PUERTO RICO AND THE ECONOMIC FUTURE: OUTSOURCER OR OUTSOURCEE?

By

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> "…ask not what your country can do for you. Ask what you can do for your country." John F. Kennedy

The Puerto Rican economy is in drastic two-sided crisis, one short run, the other long run. The short run crisis stems from large and persistent governmental deficits, which in a few years have dragged down the island's bonds from the very top rating to nearly junk-bond status. But that is merely a symptom. The real price will be paid when the Island will be left with only two choices: drastic retrenchment or massive overpayment for further funds. Still, it is the second crisis that is really threatening, bringing the economy from a spectacular rate of growth between 1950 and 1970 to a state of affairs in which the Puerto Rican economy falls ever further behind mainland U.S. In short, if the responses adopted are insufficient it may be well on its way to impoverishment and underdevelopment.

The future rewards from an effective program dealing with these two problems are great. But such a program can work only if everyone is prepared to accept the necessary and substantial initial sacrifices, rather than scrambling to protect one's own territory every time one of the painful steps necessary for recovery is proposed by the understandably frightened politicians.

1. Toward Elimination of the Deficit: the Short-Run Crisis

One of the standard clichés of political campaigns during an era of fiscal deficits is the promise to straighten out the budget with the aid of a vigorous war on waste and

[1]. I am very grateful to Dr. Heidie Calero, president Hcalero Consulting group, for her suggestions.

corruption. Thereby, it is claimed, the government's debt burden can be brought under control with little or no reduction in popular services and, even more emphatically, with no tax increases. This is the expectable promise, and it is a promise that is never kept. It never materializes, even though the winners of the election wish that it could. But it cannot, for at least two reasons: first, in the real world it is very difficult to make much of a dent in waste and corruption, much less to uproot them altogether. No one really knows how to do much more than to achieve minor reductions in the two. Second, even if it could be brought under control, the size of the cost of waste and corruption, though substantial, probably is insufficient to eliminate the deficit. Of course, of the latter we cannot be sure because systematic concealment makes it impossible to provide reliable estimates of the magnitude of the costs entailed.

The fact, then, is that this remedy for fiscal crisis is a fairy tale. At its most successful it merely serves to camouflage the need for steps that are more effective, if more painful. There is no choice but to raise taxes and to cut expenditures, and no one but the poorest of the poor can reasonably be exempted. Of course, we are all well aware that such a program can be political suicide, unless some courageous statesman is willing to face the electorate candidly, and there have been times in history when such candor did elicit popular support. But the opposite game in which every group devotes its energies to explaining why it alone merits exemption from the burden is a game in which everyone will eventually lose. The time has indeed come for some new entrants into the roster of profiles in courage.

2. Toward an Effective Program for Long-Run Growth

Puerto Rico's economy is, of course, quite small, and is therefore heavily dependent on exports that will provide the resources to acquire the imports on which the well being of the public depends. But its success depends heavily on whether others economies, notably the U.S., will find it increasingly profitable to outsource some of their activities to Puerto Rico, or whether some of the activities now in Puerto Rico, will be outsourced to other, lower wage areas. That is, what matters profoundly for the outcome is whether the island will predominantly be an outsourcee – that is, prospering as the recipient from elsewhere of outsourced activity -- or an outsourcer, losing more of its activities to low-wage rivals.

Now, the loss of economic activities via outsourcing is not necessarily as serious to an economy as is popularly supposed. As will be reiterated below, there is a way for an economy to ensure that the outcome is beneficial – it can be done via productivity growth and innovation at home. That is what has enabled U.S. living standards to expand with little let up for more than a century, even though it was doing business with a world much of which had wages much lower than its own. The way it was done was through unrelenting productivity enhancement and innovation, which enabled the U.S. to keep replacing exported jobs with new ones, mostly via the creation of inventions and other intellectual property (IP), and at the same time to benefit via lower-priced imports from the countries that received the outsourced activities. This way out is particularly pertinent to Puerto Rico, with its widespread education and the high transport cost of its manufactures. The example of the recently successful economies, Ireland, Finland, India and China, makes this clear. Their prosperity has come neither from manufactures nor from tourist services, but from the use of their educated labor force for the creation of intangible intellectual property, which can be exported instantaneously, costlessly, and without delay.

