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Imported Capital Dependency As an Economic Development Strategy: The Failure of Distortionary Tax Policies in Puerto Rico

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EXECUTIVE SUMMARY

The use of tax holidays and other financial incentives designed to attract foreign investment is an old development strategy which like a magic pill has substantial negative side effects. There are many factors that influence the flow of investment across borders. An increase in the rate of return as exemplified by a deferral of taxes is but one factor among many including, but not limited to, the quality of host location infrastructure, the human capital of the participating labor force, the state of health care provision, the state of telecommunication coverage, etc., that enter a multinational's decision tree and determine how much it will invest in the capital importing country, state or region.

This report presents an econometric analysis of the tax incentives directed to induce the flow of investment into Puerto Rico. Its major findings are that the incentive programs contained in §936 of the IRS Code were predominantly used by the Pharmaceutical industry in order to shift income. The simulation of the proposed changes in §956 of the IRS Code contained in HR 2550 generate outcomes similar to §936, in that they primarily insure the interests of existing corporations with a continued incentive to defer income with little incentive to further the economic development of Puerto Rico. Apart from being welfare programs to the special corporate interest these programs lead to substantial tax losses to the US Treasury.

If the deferral lasts 5 years the present value of the lost tax revenue at a 5 percent discount would amount to $1.68 billion. If the deferral were to last 10 years the loss would be $3.37 billion. Given the conventional wisdom that the deferral is a long-term event the opportunity cost of this lost tax revenue will be greater then the simulated $3.37 billion.

The tax revenue gain for Puerto Rico would be less then $1 billion. Furthermore, the results show no significant resource shifts to the Commonwealth in a bilateral exchange with the US. In fact, the results show that skilled labor is leaving as Puerto Rico's capital stock expanded in the 1990s.

The results of our estimates for the pharmaceutical industry indicate that the utilization of capital is more significant then changes in its stock. The same can not be said for labor, where the stock effects dominate, suggesting very little transaction costs in the local labor market. These results may be sensitive to the ease of migration from the Commonwealth to the mainland.

What is apparent from the econometric results is that the various tax deferrals and other tax holidays have not significantly led to a positive expansion of the Commonwealth's economy.

Economies that predominantly rely on tax measures as the exclusive carrot in their development strategy are not only assuming that all of the other factors are equal to or superior to those found in competing locations but that imported capital flows have the same home country impact. These economies make an error in ignoring the there is a differences between imported capital that is used to drive the economic growth of an economy by investing in the human capital intensive or manufacturing sector from the imported capital that is induced by a desire to shift income for tax purposes. Puerto Rico represents the latter case where the imported capital was induced by a desire of corporations to shelter income from taxes. For the last 30 years it has had little if any downstream impact on the host economy but has created certain vested interests both in Puerto Rico and in the United States in continuing the state of corporate welfare with an illusory promise of future improved economic growth.

This report further presents a review and an analysis of the very fascinating progress of a classic distortionary development model as applied to Puerto Rico, dubbed the 'great miracle' which over time turns out to be no miracle at all, but rather a case of Puerto Rico becoming entrapped in a false promise of economic growth originating from imported capital driven by tax incentives. This dependency on external capital as the driver of its economic growth has forced various Puerto Rican administrations to continuously focus on maintaining the distortionary tax programs under the corporate threat of capital flight rather then focusing on the fundamental problem of Puerto Rican economic development.

One of the main conclusions of this report is that in Puerto Rico, as in many other similar situations, short term incentive to induce capital inflow are never short-term but rather become long term distortion with vested property rights. The results from Puerto Rico are thus consistent with the general observations that a development program designed predominantly on the basis of distorting the rate of return on foreign capital will fail to achieve its goal. Unless there are other structural inducements to foster the continued investment in a particular state or region, the returns to this strategy are very limited to the transfer of income across borders. That is indeed the case in Puerto Rico. The industries that have been affected by these imported capital have not sustained up or downstream magnification effects.

The conclusion one reaches after looking at the macro data is that Puerto Rico's post 1970 economic development did not benefit from a structural change as a result of the entire set of tax holidays. There was no major shift in technology into Puerto Rico. There was no sustained downstream economic development. On the contrary, the island's economic development strategy appears to be held captive to continued reliance on these tax distortions.

The macro data used in this report to measure Puerto Rico's production is Gross National Product (GNP) rather than Gross Domestic Product (GDP) primarily because of the distortionary impact of imported capital. In order to shift from GNP to GDP one must subtract factor income receipts from foreigners and add factor income payments to foreigners. Factor incomes are measured as corporate profits, dividends, earnings of unincorporated affiliates, reinvested earnings of incorporated affiliates, net interest and compensation of employees. The profits of foreign affiliates are affected by intra-company transfer prices and tax holidays. In the case of Puerto Rico the discrepancy between GNP and GDP as a percent of GDP has ranged from 31 to 36 percent in the 1990s. Because of this magnitude the GNP data for Puerto Rico is the most useful concept for any review of the economic impact of development programs because it refers to the income available to Puerto Rican residents as a result of their contribution to production. It is also the better estimate of the availability of resources to finance local expenditures such as education or infrastructure.

One would expect that a costly US tax holiday program along with local Puerto Rico tax holidays would result in a shift in Puerto Rico's national output. In order to test this hypothesis we tested for the existence of structural changes in Puerto Rico over the entire 1949 to 2000 period. What we found is that while pre-1996 there was no significant break in the growth of either current or constant (1996 dollars) GNP series, there appears to be a statistically significant structural change after 1996 when §936 was being phased out. The average annual growth in real GNP in the 1950s was 5.3 percent, followed by 8.1 percent in the 1960's and then declining to a steady state of 2.5 and to 2.3 percent in the 1970s and 1980's. The 1990's can be divided into two different growth regimes. The 1990-1995 period had an average growth rate of 3.2 percent, while the 1996-1999 period had a 6.0 percent rate of growth. It appears that the greatest impact created by the tax distortions was when it was being eliminated. Rather than observing a decline in growth as many in Puerto Rico predicted the opposite is true.

