The Pseudo-Development Strategies of Microstates', *Development & Change*, Vol. 24, No.1, pp. 29-51.

Baldacchino, G. (1998) 'The Other Way Round: Manufacturing as an Extension of Services in Small States', *Asia Pacific Viewpoint*, Vol. 39, No.3, pp. 267-279.

Baldacchino, G. (2005) 'The Contribution of "Social Capital" to Economic Growth: Lessons from Island Jurisdictions', *The Round Table*, Vol. 94, No. 378, pp. 31-46.

Baldacchino, G. (2006a) 'Managing the Hinterland beyond: Two, Ideal-type Strategies of Economic Development for Small Island Territories', *Asia-Pacific Viewpoint*, Vol. 47, No.1, pp. 45-60.

Baldacchino, G. (2006b) 'Innovative Development Strategies from Non-Sovereign Island Jurisdictions: A Global Review of Economic Policy and Governance Practices', *World Development*, Vol. 34, No. 5, pp. 852-867.

Banque de France and Institut d'Emission d'Outre-Mer (2004a) *Polynesie Française: Rapport Annuel La Balance des Paiements 2004*

Barrett, C. & Swallow, B.M. (2005) 'Fractal Poverty Traps', *World Development*, Vol. 34, No.1, pp. 1-15.

Bennell, P. & Oxenham. J. (1983) 'Skills and Qualifications for Small Island States', *Labour and Society*, Vol. 8, No. 1, pp. 3-38.

Bertram, G. (1986) '"Sustainable Development" in Pacific Micro-Economies', *World Development*, Vol. 14, No. 7, pp. 809-822.

Bertram, G. (1998) 'The MIRAB Model Twelve Years On', *The Contemporary Pacific*, Vol. 11, No. 1, pp. 105-138.

Bertram, G. (2004) 'On the Convergence of Small Island Economies with their Metropolitan Patrons', *World Development*, Vol. 32, No. 2, pp. 343-364.

Bertram, G. (2005) 'Bibliography on Migration and Remittances', in Shaw, J. (ed), *Remittances, Microfinance and Development: Building the Links, Volume 1: A Global*

View, Brisbane: Foundation for Development Cooperation, www.dgroups.org/groups/worldbank/moneytransfers/docs/REMIT_Book.pdf

Bertram, G. (2006) 'Introduction: the MIRAB Model in the Twenty-First Century' in G. Bertram (ed.) *Beyond MIRAB: The Political Economy of Small Islands in the Twenty-First Century*, edited special issue of *Asia Pacific Viewpoint,* Vol. 47, No.1, pp. 1-21.

Bertram, G. & Karagedikli, O. (2004) 'Core-Periphery Linkages and Income in Small Pacific Island Economies' in Poot, J. (ed) *On the Edge of the Global Economy*, Cheltenham, Edward Elgar, pp. 106-122.

Bertram, G. & Watters, R.F. (1985) 'The MIRAB Economy in South Pacific Microstates', *Pacific Viewpoint*, Vol. 26, No. 3, pp. 497-519.

Boland, S. & Dollery, B. (2005) *The Economic Significance of Migration and Remittances in Tuvalu*, Working Paper 2005-10, University of New England School of Economics.

Borovnik, M. (2006) 'Working Overseas: Seafarers' Remittances and their Distribution in Kiribati', *Asia-Pacific Viewpoint*, Vol. 47, No. 1, pp. 151-161.

Briguglio, L. (1995) 'Small Island Developing States and their Economic Vulnerabilities', *World Development*, Vol. 23, No.9, pp. 1615-1632.

Briguglio, L., Cordina, G., Farrugia, N. & Vella, S. (2005) 'Conceptualizing and Measuring Economic Resilience' in S. Chand (ed.) *Pacific Islands Regional Integration and Governance*, Canberra, ANU Press, pp. 26-49.

Briguglio, L. & Cordina, G. (eds.) (2004) *Competitiveness Strategies for Small States*, Malta & London, Islands and Small States Institute and Commonwealth Secretariat.

Brittain-Catlin, W. (2005) *Offshore: The Dark Side of the Global Economy*, New York, Farrar, Strauss and Giroux.

Central Intelligence Agency (2006) *CIA World Factbook*, Washington DC, Central Intelligence Agency, https://www.cia.gov/cia/publications/factbook/index.html.

Chamon, M. (2005) 'The Importance and Determinants of International Remittances to Samoa', in IMF, *Samoa: Selected Issues and Statistical Appendix*, Country Report 05/221, Washington DC, June.