Before turning to this issue, however, let me provide an intuitive description of a new and rigorous analysis of the dangers and yet possible advantages of outsourcing.[2]

3. Outsourcing: Perils and Promise

There seem to be no moderate views on the issue of outsourcing. Many economists hail it as an instrument of free trade that can confidently be expected to benefit all concerned. But there are others, notably trade unions, who see it as a dire threat to labor in the

[2] The analysis is based on the work of Ralph E. Gomory, with the present author as junior partner. Gomory is now President of the Alfred P. Sloan Foundation and formerly, senior vice president and director of research at IBM, and was formerly a member of the mathematics department at Princeton University. For more information on the analysis see Ralph E. Gomory and William J. Baumol, *Global Trade and Conflicting National Interests*, Cambridge, Massachusetts: The MIT Press, 2000.

country whose activities are outsourced, which can only result in a reduction in its standard of living. As usual, both extreme positions go too far. The truth is that matters can go either way, depending in large part, on what the outsourcing country succeeds in doing to ensure that the process turns out to be mutually beneficial.

First, it should be obvious that one of the key economic contributions of the entrepreneurs' activities is discovery of opportunities for enhanced efficiency in production and the resulting decrease in product costs to the consumer. But enhanced efficiency and/or cost reduction can be achieved in a variety of ways, innovative technology being only one of them. The entrepreneurs are also driven to look for new and better *locations* for their activities, and the discovery of a foreign source that once was less efficient as a supplier but has now become the least costly provider, as far as economists are concerned, is also an innovative act. And such an entrepreneur clearly helps consumers in his country by providing products at lower cost. Unfortunately this is not the end of the story

What about the shorter run effects on the outsourcing country? The answer is that it depends. First, past experience shows that, in the case of the U.S., wages were indeed able to grow in the past, with no sustained decline in employment, though we were for a long time facing the competition of "cheap foreign labor," of all of Europe and Japan, whose effect could have been analogous to outsourcing.

What really is at stake is shown by careful analysis to be the following:

1. The mainstream economists are right in saying that trade generally brings mutual gains. Just think how much worse every State of the U.S. would be if we could not trade New York financial services for California winter fruits and automobiles from Michigan.
2. But the gains from trade are divided by market forces between any two trading countries and outsourcing *can* reduce the *share* of the gains that go to the outsourcing country.
3. This means that tariffs and other impediments to trade are a counterproductive way to deal with the problem because they only reduce the total amount of the gains from trade, leaving both countries worse off

4. The possible loss to the outsourcer is not unemployment – there is no long-term trend toward increased unemployment in this Island or the U.S. and no reason for it to occur, because demand growth creates new jobs when old ones disappear.
5. The real damage that threatens the outsourcer is a reduction of the purchasing power of its workers' wages and other earnings, generally, and not only in those of the workers whose old jobs have gone overseas.

It is easy to construct an example that brings out the full story. In honor of David Ricardo, the father of the relevant analysis, let us call the two trading partners, as he does: Portugal and England. Suppose England makes two commodities: cloth and shoes for both countries because its advanced technology enables it to produce those more cheaply than Portugal could, even though British wages are higher. In exchange, low-wage Portugal produces wine for itself and England.

Next, imagine that by means of trade schools and imported machinery Portugal is able to match England's shoe price, and even begins to displace some British-made shoes with its exports. That is, there is some *outsourcing* of British shoe making to Portugal. Portugal's wages will rise, so this requires Portugal's shoe-making productivity to rise sufficiently to offset the wage increase and match or undercut English shoe prices.

Let us see the net effect of this outsourcing on what England can afford to consume. Cloth will continue to made in the UK because the process is still too high tech for Portugal, and if there is no progress in British technology or efficiency, the price of cloth will remain unchanged. The price of shoes will stay the same if England remains in the shoe manufacturing business, and if not (if Portugal takes over the industry) shoe price in England must fall. But with no new technology in wine production and higher Portuguese wages, the price of wine will evidently have to rise.

What is the bottom line? With no increase in either cloth or shoe prices Englishmen will be able to afford the same quantities of these two items as before. But with wine prices raised they will have to cut back on wine consumption (or transfer some of their purchasing power from the other commodities to wine). Evidently, England can conceivably benefit, if shoe prices do fall *substantially* in this process, but if they do not the rise in wine prices will cut into British purchasing power and its standard of living will fall.

A numerical example may make this clearer:

	OUTPUT/HR UK	OUTPUT/HR PORT	AC UK	AC PORT
Cloth	3	1	6/3=2	4/1=4
Shoes	1	0.5	6	8
Wine	1	4	6	1
WAGE/HR	6	4		

Table 1. Initial productivity levels, wages and prices

Table 1 shows *initial* illustrative productivity figures, costs and wages in the two countries. The first column shows in the first three rows the output per hour in the UK of the three commodities. The last entry in the first column is the initial UK hourly wage. The second column shows the same for Portugal. The third and fourth columns are initial costs per unit of output (wage per hour/output per hour) for the two countries.
So England initially exports cloth and shoes at its lower prices ($4 and $8, repectively)
Now suppose Portugese productivity of shoes rises from one half pair per hour to 5/6 pair per hour and its uniform wage consequently rises from 4 Euros to 5 Euros per hour, with no change in the U.K. (Table 2).