While it is difficult to make cross country comparisons of GNP and GDP growth rates, based on a whole set of differing country characteristics and development approaches, it can pick up anomalies and outliers in the data. If Puerto Rico's development approach were to be a success, it would create a significant difference in its rate of growth relative to its neighbors, holding all other factors constant. A comparison of the data shows that the Commonwealth of Puerto Rico's growth rate was not significantly different from that of its neighbors. In the 1980s the Dominican Republic grew at 3.8 percent, Costa Rica grew at 2.22 percent and Mexico grew at 2.3 percent on average. In the 1990's the growth rate in Costa Rica expanded to 5.2 percent, in the Dominican Republic it expanded to 5.8 percent and in Mexico it expanded to 3.5 percent.

At the human level the imported capital dependency model of economic development has not improved the standard of living of Puerto Rico's population relative to those on the mainland. Based on the US Department of Labor statistics for the year 2000, Puerto Rico continued to represent the lowest point on the US income distribution, with an annual income of $18, 796 growing at an annual average rate of growth of 1 percent while the average across the 50 States (not including Puerto Rico) was $35,296 with an annual average growth of 6 percent. If we adjust these figures for inflation it would suggest that the Puerto Rican population is experiencing a decline in their 'real' annual incomes despite all the discussion of economic development engineered through a long history of tax holidays.

When the US Congress enacted §936 of the Internal Revenue Code in 1976, its aim was for Puerto Rico to obtain employment-producing investment that would be self-sustaining. In theory, one could argue that exempting completely from federal taxes the income of qualifying US corporations in Puerto Rico combined with local tax benefits granted by the government of Puerto Rico would translate into an enormous tax break sufficient to counterbalance the poor infrastructure, education and higher wages in the Commonwealth. The reality has proven to be substantially different. Rent seeking by primarily international pharmaceutical companies has taken the majority of the tax advantages with little positive downstream effects for the rest of the economy.

Puerto Rico is not an integral part of the US nor is it a foreign country. Furthermore, it differs from all other possessions in that it has its own income tax law which takes the place of the federal income tax law. However, for US income tax purposes a US owned company incorporated in Puerto Rico is treated as if it were operating in a foreign country.

With the phasing out of §936, multinational companies started to take advantage of the CFC umbrella. By 2002, most major Puerto Rican corporation eligible for §936 have converted to CFC status. In the past 12 months, the number of companies converting all or part of their local operations to controlled foreign corporation (CFC) status under Internal Revenue Code IRC Section 901 totaled 80, a 19% increase from the number registered a year earlier.

Financial data on CFC activity in Puerto Rico covers the period 1988 to 1996. The most important factor to point out is the limited degree of repatriation of capital back to the mainland. Total distributions as a percent of total average assets declined from 1.72 percent in 1992 to 0.14 percent in 1996. Similarly total distributions as a percent of total receipts declined from 5.7 percent in 1992 to 0.42 percent in 1996.

The total taxable income of the CFCs in Puerto Rico in 1999 based on reported tax payments was estimated to be 6.15 billion dollars. If that income would has been subject to current US corporate taxes, the CFCs would have paid 2.15 billion dollars of taxes instead of 0.431 billion which were actually paid in Puerto Rico. Therefore, in 1999, a total of 1.72 billion dollars of tax revenues were deferred.

A very small portion of earnings are repatriated from Puerto Rico. Consequently, the 1.72 billion dollars on potential tax collection in 1999 must be adjusted to reflect the present value of that amount when it is repatriated at some future date. If the deferral lasts 5 years the present value of the lost tax revenue at a 5 percent discount would amount to 1.68 billion. If the deferral were to last 10 years the loss would be 3.37 billion. Given the conventional wisdom that the deferral is a long-term event the opportunity cost of this lost tax revenue will be greater then the simulated 3.37 billion. If we increase the discount factor, the loss would increase even more. As §936 firms complete the process of re-constituting themselves as CFCs we should observe a continued accumulation of earnings in Puerto Rico and much greater revenue losses to the U.S. Treasury.

Under the assumption that these corporations are normal 'rent seekers' the affected CFCs would oppose any attempt to increase their tax exposure once the funds are accumulated. The proposed Congressional legislation to modify CFCs under HR 2550, represents such a corporate response to the growing capital overhang awaiting the maximum 35% corporate tax in the United States.

In addition to losses in revenue and taxes the Federal government also incurred a growing transfer payment. In 2000 the net transfer to Puerto Rico equaled $5.6 billion, more than double the 1985 figure of $2.3 billion. In 2000, federal direct payments to individuals, consisting primarily of social security benefits, equaled $6.8 billion as compared to $3.6 billion in 1990, an increase of slightly less than 90 percent.

The primary "official" argument of both the various Puerto Rican governments and the U.S. Congress is that §936 tax distortions are motivated by the need to create 'jobs.' While this is an admiral objective, the statistics on the Puerto Rican labor market point out that these programs have not been successful in creating either manufacturing jobs or employment opportunities in the skilled human capital segment of the economy.

Despite the growth in overall employment, the unemployment rate continues to be in double digits, suggesting that the 'full employment' in Puerto Rico is synonymous with a 'natural' rate of 11 percent unemployment. The employment picture in Puerto Rico is further complicated by the easy transfer of workers from the Commonwealth to the mainland. In effect one can observe two distinct distributions in the profile of workers in Puerto Rico, those that remain in the Commonwealth in relatively low wage occupations and those that transfer to the mainland, presumably to higher paying occupations. This transfer is akin to the 'brain drain' that characterizes much of the inflow migration from Asia. A further complication present in Puerto Rico is the low labor force participation rate, in comparison with the mainland, pointing out the very unique population distribution and the bias of the welfare payments.