Christensen, J. & Hampton, M. (2000) 'The Economics of Offshore: Who Wins, Who Loses?', *The Financial Regulator*, Vol. 4, No. 4, pp. 24-26.

Connell, J. (2006) 'Nauru: The First Failed Pacific State?", *The Round Table*, Vol. 95, No. 383, pp. 47-63.

Da Cruz, V., Fengler, W. & Schwartzman, A. (2004) *Remittances to Comoros-Volume, Trends, Impact and Implications*, Washington DC, World Bank African Region Working Paper Series No. 75.

Demas, W.G. (1965) *The Economics of Development in Small Countries, with Special Reference to the Caribbean*, Montreal, McGill University Press.

Docquier, F. & Marfouk, A. (2004) 'Measuring the International Mobility of Skilled Workers (1999-2000), Washington DC, World Bank, www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2004/09/22/000160016_20040922150619/Rendered/PDF/wps3381.pdf.

Financial Action Task Force (2005a) *Money Laundering and Terrorist Financing Typologies 2004-2005*, Paris, OECD.

Financial Action Task Force (2005b) *Annual and Overall Review of Non-Cooperative Countries or Territories June 2005*, Paris, OECD.

Grieco, E.M. (2003) *The Remittance Behaviour of Immigrant Households: Micronesians in Hawaii and Guam,* New York, LFB Publishing.

Hall, R.E. & Jones, C.I. (1999) 'Why do some Countries produce so much more Output per Worker than Others?', *Quarterly Journal of Economics*, Vol. 114, No. 1, pp. 83-116.

Hampton, M.P. (1996a) 'Sixties Child? The Emergence of Jersey as an Offshore Finance Centre: 1955-71', *Accounting, Business and Financial History*, Vol. 6, No. 1, pp. 51-71.

Hampton, M.P. (1996b) *The Offshore Interface: Tax Havens and Offshore Finance Centres in the Global Economy*, Basingstoke, Macmillan.

Hampton, M. & Christensen, J. (2002) 'Offshore Pariahs? Small Island Economies, Tax Havens and the Reconfiguration of Global Finance', *World Development,* Vol. 30, No. 2, pp. 1657-1673.

Hein, P.C. (1988) 'Problems of Small Island Economies' in J. Crusol, P. Hein & F. Vellas (eds.) *L'Enjeu des Petites Économies Insulaires*, Paris, Economica, pp. 1-45.

Hintjens, H.M. & Newitt, M.D.D. (eds.) (1992) *The Political Economy of Small Tropical Islands: The Importance of Being Small*, Exeter, University of Exeter Press.

IEDOM (Institut d'Emision d'Outre-Mer) (2006) *Evolution des Principaux Indicateurs Economiques, Monetaires et Financiers dans les DOM et les Collectivites d'Outre-Mer*, www.iedom.fr/doc/principaux_indicateurs_economiques_DOM2.pdf#search=%22evolution%20des%20principaux%20indicateurs%20economiques%20monetaires%20et%20financiers%20dans%20les%20DOM%22.

IMF African Department (2005) *Union of the Comoros: Staff Report for the 2005 Article IV Consultation and First Review Under the Staff-Monitored Program*, IMF Country Report 05/299, August.

Lall, S. & Wignaraja, G. (eds) (1998) *Mauritius: Dynamising Export Competitiveness*, London, Commonwealth Secretariat.

Lapointe, M. (2004) *Diasporas in Caribbean Development, Rapporteur's Report*, Washington DC, Inter-American Dialogue and World Bank.

McDaniel, C.N. & Gowdy, J.M. (1999) 'The Physical Destruction of Nauru: An Example of Weak Sustainability', *Land Economics,* Vol. 75, No. 2, pp. 333-338.

McDaniel, C.N. & Gowdy, J.M. (2000) *Paradise for Sale: A Parable of Nature*, Berkeley CA, University of California Press.

McDonald, C. & Yao, J. (2003) *Mauritius: Unemployment and the Role of Institutions*, IMF African Department Working Paper WP/03/211, November.

Marshall, A. (1890) *Principles of Economics*, London, Macmillan.

Matsen, E. & Torvik, R. (2005) 'Optimal Dutch Disease', *Journal of Development Economics*, Vol. 78, No. 2, pp. 494-515.

