

Small remote economies like Anguilla and Vanuatu face huge competitive challenges, not least the higher costs of doing business.

L Alan Winters and **Pedro Martins** measure the size of their cost disadvantages and explore potential solutions.

Small isn't beautiful: the cost disadvantages of small remote economies

The supposed problems of small remote economies have long occupied the economics profession. It is well established that smaller economies – those with populations of up to 4 million people, the size of Singapore – are less diversified and more vulnerable to shocks. And yet it has been hard to find evidence either that they grow less rapidly or that they have lower incomes per person.

But as the world economy becomes more integrated, small economies are starting to feel greater competitive pressure and to lose some of the advantages they had previously taken for granted, such as preferential trade access to the markets of rich countries. These concerns have been articulated in international trade negotiations and the creation of dedicated organisations like the World Bank and Commonwealth Secretariat's Small States Forum.

Our research addresses a key element of this debate: whether the costs of doing business are higher in smaller, more remote economies. If so, such economies may be unable to generate acceptable incomes for their residents – and the problem will be exacerbated if they lose their trade preferences.

The problem of smallness

The economist's stock answer to complaints about the costs of smallness is to argue that international trade allows a small economy to buy from the most efficient producers in the world and to reap at least some economies of scale by concentrating production in a very small number of sectors.

But when we add remoteness to the equation, this response is attenuated because, even setting aside the risks inherent in specialisation, trade is costly. Once the cost of transporting goods to and from a remote economy is taken into account (a small economy facing given world prices has to pay for transport both ways), incomes will necessarily be lower than in bigger and better-located economies. Moreover, the extra transport costs will typically be larger the smaller the economy since consignment sizes are smaller and infrastructure less developed. If transport is prohibitively expensive, the small economy's costs are inflated by the absence of economies of scale.

Figure 1 illustrates the problem. Imagine an industry in which a manufactured good produced in the average-sized (median) economy requires \$20 of power, \$40 of materials and \$40 of labour, and sells on the world market

for \$100. If a small economy pays 50% extra for its power because it lacks scale and 50% extra for its materials because of transport costs, it only has \$10 left over for labour. If labour productivity is the same as in the average economy, wages will be a quarter of those in the average economy.

Now consider a 'micro economy' where power and materials cost twice their average economy levels: there is nothing left for labour. Even if wages were zero, this industry would still be unviable. What can be done?

Improving efficiency to reduce the value of inputs could solve the problem, but failing that, the small economy needs higher prices if it is to keep this industry. A niche market – a unique product with high demand – is one source, but more common is a trade preference. If there were a market that imported this good and levied a 40% tariff, its internal price would be \$140. If it were to exempt the small economy from the tariff, the latter could earn \$140 per unit on its exports and suddenly the industry is viable, albeit still with lower returns to labour.

The worry would then be what happens if improved efficiency elsewhere drives the world price down? Think of this as the emergence of China, perhaps.

The sources of income necessary to keep some small economies going are likely to be external



on value added and it is plain that there is almost no room for value added in micro economies.

The final two rows divide up value added. The data suggest that if capital were the only residual claimant (that is, excess wages are taken as given), then it would earn negative returns in micro economies and zero in very small ones. Similarly, if wages were the residual income recipient, then there would be nothing to pay them in a micro economy and they would be only 43% of average wages in very small economies. For a micro economy, this means that even if wages were zero, total costs in manufacturing would still exceed the world price.

Local solutions?

While circumstances vary, it is clear that micro and very small economies are likely to face huge competitive challenges. These economies will not be suitable locations for industry or even tourism unless they have very specific advantages that allow them to charge substantially higher prices than the average economy. For hotels and tourism, the attractions of small tropical islands are plausible and we do see viable tourist industries on them. Our results merely indicate that they will need to manage costs carefully and will never achieve mass market penetration.

But for manufacturing, the challenges look very tough unless countries are fortunate enough to find very specific niche markets. One common response is that since the costs of trade are so high, small countries need the right to protect their industries. This is completely misguided. The problem is not that imports can get in too easily but the very

opposite. Adding barriers to trade will exacerbate not relieve the problems of smallness. Even where local industries could be successfully established behind tariff walls, there is nothing to suggest that such an approach would be economically beneficial. Pursuing comparative advantage maximises real income – though it might not be sufficient to provide an adequate standard of living.