The data on average annual pay by state for 1999 and 2000, demonstrates that in addition to maintaining a natural rate of unemployment of 11 percent, Puerto Rico also can claim the lowest annual income in comparison to the mainland and the Virgin Islands. This low average annual pay does not, however, translate into Puerto Rico being the cheapest labor cost destination in the Caribbean and Latin labor markets.

An examination of the occupational breakdown in the Commonwealth, reveals that during the 1999-2001 sample period, 46 percent of those employed were in four occupation skills – office and administrative support occupation, sales, production, and transportation and material moving occupations. Seven percent of those employed were in education, training and library occupations. Elementary school teachers represented 2 percent of the workforce exactly the same proportion as police officers. What appears to be missing is a significant core in the skilled human capital areas, engineering and sciences. Given the relatively high wage structure in the Commonwealth, low skilled manufacturing should not be viewed as the path to rapid growth. On the contrary a shift towards science and technology revolving around the university system should be the target. Unfortunately neither §936 nor the various Industrial Acts managed to shift resources into these areas.

The empirical results from the econometric literature predict that §936 primarily provided transnational corporations with an ability to shift income. Investment in Puerto Rico was therefore not designed to augment economic development. The simulations of the proposed §956 of the IRS Code results in the same outcome as §936. The proposed rule changes primarily insure transnationals with a continued incentive to shift income with little incentive to further the economic development of Puerto Rico. Combined with the tax losses to the US Treasury, the proposed §956 appears to be a well designed welfare program for transnational corporations.

Overall, the lessons of this development approach are straight forward. If the intent of §936, the various Industrial Acts, was to liberate the Puerto Rican economy from a dependency on the US taxpayer, to shift employment to high end manufacturing jobs, to induce technological creativity, then both the US tax subsidy and the Puerto Rican tax distortions have been a failure and after 43 years of testing and tinkering, different approaches should be explored.

IMPORTED CAPITAL DEPENDENCY AS AN ECONOMIC DEVELOPMENT STRATEGY: THE FAILURE OF DISTORTIONARY TAX POLICIES IN PUERTO RICO

I. INTRODUCTION

The use of tax holidays and other financial incentives[1] designed to attract foreign investment is an old development strategy which like import substitution programs has proven to be far less successful than initially advertised.[2] As Hines and the others have shown, there are many factors that affect the flow of investment across state lines. An increase in the rate of return arising from a deferral of taxes is but one factor among many including, but not limited to, the quality of infrastructure, the human capital of the local labor force, the standard of health care provision, the level of telecommunication, etc., which determine a multinational's decision to invest in the capital importing country or state.

[1] Economic incentives offered by central and local governments are well known instruments in the global game to attract foreign capital. The resulting departures in the rate of return on capital as compared to a non-interventionist state can be referred to as distortions. The existence of these distortions is not very new or interesting in themselves, but what is relevant for our purposes is the economic impact of such distortions on the economic development of the target economy.

[2] Tax distortions designed to induce capital transfers are common in both developed and developing countries. Their long-term effectiveness in generating self-sustaining economic activity, additional long-term employment and an expansion of exports is hard to isolate. A number of relevant articles that have investigated the impact of investment flows resulting from differential tax treatment include, Froot, Kenneth A. and James R. Hines Jr., "Interest Allocation Rules, Financing Patterns, and the Operations of U.S. Multinationals," in Martin Feldstein, James R. Hines Jr., and R. Glenn Hubbard, eds. *The Effects of Taxation on Multinational Corporations* (Chicago: University of Chicago Press), 1995.; Hines, James R. & Eric M. Rice, "Fiscal Paradise: Foreign Tax Havens and American Business," *The Quarterly Journal of Economics*, 109:1, (February 1994), 149-182; Goodspend, Timothy J., and Daniel J. Frisch, "U.S. Tax Policy and the Overseas Activities of U.S. Multinational Corporations: A Quantitative Assessment," U.S. Treasury Department, mimeo, (August 1989); Cummins, Jason G., and R. Glenn Hubbard. "The Tax Sensitivity of Foreign Direct Investment: Evidence from Firm-Level Panel Data." in Martin Feldstein, James R. Hines Jr., and R. Glenn Hubbard, eds. *The Effects of Taxation on Multinational Corporations* (Chicago: University of Chicago Press), 1995; Mingo, John J. "Capital Importation and Sectoral Development: A Model Applied to Postwar Puerto Rico," The American Economic Review, 64:3 (Jun., 1974), 273-290 and Hines, James R., Jr., "Tax policy and the activities of multinational corporations," NBER Working Paper No. 5589, May 1996.

Economies that predominantly rely on tax measures as the exclusive carrot in their development strategy are not only assuming that all of the other factors are equal to or superior to those found in competing locations but that imported capital flows have the same home country impact. These economies make an error in ignoring the there is a differences between imported capital that is used to drive the economic growth of an economy by investing in the human capital intensive or manufacturing sector from the imported capital that is induced by a desire to shift income for tax purposes and has no long term home country impact. Puerto Rico represents the latter case where the imported capital was induced by a desire of corporations to shelter income from taxes. This is consistent with the conclusions of Hines who finds that the investment flows that are attracted by tax deferrals are by their nature opportunistic and not long term. In the case of Puerto Rico these flows, for the past 30 years, have had little if any downstream impact on the host economy but have created certain vested interests both in Puerto Rico and in the United States in continuing the state of corporate welfare with an illusory promise of future improved economic growth.

In effect, the countries or states that rely on such tax measures are accepting the position of the asymmetrically poorer partner in the international capital flow transaction. Whatever gains may accrue to the capital importing country are short lived if not followed by a consistent development path. A respected economist, Professor Werner Baer in a 1959 QJE article argued that Puerto Rico had entered what he called a "successful development program" by targeting capital inflows as a source of its growth.[3] Professor Baer may have been correct in 1959 but forty three years later we see that his pronouncement was in error. Puerto Rico as many other states that rely on these distortions make themselves prisoners to this incentive system. Today, rather then focusing on

[3] Baer, Werner, "Puerto Rico: An Evaluation of a Successful Development Program," The Quarterly Journal of Economics, 73:4 (Nov., 1959), 645-671.

economic development problems, government officials focus on maintaining the distortionary tax programs under the corporate threat of capital flight. What appears to be a short term incentive becomes a long term distortion with vested property rights.

