MEMORANDUM

November 14, 2003

Subject: What Kind of Incentives Can the Puerto Rican Government Use to Promote Economic Growth and Expand Employment?

Summary

In order to promote economic growth and expand employment, the Puerto Rican government should encourage investments that will develop skill-intensive activities in a variety of service and manufacturing sectors. It can do so through developing a number of *focused* incentives, including tax programs but also including education and training programs.

General Considerations

It is well recognized that the nature of economic growth in a nation or region is highly dependent on the nature of the labor force. A labor force with a high level of schooling and well developed skills is a foundation for rapid growth. Moreover, with such a labor force, economic activity will focus on the use and development of new technologies and firms will be able to adjust relatively quickly to changing circumstances. As a consequence, economic growth is not only likely to be rapid, but it is likely to be sustained over a longer period.

Causation, however, also runs in the other direction: the nature of the economy affects the nature of the labor force. When firms develop new technologies and need to adjust quickly to changing circumstances, they will tend to develop workers who are capable of operating under these conditions. There is a great deal of "learning by doing" in the process of economic growth, and there is also a great deal of training that is undertaken by firms themselves (instead of relying on a previously trained labor force). Also and equally important, when these sorts of technologically advanced firms are playing an important role in a nation's or region's economy, it is not only workers in those firms who will develop new skills. The character of the entire labor force is likely to be affected as educational institutions adjust and individuals seek to keep up. High technology in firms tends to generate a culture of skills among the labor force.

The simultaneous transformation of industry and the skills of the labor force has been a characteristic of virtually all economically successful countries, from Western Europe and the United States in the 19th century through Japan in the middle of the 20th century to South Korea and Taiwan in the later part of the 20th century. Of course the meaning of "advanced technology" and the nature of skills has been different in each historical period, but the general processes have been the same.

The broad implication of these observations is that an economic development strategy needs to give attention to both sides of the industry-labor relationship, pushing firms in the direction of developing new technologies and pushing the labor force to extend schooling and up-grade skills.

Economic development, of course, is not simply a matter of economic growth. In many cases, relatively rapid economic growth has been accompanied by relatively high rates of unemployment and has therefore not fully established the social characteristics of successful development. In particular, during Puerto Rico's especially rapid growth in the period from 1950 to the early 1970s, unemployment was consistently above 10 percent of the labor force; furthermore, in this era the labor force participation rate was low (and falling), dropping below 50 percent from the mid-1950s onward.

For Puerto Rico, the best way to encourage the expansion of employment is to push firms and the labor force along the same high technology and high skill route that would be a foundation for rapid and sustained economic growth. Puerto Rico can no longer compete on the basis of low wage labor, operating with limited skills in labor-intensive production; wages and unit labor costs are simply too high compared to many other countries that also have access to the US market. Efforts to encourage labor intensive activity in the name of generating employment – for example, through the supports of tax incentives or various forms of subsidies – would be too expensive and the activity would never become viable without those supports. A coordinated strategy of technological advance, however, could place Puerto Rico in a competitive position, yielding growth and expanding employment. Moreover, while growth itself is not necessarily a panacea for the unemployment problem, sustained growth is a necessary part of the solution to this problem.

Aspects of Puerto Rican Tax Policy

In Puerto Rico, tax policies – both the policies of the Puerto Rican government and the policy of the federal government – have been principal tools in efforts to promote growth and employment expansion. Since the early 1970s, however, tax policies do not appear to have had the hoped for consequences. Also, they have not pushed the economy in a high technology direction. The problems are not simply in the set of tax regulations giving special treatment to the Puerto Rican operations of US-based firms – 936, 30A, etc.

The Tax Incentive Act of 1998 (TIA) illustrates some of the shortcomings of Puerto Rican tax incentives from the perspective of pushing in a high technology direction. It also includes some potentially positive aspects of tax policy, which will be noted below. Examples of the shortcomings of the 1998 TIA are:

- ❖ It provides a very broad incentive, affecting firms regardless of whether or not those firms move the economy in a high technology direction.

- ❖ It gives especially favorable treatment to activities that are generally labor intensive and relatively low technology, presumably with the intent of promoting employment. For example, while the 1998 TIA sets a single top tax rate of 7% on firms, it provides an exception of a 4% top rate for the production of textiles, clothing, leather, shoes and tuna packing.

- ❖ It includes favorable treatment for activities the location of which (i.e., in Puerto Rico or elsewhere) is not likely to be affected by such tax considerations – e.g., furniture and food products.

- ❖ It does not impose any investment conditions on firms.

As a consequence of these sorts of provisions in the 1998 TIA, it is likely that firms receive tax reductions for actions they would have taken regardless of the TIA. Insofar as this is the case, the TIA is not providing an incentive. Instead it is simply providing additional net income for the firms.

However, the 1998 TIAA does include at least one significant provision that would push firms towards the development of high technology. In particular, it allows special deductions to firms for training and for research and development. There does not appear to be as yet any examination of the implementation and impacts of these provisions. At least in principle, however, they are consistent with the line of development advocated here.