A related response is to suggest subsidising business investment in order to overcome the cost disadvantages of smallness. There are many arguments for subsidising business in any economy. We do not accept most of them but even if we did, smallness adds nothing to them. If business should not be subsidised in a large economy, neither should it be in an equivalent small one. Smallness does not introduce distortions that need to be countervailed, but an overall feasibility constraint. If income is insufficient when maximised, it will certainly be insufficient if it is not maximised. And in the absence of the market failures usually adduced to justify subsidies, offering support to manufacturing means income is not being maximised.

Another approach is to economise on the costs of economic management or statehood by combining to provide various functions of government. We doubt whether such efficiencies are sufficient to overcome the disadvantages of smallness, but there is undoubtedly a case for seeking such efficiency gains. And in places where smallness doesn't seem to matter – Luxembourg, Liechtenstein, Andorra – the secret seems to be to integrate extremely closely with the neighbouring large countries.

But combining to produce government

services does not mean establishing regional authorities and then maintaining local capacity to influence and monitor those authorities. It means a genuine pooling of sovereignty with no local shadowing – as, for example, Yorkshire and Lancashire (counties that are larger than many small economies) combine in England.

External sources of income

In the end, the sources of income necessary to keep some small economies going are likely to be external. Several already exist and account for the relatively high incomes that many small economies currently maintain. Trade preferences allow them to earn higher prices for exports, as do niche markets like high-end tourism. High remittances from expatriates support some economies: Tonga, for example, where 41% of income comes from remittances. Aid supports others: the Marshall Islands, for example, with aid flows of \$1,178 per person in 2002. The policy issue is that some of these sources are under threat and not all very small economies seem likely to find niche markets.

The most favourable case for using a one-off capital transfer as a solution is probably building communications links. If these are of good quality and inexpensive, services relying on electronic interchange may become competitive. But even if exports avoid transport costs, imports do not (and ships and planes have to return home). And even in 'electronic services', personal contacts are important so small remote economies will still be disadvantaged by their high travel costs and long travel times.

Another possibility would be for rich countries to subsidise small economy industries. Unlike where small economies fund their own subsidies, this could be attractive. But the idea raises very particular political challenges. Many of the cost disadvantages of smallness apply equally to insular or isolated parts of larger countries. These disadvantaged regions are often subsidised via regional policies, but if small economies were permitted to have export subsidies, it needs to be explained why parts of larger economies should not. The reason is not hard to formulate, but it may be uncomfortable: within a country, people can move out of uneconomic locations.

to Anguilla, Vanuatu, Botswana, Singapore and Hungary, respectively.

Our calculations suggest that there are significant costs to small size in almost all areas. Table 1 summarises these estimates, indicating, for example, that there are very high cost disadvantages for seafreight and utilities and rather lower cost disadvantages for airfreight. And while small countries apparently have an advantage in rents, this is because rents reflect the value of land in commercial exploitation. The negative numbers reinforce the view that small economies are disadvantaged: it is obvious why a plot in Manhattan costs more than one in Vanuatu.

The next step is to aggregate these cost disadvantage factors into overall competitive disadvantages for small economies in three potential export industries: electronic assembly, clothing and tourism. Using data from nearly 60 countries on the structure of the costs of supplying exports to the world market, we can bring the cost disadvantage factors together to calculate an index of the excess costs of exports from small economies.

For the two manufacturing sectors, the competitive disadvantage of 'Singapore' is around 2.7%, well within the likely range of data error and also easily coped with by good management. For a Botswana-sized economy, the excess is around 5%, again not a huge worry. But for the very small and micro economies, the size disadvantages of 14% and 36% respectively are huge.

For tourism, in which personal air travel features large in the cost structure, the disadvantages are larger but have the same pattern as in manufacturing.

If these cost disadvantages cannot be passed onto customers – if small economies have to sell their goods and services at world prices – then the only way that very small economies can export is if some input accepts lower payments than it would get in the average economy. Quantifying these 'penalties' requires an assumption about which inputs have unavoidably higher costs and which can be squeezed to accommodate the excess costs elsewhere.

Table 2 outlines the results of five exercises for the clothing sector. The top row shows the overall cost disadvantage factors, while the remaining rows report income penalties. The first assumes that only tradable material inputs and final outputs face excess costs and that all the rest of the economy can be squeezed to maintain competitiveness. Even here, the penalties are large for micro and very small economies.