This report presents a review and an analysis of the very fascinating progress of a classic distortionary development model as applied to Puerto Rico, dubbed the 'great miracle' which over time turns out to be no miracle at all, but rather a case of Puerto Rico becoming entrapped in a false promise of economic growth originating from imported capital driven by tax incentives. This dependency on external capital as the driver of its economic growth has forced various Puerto Rican administrations to continuously focus on maintaining the distortionary tax programs under the corporate threat of capital flight rather then focusing on the fundamental problem of Puerto Rican economic development.

One of the main conclusions of this report is that in Puerto Rico, as in many other similar situations, short term incentive to induce capital inflow are never short-term but rather become long term distortion with vested property rights. The results from Puerto Rico are thus consistent with the general observations that a development program designed predominantly on the basis of distorting the rate of return on foreign capital will fail to achieve its goal. Unless there are other structural inducements to foster the continued investment in a particular state or region, the returns to this strategy are very limited to the transfer of income across borders. That is indeed the case in Puerto Rico. The industries that have been affected by this imported capital have not sustained up- or down- stream magnification effects.

The capital importing country or region becomes the weaker party to the transaction, always subject to the threat that these capital flows would depart if the inducements are not continued. Moreover, the tax incentives rarely require that there be any performance requirements imposed on the source of the imported capital. If such requirement were imposed it would point out the true nature of these capital flows and the fact that these programs serve corporate welfare more than the home country.

The imported capital dependency model adopted in Puerto Rico is composed primarily of tax concessions and deferrals adopted by the federal government and fortified by Commonwealth tax legislation. In describing this history we take note of the fact that there are certain elements of a simultaneity bias[4] in this economic development approach. We begin in Section II to present the history of Puerto Rican tax concessions through a series of "Industrial Incentive Acts" all dubbed "New" and all subject to constant fine tuning. None of the fine-tuning brings Puerto Rico back to a market solution, but rather distorts it further and further away from equilibrium. This constant tinkering does, however, create a permanent transfer pricing problem which has resulted in numerous tax court litigations in the United States.

Section III, presents the history of the various US government programs that were designed to support an imported capital dependency model of economic development. The key characteristic of this approach was to rely on distortionary rates of return to induce the flow of foreign and US capital into Puerto Rico. After reviewing the "standard" U.S. approach to corporate taxation we present the development of the unique treatment of "possessions" source income from its inception in 1921 until the expiration of §936 of the Internal Revenue Code (IRC) and the discussion concerning the continued preferences under a revised §956 of the Code.

Given the enormous money and effort involved in altering the tax structure of possessions corporations in Puerto Rico since the late 1940s, the obvious question is —was this an optimum approach? Before entering into a full econometric evaluation of this question, Section IV of the

[4] Simultaneity bias exists when a number of variables act upon each other, making it difficult to attribute causality in only one direction. In describing the elements of the imported capital dependency model there are a series of measures taken by the federal government as well as the local Puerto Rican administrations. Because of these interactions it becomes impossible to sort out the sources of the distortion during all periods.

report looks at macro data on GNP, employment and financial transfers from the US to Puerto Rico.

The conclusion one reaches after looking at the macro data is that Puerto Rico's post 1970 economic development did not benefit from a structural change as a result of the entire set of tax holidays. There was no major shift in technology into Puerto Rico. There was no sustained downstream economic development. On the contrary, the island's economic development strategy appears to be held captive to continued reliance on these tax distortions.

The macro data used in this report to measure Puerto Rico's production is Gross National Product (GDP) rather than Gross Domestic Product (GDP) primarily because of the distortionary impact of imported capital. In order to shift from GNP to GDP one must subtract factor income receipts from foreigners and add factor income payments to foreigners. Factor incomes are measured as corporate profits, dividends, earnings of unincorporated affiliates, reinvested earnings of incorporated affiliates, net interest and compensation of employees. The profits of foreign affiliates are affected by intra-company transfer prices and tax holidays. In the case of Puerto Rico the discrepancy between GNP and GDP as a percent of GDP has ranged from 31 to 36 percent in the 1990s. Because of this magnitude the GNP data for Puerto Rico is the most useful concept for any review of the economic impact of development programs because it refers to the income available to Puerto Rican residents as a result of their contribution to production. It is also the better estimate of the availability of resources to finance local expenditures such as education or infrastructure.

The average annual growth in real GNP in the 1950s was 5.3 percent, followed by 8.1 percent in the 1960's and then declining to a steady state of 2.5 and to 2.3 percent in the 1970s and 1980's. The 1990's can be divided into two different growth regimes. The 1990-1995 period had an average growth rate of 3.2 percent, while the 1996-1999 period had a 6.0 percent rate of growth. It appears that the greatest impact created by the tax distortions was when it was being eliminated. Rather than observing a decline in growth as many in Puerto Rico predicted the opposite is true.

While it is difficult to make cross country (particularly since Puerto Rico is not a country) comparisons of GNP and GDP growth rates, based on a whole set of differing country characteristics and development approaches, it can pick up anomalies and outliers in the data. If Puerto Rico's development approach were to be a success, it would create a significant difference in its rate of growth relative to its neighbors, holding all other factors constant. A comparison of the data shows that Puerto Rico's growth rate was not significantly different from that of its neighbors. In the 1980s the Dominican Republic grew at 3.8 percent, Costa Rica grew at 2.22 percent and Mexico grew at 2.3 percent on average. In the 1990's the growth rate in Costa Rica expanded to 5.2 percent, in the Dominican Republic it expanded to 5.8 percent and in Mexico it expanded to 3.5 percent.[5]

At the human level the imported capital dependency model of economic development has not improved the standard of living of Puerto Rico's population relative to those on the mainland. Based on the US Department of Labor statistics for the year 2000, Puerto Rico continued to represent the lowest point on the US income distribution, with an annual income of $18, 796 growing at an annual average rate of growth of 1 percent while the average across the 50 States (not including Puerto Rico) was $35,296 with an annual average growth of 6 percent. If we adjust these figures for inflation it would suggest that the Puerto Rican population is experiencing a decline in their 'real' annual incomes despite all the discussion of economic development engineered through a long history of tax holidays.