	OUTPUT/HR UK	OUTPUT/HR PORT	AC UK	AC PORT
CLOTH	3	1	6/3=2	5/1 = 5
SHOES	1	5/6	6	6
WINE	1	4	6	5/4 > 1/2
WAGE/HR	6	5		

Table 2. Trade after outsourcing of shoes from UK to Portugal

Now some of the shoe supply is outsourced from the UK to Portugal, since both countries have the same 6 Euro cost per pair of shoes. At the same time

- The UK price of cloth continues unchanged since it remains the sole producer
- The UK price of shoes is unchanged because it still produces at the old price
- But the UK price of wine rises because of the higher Portuguese wage.

So if the UK demand curves are negatively sloped and income inelastic, only the UK consumption of wine falls. There need be no cut in UK consumption of the outsourced item, but only the UK consumption of the good produced by Portugal alone falls. This is how the UK share of the gains from trade is reduced.

What can England do to protect itself from impoverization as a result of the cut in its share of the gains from trade? Clearly, the worst thing it can do is to cut off trade with Portugal, and deprive itself of even its diminished gains. Rather, it can save the situation as the U.S. has done for more than a century, by unrelenting technical progress that keeps up its leadership even as the Portuguese economy also continues to progress technologically. In that way both countries will be better off. But for innovation and growth in the outsourcing economy not to slow down, many steps must be considered, including abundant stimulation of research, innovation and innovative entrepreneurship.

4. Sample Steps to Improve Puerto Rico's Long-Run Prospects: Research Incentives

Aside from the ease of entry of its products into the U.S. markets, Puerto Rico has one enormous advantage for the creation of the intellectual property that is the promising market for the future – it has an extraordinary share of its population that attends college and postgraduate programs. This has been an essential ingredient in the progress of other recently successful countries. But the educational programs of the Island are literally throwing away the resulting opportunity. This is because higher education has two roles, education and research, and the latter is evidently and indispensable link to innovation and the creation of intellectual property for use on the Island and for export. But it seems clear that the institutions of higher education provide neither outstanding research facilities nor substantial rewards for success in this endeavor by faculty and students. This is a sure way to impede growth in the future world economy. Accordingly, it seems urgent for those who plan and control the activities of the Island's institutions of higher learning to consider steps such as the following:

An Energetic Fund-Raising Program: As in mainland U.S., the institutions of higher learning must be required to undertake a systematic fund raising program, not only from alumni and firms on the Island, but from Federal institutions such as the National Science

Foundation, and from the generous private foundations, such as Rockefeller, Mellon, Sloan, Kauffman and others, organizations that are willing and perhaps even anxious to be helpful if approached with carefully designed research proposals that promise to produce valuable results.

A Program of Patenting by the Universities with Shared Returns: A number of U.S. universities are now actively and systematically patenting inventions and discoveries obtained by members of their faculties. These programs generally offer a share of the patent revenues to the faculty researchers. This has served as an incentive for effective research activity within the universities and as a source of substantial revenues to the institutions themselves.

A Program of Construction of Research Facilities: A substantial portion of the funds derived from patents, foundations and other sources has been used in the U.S. for the acquisition of up-to-date research facilities of high quality, both to create an atmosphere conducive to research and to facilitate the research process.

Special Financial Rewards to Faculty and Students with Substantial Research Accomplishments: In much of the world, promotion and increases in compensation of the faculty are based in good part on the individual's research accomplishments. Similarly, successful student researchers can receive scholarship and fellowship supplements. This is important not only because of the prospect of increased Island income through research activity, but as a clear indication that such activity is valued highly by the educational institution and the community.

Here, it is important to prevent inflation of the adopted standards of success in research undertakings. For example, while publication is a widely employed indicator of success in the world's universities, only publications in internationally noted journals and other such publications are taken into account. That is, publication only in a local proprietary journal is not considered valid evidence of success in research.

The Required Sacrifice: Acceptance by those who do not Engage in Research: It is clear that what has just been proposed entails no sacrifice for those members of the university community who wish to or are actually engaged in research. Yet an element of sacrifice is entailed in the program, because it means that those who do not undertake such activity will receive no corresponding rewards. Such individuals will, of course, have to be treated fairly, but they will also have to be tolerant of the resulting differentials in rewards between themselves and those who do participate and succeed in such research undertakings. Without such broad acceptance such the research program is apt to meet resistance and even sabotage that in the long run will harm not only the participants but the entire university community and the economy of Puerto Rico.