The next row assumes that traded inputs, outputs and utilities have unavoidable cost excesses, and the third that all intermediate inputs including services do. In the latter, the burden falls

Table 2:

Cost disadvantages and income penalties in the clothing sector (percentage of average economy costs or incomes)

		Economy size			
		Micro	Very small	Threshold	Small
Cost disadvantage factor		36.3	14.3	5.1	2.7
Income penalties					
Inputs assumed to have unavoidable cost disadvantages	Inputs bearing the costs of inefficiency				
Internationally traded intermediate inputs	All domestic supplies primary factors, services and non-traded intermediates	-40.1	-12.0	-3.1	-1.3
Traded intermediate inputs and utilities	Primary factors and services	-44.7	-14.0	-3.8	-1.6
All intermediate inputs including services	Primary factors	-86.0	-28.6	-8.4	-3.7
All intermediate inputs and labour	Capital	-263.9	-99.9	-34.0	-15.6
All intermediate inputs and capital	Labour	-161.0	-57.3	-18.4	-10.2

Table 1:

Summary of cost disadvantages

Percentage deviation of costs from those in the average economy

Area of cost*	Micro	Very small	Threshold	Small
Airfreight	31.8	4.1	-1.8	-1.7
Seafreight	219.6	70.5	20.5	9.1
Unskilled wages	60.1	31.6	13.6	6.6
Semi-skilled wages	22.4	12.1	5.3	2.6
Skilled wages	38.0	20.3	8.9	4.3
Telephone (marginal costs)	98.5	47.2	19.1	9.0
Electricity (marginal costs)	93.1	47.0	19.7	9.4
Water (marginal costs)	0	0	0	0
Fuel	53.8	28.3	12.3	5.9
Personal air travel	115.7	56.8	23.3	11.0
Land rent	-3.5	-17.2	-14.2	-8.9

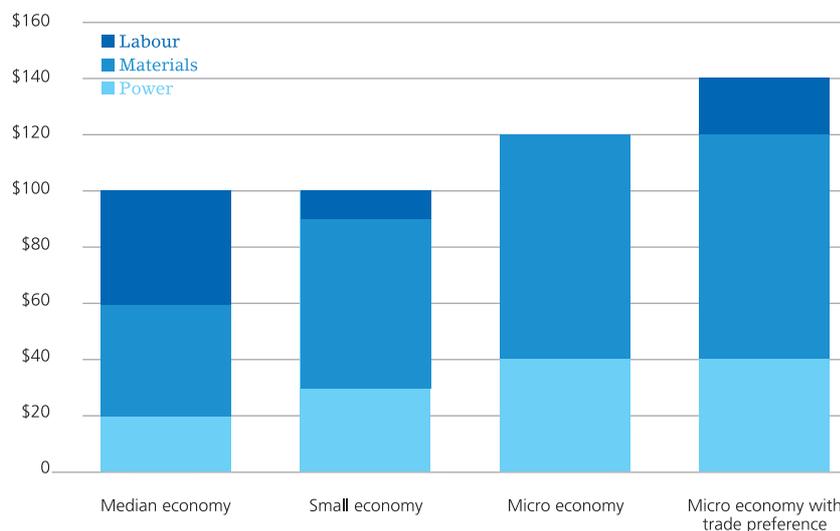
*The figures cited are averages over several specific costs such as types of fuel or transport to different destinations





'Micro' and very small economies – with 200,000 inhabitants or fewer – face particularly tough challenges

Figure 1:
Excess costs cut incomes



If the world price fell to, say, \$85, the 40% tariff would now yield a price of only \$119 – below costs again. Or suppose the tariff fell in a round of trade liberalisation or other countries objected to the preference: the small economy would be back in trouble again. These are the shocks that loom for the world's small remote economies.