[5] Data is from the World Bank, *World Development Indicators*. For an excellent study on the "Catching Up" problem see Lefort, Fernando, *Puerto Rico's Economy is Not Catching UP*, June 27, 2000. Documento de Trabajo 02-00, Escuela de Administacion, Pontificia Universidad Catolica de Chile.

When the US Congress enacted §936 of the Internal Revenue Code in 1976, its aim was for Puerto Rico to obtain employment-producing investment that would be self-sustaining. In theory, one could argue that exempting completely from federal taxes the income of qualifying US corporations in Puerto Rico combined with local tax benefits granted by the government of Puerto Rico would translate into an enormous tax break sufficient to counterbalance the poor infrastructure, education and higher wages in the Commonwealth. The reality has proven to be substantially different. Rent seeking by primarily international pharmaceutical companies has taken the majority of the tax advantages with little positive downstream effects for the rest of the economy.[6]

Puerto Rico is not an integral part of the US nor is it a foreign country. Furthermore, it differs from all other possessions in that it has its own income tax law which takes the place of the federal income tax law. However, for US income tax purposes a US owned company incorporated in Puerto Rico is treated as if it were operating in a foreign country.

The Joint Committee on Taxation estimated that the total loss of revenue associated with the deferral of income of Controlled Foreign Corporations (CFCs) would amount to 7.2 billion dollars for the period from 1999 through 2003[7] (average of 1.45 billion dollars per year). The US Treasury Department estimated that the losses of taxes per year were between 2.2 billion dollars (in 1997) and 3.4 billion dollars (in 2003)[8].

In addition to losses in revenue and taxes the Federal government also incurred a growing transfer payment. In 2000 the net transfer to Puerto Rico equaled $5.6 billion, more than double the 1985 figure of $2.3 billion. In 2000, federal direct payments to individuals, consisting primarily of

[6] See GAO. *Pharmaceutical Industry: Tax Benefits of Operating in Puerto Rico*. May 1992.

[7] Op. cit.

[8] Budget of the US Government FY 1999. The estimated loss does not reflect the total income of CFCs, but merely the present value of the loss from the deferral of the taxes.

social security benefits, equaled $6.8 billion as compared to $3.6 billion in 1990, an increase of slightly less than 90 percent.

The obvious policy question should focus upon the intent and conclusion of the short-run and long term tax subsidies. If the intent was to liberate the Puerto Rican economy from a dependency on the US taxpayer, to shift employment to high end manufacturing jobs, to induce technological creativity, then both the US tax subsidy and the Puerto Rican tax distortions have been a failure and after 43 years of testing and tinkering, different approaches should be explored.

Section V of the report presents a brief review of the utilization of Controlled Foreign Corporations in general and Section VI presents what appears to be the latest attempt to find a substitute for §936 of the IRC. The attempt contained in HR 2550 (and S 1475) is to alter the tax treatment of Controlled Foreign Corporations (CFCs) located in Puerto Rico.[9] These latest Congressional bills would transform the existing deferral for Puerto Rico CFC's into a direct 90% exemption. Under the proposed legislation, income could be immediately repatriated while avoiding federal taxation on 90% of the income. Thus, if it were enacted in 1999, the U.S. Treasury would have lost $1.5 billion in taxes on the income of US CFCs in Puerto Rico, for additional $500 million to $1.1 billion loss over the loss from a deferral.

In Section VII we present a multi layered econometric model to test many of the assertions made by policy makers in Puerto Rico. Its major findings are that the incentive programs contained in §936 of the IRS Code were predominantly used by the Pharmaceutical industry in order to shift income. The simulation of the proposed changes in §956 of the IRS Code contained in HR 2550 generate outcomes similar to §936, in that they primarily insure the interests of existing corporations with a continued incentive to defer income with little incentive to further the economic

[9] This is known as "Economic Revitalization Tax Cut Act of 2001."

development of Puerto Rico. Apart from being welfare programs to the special corporate interest these programs lead to substantial tax losses to the US Treasury.

If the deferral lasts 5 years the present value of the lost tax revenue at a 5 percent discount would amount to $1.68 billion. If the deferral were to last 10 years the loss would be $3.37 billion. Given the conventional wisdom that the deferral is a long-term event the opportunity cost of this lost tax revenue will be greater then the simulated $3.37 billion.

The tax revenue gain for Puerto Rico would be less then $1 billion. Furthermore, the results show no significant resource shifts to the Commonwealth in a bilateral exchange with the US. In fact, the results show that skilled labor is leaving as Puerto Rico's capital stock expanded in the 1990s.

The results of our estimates for the pharmaceutical industry indicate that the utilization of capital is more significant then changes in its stock. The same can not be said for labor, where the stock effects dominate, suggesting very little transaction costs in the local labor market. These results may be sensitive to the ease of migration from the Commonwealth to the mainland.

What is apparent from the econometric results is that the various tax deferrals and other tax holidays have not significantly led to a positive expansion of the Commonwealth's economy.