Elementary Education: There is an obvious reason for my focus on the universities in my discussion of education, since it is in the universities that the research activities of educators take place. But success in the long-term program will also require marked improvement in elementary education since effective researchers require the prior training that will enable the students to derive the full benefits of their later higher education. This means that teachers in elementary schools will have to be trained carefully to proficiency in subjects such as science and mathematics. Equally urgent, as in leading world economies, no student should be allowed to graduate without having achieved true fluency in English, both in reading comprehension and in speaking. After all, that is now the international language of research and no persons can be up to date in relevant knowledge if English is a closed book to them.

5. Long-Run Incentives 2: A Growth-Reoriented Structure of Business Taxation

Universities, of course, are not the only institutions that must participate in a successful growth program. The current proposal for revision of the tax system has predictably met with self-interested responses. Groups that are being asked to bear part of the burden have responded that the part of the cost that falls on themselves is unfair, counterproductive or an impediment to growth. This is not a problem in Puerto Rico alone. Throughout the industrialized countries of the world it is common for any proposed increase in the taxes on business, for example, to be opposed on the ground that it will reduce the incentive for investment and is therefore contrary to the interests of the community. Equally predictably, those who will escape the resulting increase in tax burden support proposed increases in business taxes enthusiastically on the ground that it is only fair for the cost to be shouldered by the wealthy firms.

But this is all distraction from the task that faces the community. Neither side's arguments is of more than limited validity. Various careful studies appear to have found little correlation between the level of business taxes in general, and the level of investment.[3] On the other side, it is not recognized by consumer groups that a substantial proportion of any increase in taxes on business activity will be shifted to themselves via higher prices of the products of the firms that bear the taxes.

The moral, however, is not that business taxes should be left as they are. Rather, what is called for is a program carefully tailored to recognize and take advantage of the incentive effects. For example it is not difficult to think of ways to redesign taxes on business firms in ways that provide an incentive for growth. Let me end by outlining an illustrative program.

Consider the advantages of a *regressive* business tax in which the firm is subjected to *a lower tax rate the faster the percentage rate of growth of its output and sales.* The average tax rate can be adjusted to yield as large a revenue total to the government from the business sector as seems appropriate. This arrangement would clearly not be unfair to small firms, for which a given increase in sales may be easier to achieve than it is for a firm that already has a large share of the market. It would clearly provide an incentive for enhanced investment, and lead to a shift in investment from markets and industries with low growth prospects into others where the opportunities for growth are greater.

If it is felt that the program is unfair to activities such as food retailing, which provide services necessary for the community, but offer little opportunity for growth, one can remedy the problem by adopting a two-avenue tax arrangement. Each firm would be given a choice between the current tax arrangement and the growth-incentive tax

[3] Certainly, there is good ground for questioning whether reduction of taxes is an effective and reliable tax stimulus. If taxes were a significant barrier to more rapid growth, then how does one explain the severe and persistent slowdown in productivity growth in Japan, where taxes are among the lowest (relative to GDP) of any of the rich OECD countries? The case of Japan may be particularly instructive for Puerto Rico because both have experienced a period of extraordinary rapid growth, followed by a marked slowdown from which both have not been able to extract themselves.

program. Once its selection is made, the firm would not be permitted to switch. Then, firms with economic activities could be expected to select the current tax arrangement, while the others would elect the growth–incentive tax.

Here, then, is a tax program that promises to elicit long-run growth without unfairly and inappropriately burdening the business community. It is evidently a radical and untried proposal, and the object of presenting it here is not to advocate its adoption unequivocally and without further examination. One might, for example, want to consider the incentives to be based on exports rather than growth or some flexible combination of the two. The objective, rather, is to show that careful analysis can yield programs that promise to deal effectively with the two serious crises that face the Island of Puerto Rico.

Moreover, one can hope that a promising set of measures will gain the support of all of the Island's political parties. In particular, solution of these crises is a matter for which the issue of ***status*** is totally irrelevant. If Puerto Rico becomes a state, no one wants it to become an *impoverished state*; if it becomes an enhanced commonwealth, we do not want it to become an *impoverished commonwealth;* and if it becomes independent surely no one wants it to become yet another *impoverished Caribbean Island*.

A few final words: what has been argued here is that there are effective ways for Puerto Rico to deal with its crises, but the will not be easy or painless. Yet, above all it must be recognized that failure of universal willingness to make the required sacrifices today is a sure way to undermine the Island's future.