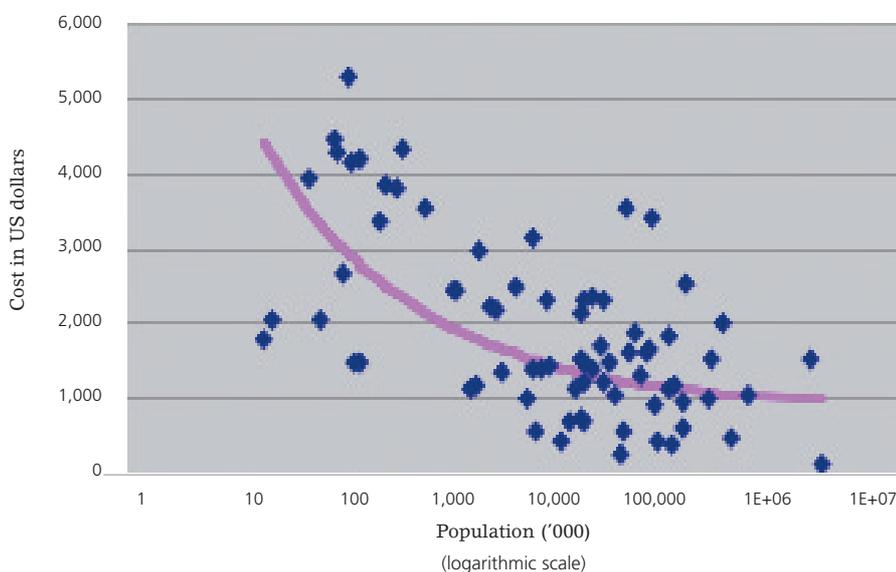
Cost disadvantages

We have assembled survey data on business costs for 92 economies from four sources: the Economist Intelligence Unit, which surveys 54 medium-sized and large countries; and Imani Capricorn (Africa), the Caribbean Community and the Pacific Islands Forum, which were commissioned by the Commonwealth Secretariat to

survey small economies in their areas. The questions covered air and sea transport costs for exports and imports, the costs and reliability of utilities, the wages of different types of labour, taxes, rents, labour shortages and policy regimes.

Using these data, we can examine the relationships between country size and different cost components. Figure 2, for example, illustrates how the costs of sending a 20' full container from Yokohama to a country's capital fall as population size increases.

Figure 2:
Shipping costs 'from Yokohama'



We can also calculate the predicted cost disadvantage for four specimen countries – chosen to represent micro (12,000 inhabitants), very small (200,000), 'threshold' (1.6 million) and small economies (4 million) – relative to the average country of roughly 10 million inhabitants. The population values for these representative countries correspond

Tourist industries on small tropical islands may be viable but they need to manage costs carefully

Migration opportunities

Ultimately, we must face the possibility that if small countries' current trade preferences are eroded and their incomes are not somehow maintained in other ways, many of their inhabitants will seek to work abroad. Liberalising the temporary movement of labour within the world economy promises huge economic gains. This could be a key factor for very small economies, essentially allowing residents to earn abroad but live and consume mostly at home.

Temporary workers from small countries would still be at a disadvantage relative to those from larger ones: they would face higher transport costs, smaller networks for finding jobs and easing migratory strains, and higher consumption costs at home. But especially if they had preferential access – like the guaranteed quotas that New Zealand offers Polynesia – the benefits could outweigh the disadvantages.

The alternative to temporary mobility would be permanent migration. In the current political climate, this seems to combine the worst fears of both sides: of depopulation, and maybe eventual cultural extinction, in the very small economies; and of immigration in most developed countries. But the latter fear is not well-founded since the magnitudes are so small.

Whether we are talking about transfers or flows of people, it is perfectly feasible for the rich countries to accommodate the micro or very small economies. For example, only around 3.1 million people (0.05% of the world's population) live in countries of below 200,000 population, 6.3 million in those below 400,000 and 16.4 million in those below 1 million population. These are not insurmountable numbers by any yardstick.

Where smallness doesn't seem to matter, the secret is to integrate extremely closely with neighbouring large countries



This article summarises 'When Comparative Advantage is Not Enough: Business Costs in Small Remote Economies' by L Alan Winters and Pedro Martins, *World Trade Review* 3(3). The same issue contains a comment by CEP's Anthony J Venables. Further discussion of the data is in 'Beautiful but Costly: Business Costs in Small Remote Economies', Economic Paper 67, Commonwealth Secretariat, and of the policy issues in 'Policy Challenges for Small Economies in a Globalising World' by L Alan Winters, mimeo, Development Research Group, The World Bank.

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If small countries' income sources are not maintained, many of their inhabitants may seek to work abroad