II. PUERTO RICAN DEVELOPMENT THROUGH LOCAL TAX DISTORTIONS

Until the early 1940s, the economy of Puerto Rico was primarily dependant on the sugar industry which despite its growth could not sustain the island's increasing population. The government of Munoz Marin introduced the first industrialization program based on local government intervention. In 1942 the Marin government introduced the Puerto Rican Industrial Development Company (PRIDCO), the Puerto Rico Planning Board, and the Government Development Bank. PRIDCO was directly involved in the creation of state-owned enterprises (SOEs) in a number of key industries, such as cement, glass, paperboard and shoes. Their intent was to create these corporations as a means of "seeding" the particular sector and then to attract foreign capital to introduce private sector participation in the same industry. This government sponsored and operated development program was a complete failure. It could not attract sufficient foreign capital and at the same time was running the SOEs at a loss.

After World War II a "new deal" approach was adopted, whereby the private sector was to lead economic development and focus on job creation while the development agencies created in 1942 would facilitate private sector development by eliminating local infrastructure problems and would focus on ax-ante projections and the ex-post evaluation of economic development in Puerto Rico. A key part of this strategy was the provision of tax exemption to encourage the importation of foreign capital. [10] Economies that provide such programs are signaling that barring these concessions there would be few investors in the target economy. [11]

[10] A tax exemption is a reduction in the cost of capital relative to the prevailing market rate.

[11] The reference to "economy" is as applicable to Puerto Rico, which has a special status, as much as to the State of New York or developing country like Egypt. The argument for special concessions to induce foreign capital imports is generally contained under the notion of the existence of "market failure."

The new development program called "Operation Bootstrap" relied on the introduction of the Industrial Incentive Act of 1948[12] which offered qualified firms an exemption from income, property, and municipal taxes, while the excise tax act exempted raw materials, machinery, and equipment used in manufacturing for export or sold to other manufacturers in Puerto Rico.

As is often the case, these distortions which rest on the principal of a short term correction to a local market failure generate a life of their own. In the case of Puerto Rico, §5 of the Act provided that all tax exemptions would expire in June 30, 1962. The exemption rates were scheduled to decrease to 75 percent, 50 percent, and 25 percent in 1959, 1960, and 1961, respectively. The 1948 legislation also provided for exemption from Puerto Rican taxes for a distribution of dividends to a parent outside Puerto Rico if the parent was unable to claim a foreign tax credit for the withholding tax. Finally, liquidation of an exempt company would be tax free, provided that the liquidating company was a least 80 percent owned by its parent.

The effects of Operation Bootstrap were impressive. Between 1947 and 1958 over 2,000 manufacturing entities established plants in Puerto Rico as a result of the tax advantages, with more than 100,000 jobs created. The GNP for the Commonwealth rose from $609 million in 1947 to $1,286 in 1958. In real terms the economy grew by 70 percent, increasing from $704 million in 1947 to $1,196 in 1958. This success was considered the economic miracle of the century, comparable to Germany's recovery after the war.[13]

With time the attractiveness of a tax incentive program which was to end in 1962 was considered non-viable because of the level of uncertainty that it would introduce. Consequently, the Puerto Rican government decided to replace the Industrial Tax Exemption Act of 1948 with a much

[12] Title 13 P.R. LAWS ANN. §§ 221-226, 227, 228-238,1948.

[13] Real income in 1954 prices.

broader incentive program called the Puerto Rico Industrial Incentive Act of 1954.[14] The 1954 Act substantially increased the size of the distortions by establishing a ten-year period of exemption for new applicants.[15]

One should not loose sight of the fact that while Puerto Rican government was establishing the tax incentives under its Industrial Incentive Act of 1954, the Federal government had its own complimentary programs. As early as 1921 the US government enacted § 262 of the Revenue Act of 1921[16] whose purpose was to stimulate investment and business activity by corporations and individuals in the possessions of the United States by exempting from Federal tax income earned in the possessions provided that a certain level of business activity was maintained. That section was ultimately reenacted as § 931 of the Internal Revenue Code of 1954 and remained in effect without any material change throughout the mid 1970s.

The congressional intent for §931 and its predecessors consistently has been the encouragement of American business investments in possessions of the United States. American companies operating in the possessions originally were subjected to double taxation by the

[14] Title 13 P.R. LAWS ANN. §§ 241-251, 1954. In *Proctor Mfg. Corp. v. Secretary of the Treasury*, 1965, 91 P.R.R. 806, the Court states that "The intent or purpose of the Legislature in enacting the Industrial Incentive Act of 1954 was to limit the exemption to income of new industries actually constituting income derived from the operation of manufacturing articles of commerce, directing such exemption to develop and create not only new and additional sources of employment through industrial operations, but also to maintain said sources of employment in order to reduce unemployment until it became eventually eliminated, social and economic goal of great interest to the community.

[15] The Industrial Incentive Act of 1954 should not be considered in a vacuum. The Puerto Rican legislature recognized that it could not attract private U.S. investors if those investors, notwithstanding the federal income tax program for possessions firms, still faced Puerto Rican taxes. Consequently, the Puerto Rican legislature passed the Industrial Incentives Act, and hence, the genesis of "industrialization by invitation" or "Operation Bootstrap." See James L. Dietz, Economic History of Puerto Rico: Institutional Change and Capitalist Development 3-239 (1986), at 209-10 (discussing enactment of Industrial Incentives Act and its effects); and Puerto Rico Status Plebiscite: Joint Hearing Before the Subcomm. on Native Am. & Insular Affairs of the Comm. on Resources & the Subcomm. on the W. Hemisphere of the Comm. on Int'l Relations, 104th Cong. 13 (1995), at 19 (statement of Rep. Gutierrez) ("Our country, born of a revolutionary war of independence does not take too well to the role of colonial ruler. Moreover, our constitutional form of government rejects anything colonial.... "). Puerto Rico's tax advantage did not necessarily only derive from magnanimous United States efforts to strengthen Puerto Rico's economy, but also from United States fears of being labeled a hypocrite. Presumably, Congress could not bear the thought of a "San Juan Tea Party." During the same period the Federal government was developing its own tax. The latter will be addressed in the next section.