Pushing Firms Further

The training and research and development provisions of the 1998 TIA can be useful mechanisms for pushing firms and the economy of Puerto Rico towards a greater development of high technology activities. There are, in addition, other mechanisms that could serve this same purpose. For any of these mechanisms to be effective, they should be tied to *performance criteria*.

An especially attractive mechanism for raising the technological level of Puerto Rican activity would be a training-for-jobs program, a type of program that has been used by many state governments. In such a program, the government provides training programs that prepare workers with the specific technical skills needed by a firm. The firm, in return, makes an investment and hires the already-trained workers. A training-for-jobs program lowers costs for an investor and thus provides an incentive in the same manner as does a tax holiday. The former, however, can be more focused and is, by its very nature, a program that leads to the development of workers' skills. Furthermore, a training-for-jobs program has a special advantage over other forms of investment incentives. Even if the firm moves away, society has raised the skill level of its workers who remain. While specific skills are not always transferable to other activities, in acquiring those specific skills workers have necessarily gained a valuable general skill,

a greater capacity to learn. Training-for-jobs programs have been used in, for example, Georgia, South Carolina and Texas.

In addition to training for jobs programs and tax incentives for research and development and training, there are other ways in which the government can encourage technological advance. For example, credit programs have been employed successfully in various circumstances. Regardless of which programs are developed to encourage technological advance, they are likely to be most effective if they are tied to performance criteria. South Korea provides some useful illustrations. The South Korean government, for example, required firms that were receiving favorable treatment to reach certain export quota in order for that treatment to continue. Other criteria might include measures of the schooling level of a firm's workforce or other measures of the structure of the workforce (e.g., the ratio of supervisory to production workers, which is generally negatively correlated with the skill level of the workers).

Performance criteria are essential to provide a continuing pressure on firms to move toward the particular goals that the incentives are designed to achieve. Incentives based on performance criteria prevent firms form receiving the benefits of the incentives without adjusting their activities or adjusting in other directions – a substantial problem with broad, tax incentives. Experience in Puerto Rico – for example, the lack of employment expansion achieved by the 936 incentives – suggests that performance criteria are especially important.

Transforming the Labor Force

As emphasized above, moving the Puerto Rican economy in the direction of higher technology activities involves changes firms *and* changes in the labor force. To some degree, changing the nature of what firms do will effect changes in the labor force. Yet is it also possible and desirable to directly affect the nature of the labor force.

The schooling attainment of Puerto Ricans suggests that a good start towards moving in the direction of high technology production has already been accomplished. By some measures, the Puerto Rican population is highly educated. In Puerto Rico in 2000, 18.3% of the population 25 or older had attained a college degree (or more), while in the United States the comparable figure was 24.4%; moreover, the Puerto Rican 2000 figure is almost as high as the 1990 figure of 20.3 for the United States. Certainly, for its level of income, by this measure Puerto Rico has a highly educated labor force, a good foundation for high technology activity.

However, Puerto Rico appears to have a "bi-polar" distribution of education: 25.4% of the 25 and over population had less than nine grades of schooling and an additional 14.6% had not attained a high school diploma; the comparable figures for the United States are 7.5% and 12.1%. These figures suggest that Puerto Rico has a serious challenge in establishing a work force that can be fully engaged in high technology production.

There appears to be a great need for improving the educational attainment of those at the bottom. Official data are contradictory on the issue retention rates in the Puerto

Rican schools, some data suggesting very high drop out rates and other data suggesting low drop out rates. Anecdotal information and the aggregate figures on the educational attainment of the population suggest that the former are to be taken more seriously. This is clearly an issue that demands attention.

More generally, issues regarding the quality of Puerto Rico's schools need attention. School quality not only affects retention rates, but also affects the significance of the favorable data regarding the number of Puerto Ricans who have completed college. Furthermore, "quality" of education not only refers to how good or how bad the schools are, but also refers to the sort of education that is being provided. It is certainly desirable for the schools to be "good," but it also desirable that the schools provide a curriculum that is consistent with the needs of an economy moving in a high skill, high technology direction. This means, most importantly, that students should be provided with schooling that allows them to continually adjust to change and continue to learn.

Conclusions

In both its systems of incentives for firms and the educational preparation of its labor force, Puerto Rico has established some favorable conditions for a movement towards establishing a greater importance for high skill, high technology economic activity. At the same time, there are opportunities for significant programs that would greatly enhance this movement. More focused incentives for firms, both tax incentives and other programs, should be considered. Also, emphasis should be given to improving the quality of the schools, especially as they affect groups that have preciously attained only low levels of schooling.

Successful development of higher technology activity in the Puerto Rican economy can be a foundation for long term income and employment expansion. This progress can be accomplished most effectively by giving consideration to both the nature of the economic activity and the nature of the labor force.