Milne, S. (2005) *The Economic Impact of Tourism in SPTO Member Countries: Final Report*, prepared for South Pacific Tourism Organization, August, http://csrs2.aut.ac.nz/NZTRI/nztrinew/documents/Pacific_Economic_Impact_Report.pdf.

Muliaina, T. (2006) 'Mismatched Perceptions: Views on Remittance Obligations Among Remittance Senders and Recipients" in J. Shaw (ed.) *Remittances, Microfinance and Development: Building the Links, Volume 1: A Global View*, Brisbane, Foundation for Development Cooperation, pp. 26-32.

Newitt, M.D.D. (1992) 'The Perils of Being a Microstate: Sao Tomé and the Comoros Islands since Independence' in H.M. Hintjens & M.D.D. Newitt (eds.) *The Political Economy of Small Tropical Islands: The Importance of Being Small*, Exeter, University of Exeter Press, pp. 76-92.

Poirine, B. (1997) 'A Theory of Remittances as an Implicit Family Loan Arrangement', *World Development*, Vol. 25, No. 4, pp. 589-611.

Poirine, B. (1999) 'A Theory of Aid as Trade with Special Reference to Small Islands', *Economic Development and Cultural Change*, Vol. 47, No. 4, pp. 831-852.

Poirine, B. (2006) 'Remittances Sent by a Growing Altruistic Diaspora: How do they Grow Over Time?', *Asia-Pacific Viewpoint,* Vol. 47, No. 1, pp. 93-108.

Puig, J. (2004) 'External Sector Developments and Policies' in Union of the Comoros: Selected Issues & Statistical Appendix, IMF Country Report 04/233, August, pp. 46-71.

Rodrik, D., Subramanian, A. & Trebbi, F. (2004) 'Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development', *Journal of Economic Growth*, Vol. 9, No. 2, pp. 131-165.

Schmitz, H. (1989) *Flexible specialization: a new paradigm of small-scale industrialization*,. Discussion Paper No. 261, Brighton, Institute of Development Studies.

Streeten, P. (1993) 'The Special Problems of Small Countries', *World Development*, Vol. 21, No. 2, pp. 197-202.

Subramanian, A. & Roy, D. (2001) *Who Can Explain the Mauritian Miracle: Meade, Romer, Sachs or Rodrik?*, IMF Working Paper WP/01/116, August.

Suss, E. C., Williams, O.H. & Mendis, C. (2002) *Caribbean Offshore Financial Centers: Past, Present and Possibilities for the Future*, IMF Working Paper WP 02/88, June.

Treeboohun, N. (2004), 'Competitiveness and Productivity in Mauritius' in L. Briguglio & G. Cordina (eds.) *Competitiveness Strategies for Small States*, Malta & London, Islands and Small States Institute and Commonwealth Secretariat, pp. 204-215.

United Nations (2005) *United Nations Statistical Yearbook 49th issue*, New York, United Nations.

United Nations (2006) *World Migrant Stock: The 2005 Revision Population Database*, http://esa.un.org/migration/.

United Nations Development Program (UNDP) (2005), *Human Development Report 2005*, New York, http://hdr.undp.org/reports/global/2005/pdf/HDR05_complete.pdf.

United Nations Technical Subgroup on Movement of Natural Persons (2005), *Definition of Personal Remittances in the Balance of Payments Context*, Outcome Paper from the Eighteenth Meeting of the IMF Committee on Balance of Payments Statistics, Washington, D.C., June 27–July 1, BOPCOM-05/9.

US Office of Insular Affairs (2006), *CNMI*, www.doi.gov/oia/Islandpages/cnmipage.htm.

Van Den Boogaerde, P., Duggar, E., Haacker, M. & Yao, K. (2005) Comoros: Statistical Appendix, IMF Country Paper 05/296, August.

World Bank (2004) *Global Development Finance 2003*, Washington DC, IBRD.

World Bank (2005) *Global Development Finance 2004*, Washington DC, IBRD.

World Bank (2006) *Global Development Finance 2005*, Washington DC: IBRD, http://siteresources.worldbank.org/INTGDF2006/Resources/GDF06_complete.pdf.