[16] Pub. L. 67-98, 92 Stat. 227.

imposition of both the Federal corporate income tax and the taxes levied by the possessions governments.[17] Congress perceived that the tax burden so created placed American businesses at a competitive disadvantage when compared with their British and French counterparts, which were not subject to taxation on the profits earned abroad unless they were paid back to the home company. Congress consequently enacted section 931 and its predecessors to remove that competitive disadvantage and to encourage American business activity in the U.S. possessions.[18]

The grandfather clause contained in the 1954 Act noted that if a firm received a new grant of exemption for a product produced under the prior law, the new grant would be terminated if the level of output in the predecessor operation was reduced. In addition, to constrain the transfer of assets from firms operating under the 1948 Act to the 1954 Act the grandfather clause also contained a prohibition on sale of plant, equipment, and other property that had been used in the production of an exempted product to new establishments intending to produce a similar exempt product. Both elements of this grandfather clause which were intended to limit the misuses of the 1954 Act were subsequently weakened and finally their implementation were turned over to the discretionary authority of the Governor who waived both provisions if they were deemed to be in the "public interest."

As the 1950's drew to a close the holders of the earlier tax exemptions began to pressure the Puerto Rican government for their continuation. In response to this pressure, an expanded Industrial Incentive Act was adopted in 1963, offering exemptions for periods of 10, 12, 15, 17, or 25 years, depending on the degree of economic development of the zone in which the plant was located. In addition, a partial exemption for up to twice the length of the original grant could be elected. A company could postpone the start of the exemption period for two years and 90 days

[17] Section II of the Tariff Act of 1913, ch. 16, 38 Stat. 166; Revenue Act of 1918, ch. 18, 40 Stat. 1058.

[18] H. Rept. 350, 67th Cong., 1st Sess. 1 (1921), 1939-1 C.B. (Part 2) 168, 174. [84 T.C. 996, 1110 (1985).]

after its first payroll, which permitted it to save the exemption for profitable years, rather than wasting it during the period of start—up losses.

In the early 1970's, the tax exemptions were further expanded. Puerto Rico redefined the tax—exemption zones and lengthened some exemption periods (exemptions of 10, 15, 25, or 30 years became available). An amendment was introduced classifying passive income from certain financial investments in Puerto Rico as "industrial development income," benefiting from the same tax exemption as trade or business income. This added provision sought to encourage the possessions corporations to invest a larger portion of their earnings in Puerto Rico.[19]

However, the policy of granting tax exemption was nevertheless insufficient to overcome the tremendous unemployment problem which had chronically affected Puerto Rico. As the 1979 U.S. Commerce Department study put it: "In the fifties, as the economy was engaged in the first phase of the transition from a mono-crop agricultural system to an industrialized system, total employment contracted. The absorption of labor into the newly developed manufacturing sector fell behind the rate at which agricultural workers were being laid off. It was only after 1963 that a persistent employment expansion was underway. Under the momentum, spurred mainly by capital investment induced to enter the economy under the revisions in the Industrial Incentives Act, employment improved for a decade. Between 1963 and 1973 it increased on the average nearly 3 per cent a year. Despite the growth in job opportunities, the average rate of unemployment in 1973 was just over 12.5 per cent.[20] The comparable US unemployment rate in 1963 was 5.7 percent, declining to 4.9 percent in 1973. As we discuss in a later section in more depth, these early figures on the Puerto

[19] Title 13 P.R. LAWS ANN. § 252, 1963.

[20] United States Department of Commerce, *Economic Study of Puerto Rico,* 1979, p. 218. Statistics not otherwise footnoted were obtained from this U.S. Department of Commerce study.

Rican labor market suggest the existence of a structural problem which could not be alleviated through tax holidays.

A. The New Industrial Incentive Act and the Tollgate Tax

Prior to October 1, 1976, the Puerto Rican government imposed a 15 percent tollgate tax on dividends paid out of Puerto Rican income from hotels, manufacturing and shipping to any corporation without significant business of its own in Puerto Rico, but only if that nonresident parent corporation could claim a foreign tax credit for the toll gate tax. In the United States a foreign tax credit was available until 1976, but because dividends were rarely paid, the tollgate tax was rarely applicable, and the foreign tax credit little used.

Anticipating the passage of §936 of the IRC in the U.S. (discussed in detail below) and the other Federal provisions relating to possessions corporations, the government of Puerto Rico, in 1976, modified their tollgate tax in two important ways. First, the rate was reduced from 15 to 10 percent, and second, the tax became applicable to U.S. shareholders, even though they were denied a foreign tax credit. The two changes taken together had the effect of subjecting dividends paid to nonresident U.S. parent corporations to a 10 percent Puerto Rican tax.[21] Although the tax rate seemed low, the potential source of dividends included not only new income earned under §936, but also earnings accumulated under §931 of the IRC.

The significance of the tollgate tax can be summarized in the following four key points.

[21] The 10 percent tollgate tax did not apply to a resident parent corporation (e.g., a U.S. manufacturer which wholesales and retails its products in Puerto Rico). Dividend payments to such a corporation would, however, initially be subject to the regular Puerto Rican income tax, which had a maximum statutory rate of 45 percent. The 85 percent dividends—received deduction in Puerto Rico would, however, reduce the effective rate on dividends from a possessions corporation to such a resident parent corporation to no more than 6.75 percent (45 percent of 15 percent). Thus, a U.S. parent corporation resident in Puerto Rico would be taxable in Puerto Rico on its dividend income from a possessions corporation, but the effective rate of taxation would be less than the 10 percent tollgate tax applicable to dividends paid to nonresident U.S. parent corporations.

1. Dividends paid out of accumulated §931 industrial development income (i.e., income earned prior to October 1, 1976) were subject to a tollgate tax of 7 percent, rather than 10 percent, if no more than 25 percent of the balance at the beginning of the year is paid out and a matching 25 percent was invested in designated Puerto Rican assets in that year. Designated Puerto Rican assets included working capital, deposits in Puerto Rican banks, Puerto Rican government bonds, mortgages insured by the Puerto Rican Housing Bank and Finance Agency, and loans or other guaranteed mortgage bonds executed by any government pension or retirement plan. Thus, part of the accumulated earnings could be brought home subject to a reduced tollgate tax rate if a matching amount from such earnings were invested in designated assets.