Appendix 1: Basic Data

Island entity	Abbrev-iation	Imports of goods and services per capita, US$m	Merch-andise exports	% of total imports of goods and services					Popul-ation 000	Per capita income US$	Life expect-ancy	Index of income and life expectancy
				Tourism	Remitt-ances	Aid	Remitt-ances + Aid	Residual				
Under 10 million population												
American Samoa	AMS	10,629	58.3	2.6	0.0	2.5	2.5	36.6	57	5,800	76	1.368
Anguilla	ANG	8,368	3.4	51.6	5.3	4.4	9.7	35.3	13	7,500	77	1.454
Antigua and Barbuda	ANT	6,337	8.4	55.5	2.4	1.8	4.2	31.9	80	9,480	72	1.335
Aruba	ARU	29,492	67.7	27.8	-1.2	0.6	-0.6	5.1	99	21,800	79	1.711
Bahamas, The	BAH	8,792	15.3	60.6	-2.8	0.2	-2.5	26.7	319	15,100	66	1.214
Bahrain	BHR	7,243	111.4	12.3	-19.7	0.0	-19.7	-4.0	716	14,370	74	1.483
Barbados	BAR	5,539	49.0	47.3	5.9	0.3	6.2	-2.5	269	17,000	73	1.461
Bermuda	BER	25,081	2.8	23.1	0.0	0.0	0.0	74.1	64	69,900	78	1.882
British Virgin Islands	BVI	24,531	4.7	56.1	0.0	0.6	0.6	38.7	23	38,500	77	1.733
Canary Islands	CAN	8,380	20.5	56.6	0.0	0.0	0.0	23.0	1,694	16,566	78	1.608
Cape Verde	CPV	807	9.8	13.7	21.1	27.3	48.4	28.1	495	1,720	71	0.979
Cayman Islands	CAY	17,773	0.4	74.6	0.0	-0.3	-0.3	25.2	44	32,300	80	1.808

Comoros	COM	119	24.5	13.2	33.9	33.8	67.8	-5.5	588	560	62	0.510
Cook Islands	CKI	2,765	11.2	75.4	2.2	8.4	10.5	2.9	21	5,000	72	1.198
Cyprus	CYP	6,519	17.5	36.7	-0.6	0.8	0.2	45.6	826	16,510	78	1.614
Dominica	DOM	2,356	28.4	28.9	2.1	68.7	70.8	-28.1	71	3,670	75	1.247
Dominican Republic	DMR	1,122	54.4	28.5	20.1	1.2	21.2	-4.1	8,768	2,100	72	1.047
Falkland Islands	FAL	28,769	121.3	0.0	0.0	-0.2	-0.2	-21.1	3	25,000	78	1.705
Faroe Islands	FAR	12,650	83.4	4.0	6.0	0.0	6.0	6.6	48	22,000	79	1.715
Fiji	FIJ	1,319	47.5	21.2	1.5	2.8	4.3	27.1	841	6,000	70	1.178
French Polynesia	FRP	6,402	11.1	25.9	-0.7	56.3	55.6	7.3	253	16,070	76	1.555
Greenland	GRN	9,500	75.6	0.0	0.0	83.8	83.8	-59.3	57	20,000	50	0.772
Grenada	GRE	2,651	23.4	31.7	7.2	3.3	10.5	34.3	106	3,750	65	0.937
Guadeloupe	GUA	4,791	8.4	13.8	0.0	54.7	54.7	23.2	453	7,900	78	1.488
Guam	GUM	4,493	7.7	254.6	0.0	0.0	0.0	-162.3	167	15,000	79	1.621
Haiti	HAI	155	24.4	8.8	47.8	15.3	63.1	3.7	8,407	400	53	0.162
Hawaii	HAW	2,576	48.6	308.9	0.0	0.0	0.0	-257.5	1,263	40,000	80	1.844
Iceland	ICE	12,198	60.5	7.0	1.7	0.0	1.7	30.9	292	37,920	80	1.844
Jamaica	JAM	1,718	31.7	28.2	18.6	0.2	18.9	21.2	2,645	3,300	73	1.177
Kiribati	KIR	999	10.3	1.4	13.2	17.5	30.7	57.6	98	970	62	0.602
Maldives	MAL	2,087	17.7	50.7	-7.0	3.7	-3.3	34.8	321	2,410	64	0.842
Malta	MLT	9,043	77.3	17.3	0.0	0.4	0.4	5.0	401	12,050	79	1.594
Marshall Islands	RMI	1,221	10.4	5.3	0.8	86.5	87.3	-3.1	61	2,320	70	1.020

Martinique	MAR	4,776	13.3	16.5	0.0	55.5	55.5	14.8	436	14,400	79	1.632
Mauritius	MAU	2,287	60.0	21.4	-0.2	0.6	0.4	18.2	1,234	4,640	73	1.220
Mayotte	MAY	1,696	1.8	0.0	0.0	111.1	111.1	-12.9	172	2,600	62	0.772
Micronesia, Federated States	FSM	1,390	13.4	10.4	1.5	74.9	76.4	-0.2	110	2,300	70	1.011
Montserrat	MON	4,376	2.8	20.6	-5.6	89.8	84.2	-7.6	9	3,400	79	1.359
Nauru	NAU	1,932	83.8	0.0	0.0	28.8	28.8	-12.6	13	5,000	63	0.933
Netherlands Antilles	NTA	13,301	25.3	32.3	-1.8	4.1	2.3	40.1	181	16,000	76	1.552
New Caledonia	NCA	8,461	40.9	10.6	-0.1	41.5	41.4	7.1	230	15,000	74	1.485
New Zealand	NZL	4,614	76.3	14.8	2.3	0.0	2.3	6.6	4,061	19,990	79	1.680
Niue	NIU	735	0.0	62.6	0.0	347.6	347.6	-310.3	2	3,600	71	1.122
Northern Marianas	NMI	8,551	127.3	99.5	0.0	7.1	7.1	-133.9	77	12,500	76	1.509
Palau	PAL	5,956	12.5	54.9	0.0	26.6	26.6	6.0	20	6,870	70	1.222
Papua New Guinea	PNG	298	113.0	4.7	-0.6	13.4	12.8	-30.5	5,772	2,600	65	0.883
Puerto Rico	PUE	12,515	96.1	5.2	1.3	12.2	13.4	-14.7	3,895	10,950	78	1.558
Reunion	REU	5,627	6.2	8.1	0.0	64.4	64.4	21.3	788	6,200	74	1.321
St Helena	STH	5,798	41.4	0.0	2.3	29.0	31.3	27.4	8	2,500	78	1.274
St Kitts and Nevis	STK	5,150	22.3	25.4	0.4	4.5	4.9	47.4	47	6,980	72	1.287
St Lucia	STL	2,693	11.3	57.2	0.4	4.6	5.0	26.6	164	4,180	74	1.239
St Pierre and Miquelon	SPM	13,138	7.5	0.0	0.0	66.8	66.8	25.6	7	7,000	79	1.483
St Vincent and Grenadines	STV	1,850	21.1	36.0	0.9	3.8	4.7	38.3	118	3,400	74	1.201

Samoa	SAM	832	9.9	30.2	35.7	21.9	57.6	2.3	184	1,840	71	1.000
Sao Tome and Principe	STP	254	11.0	25.9	2.9	84.7	87.6	-24.6	153	390	67	0.601
Seychelles	SEY	6,639	38.9	26.9	-1.5	1.9	0.4	33.9	84	8,190	72	1.306
Singapore	SIN	35,944	92.3	3.0	0.0	0.0	0.0	4.6	4,240	24,760	82	1.811
Solomon Islands	SOL	271	64.8	5.7	-3.1	39.5	36.4	-6.9	466	560	73	0.843
Tokelau	TOK	496	0.0	0.0	0.0	674.4	674.4	-574.4	1	1,000	69	0.826
Tonga	TGA	847	15.2	12.8	48.2	23.9	72.0	-0.1	102	1,860	70	0.965
Trinidad and Tobago	TRI	2,925	107.9	5.9	1.6	0.1	1.6	-15.4	1,301	8,730	67	1.150
Turks and Caicos Islands	TUR	4,214	7.7	332.1	0.0	6.5	6.5	-246.3	21	11,500	75	1.451
Tuvalu	TUV	1,205	0.1	3.4	31.3	47.4	78.7	17.8	12	1,400	68	0.866
US Virgin Islands	USV	48,600	96.3	25.5	0.0	0.0	0.0	-21.7	113	14,500	79	1.630
Vanuatu	VAN	699	16.5	33.3	-19.4	24.1	4.7	45.5	207	1,390	63	0.692
Wallis and Futuna	WAL	3,846	0.1	0.0	0.0	84.7	84.7	15.2	16	3,800	74	1.236
Large island economies (over 10 million population)												
Cuba	CUB	460	32.8	33.1	15.3	1.9	17.2	17.0	11,383	3,500	77	1.303
Madagascar	MDG	40	97.6	12.9	0.5	49.5	50.0	-60.5	18,113	290	57	0.233
Sri Lanka	SRI	379	67.1	4.2	15.0	5.2	20.1	8.6	19,419	1,010	73	0.966