2. Dividends paid out of accumulated §936 industrial development income (i.e., earned subsequent to October 1, 1976) were subject to a tollgate tax of 7 percent, rather than 10 percent, if no more than 75 percent of such income was paid out and if at least 25 percent of such income was reinvested in the designated Puerto Rican assets for a period of at least 8 years.

3. Dividends paid out of income from interest on the designated Puerto Rican assets were exempt from the tollgate tax.

4. A credit equal to 3 percent of new investment (made subsequent to the later of March 31, 1977 or the second year of tax exemption) in buildings and other structures used in manufacturing was allowed against the tollgate tax.

In December 1977, the Puerto Rican Treasury issued regulations clarifying the exemption paid out of non—Puerto Rican income earned outside Puerto Rico (e.g., Eurodollar investments). As long as a company had both undistributed earnings from Puerto Rico and earnings from foreign sources, a dividend was deemed to consist of 50 percent exempt foreign—source income. That is, the tollgate tax in these instances equaled 5 percent of the total dividend.[22]

[22] To appreciate the tollgate tax, we attach the following data on the collected tax between 1991 and 2000.

In March 1978[23] the Puerto Rican legislature restructured the Industrial Incentive Act once again in order to further refine the distortionary elements contained in the ever more complicated industrial incentive system. The primary features of the revised law were:

1. New grants exempted from taxation would have that exemption on a declining fraction of income; that fraction would be 90 percent in the first five years, 75 percent in the sixth through tenth years, 65 percent in the eleventh to fifteenth years, and 55 percent the sixteenth to the twentieth years. The first $100,000 of real property was exempt from property tax, and the remainder was exempt in the same proportion as in the case of income.

When the original grant expired, the company could apply for a ten year extension. If the extension was granted, 50 percent of income could be excluded for the first five years; for the second five years, between 35 percent and 50 percent would be excluded, the exact percentage depending on the location of the investment in Puerto Rico.

These new incentives translated into the resulting effective tax rates are presented in Table 1.

Year	Toll Gate Tax (Millions of Dollars)
1991	176.9
1992	98.5
1993	98.8
1994	224.4
1995	220.9
1996	179.5
1997	210.2
1998	171.0
1999	107.7
2000	111.1

[23] Title 13 P.R. LAWS ANN. § 255, 1978.

Table 1 Tax Incentives Contained in the 1978 Industrial Incentive Act			
Years of Exemption	Percentage of Exemption From Income and Property Tax	Effective Tax Rate on Income Derived from Manufacturing	
		Minimum	Maximum
1—5	90%	2.20%	4.50%
6—10	75	5.50	11.25
11—15	65	8.75	15.75
16—20	55	9.90	20.25
21—25	50	11.00	22.50

The actual effective tax rates were lower than those shown above because of two additional incentives provided by the 1978 Act to encourage labor—intensive operations and assist small firms.

2. Companies earning less than $500,000 could also exclude the first $100,000 of income from taxation; companies earning more than $500,000 would have no such exemption.[24] Corporations ineligible for, or not claiming, the $100,000 exemption could, however, deduct an amount equal to 5 percent of production—worker payroll costs. This extra payroll deduction could not exceed 50 percent of otherwise taxable income.

3. The regular tollgate tax would be reduced to 5 percent for funds reinvested in designated Puerto Rican assets and withdrawn according to the following schedule: 10 percent could be withdrawn annually for five years, and the remaining 50 percent could be withdrawn at the end of the five years. The list of designated assets was expanded to include investment of earnings in the company's own business or in paying off its own debt.

4. Upon liquidation, a 4 percent tollgate tax would apply to accumulated Puerto Rican income. In the past, accumulated Puerto Rican income was exempt from the tollgate tax if distributed upon liquidation of the company.

[24] The exemption applied to the entire controlled corporate group.

5. Export—oriented service industries (architectectural, insurance, engineering, management consulting firms, etc.), which had been fully taxable under prior law, were able to exempt 50 percent of their export—service income, providing that 80 percent of their employees are residents of Puerto Rico and 80 percent of the cost of the services was incurred in Puerto Rico.

The new law also included provisions permitting currently tax—exempt corporations to elect to move to a *partially* exempt status. The election, which could apply to either the current or the coming fiscal year, had to be made when the corporation filed its Puerto Rican income tax return for the fiscal year which included December 31, 1978. Thus a possessions corporation whose fiscal year corresponded to the calendar year could elect in April 1979 (the usual filing date) to become partially taxable for either 1978 or 1979. If 1979 is elected, then the first return indicating taxes actually due would be filed in April 1980.

The election was subject to the following provisions:

1. During the years remaining until the end of the existing grant, the following percentages of income would be exempt from taxes:

Table 2
Shifting to Partially Exempt Status Under the 1978 Industrial Incentive Act

Years Left on Original Grant	Exempt Percentages	Maximum Effective tax Rate (percent)
0—4 years	73.3	12.0
5—8 years	77.7	10.0
9—12 years	85.5	6.5
13—16 years	90.0	4.5
17—20 years	91.0	4.0
More than 20 years	93.3	3.0

After the period of original exemption had expired, the companies electing this option were automatically entitled to operate partially exempt from taxation for ten more years. During the first five of those ten years, 50 percent of income would be exempt; during the second five years, between 35 percent and 50 percent (depending on the location of the investment) of total income, would be exempt.

2. Companies with six or more years remaining on their current tax exemption could make an alternative election. They could exclude 90 percent of their income from taxation and credit two thirds of their net income taxes paid against the post—conversion tollgate tax imposed on dividends paid from current earnings. Companies electing this second option could apply for a ten—year extension when the current grant expired, but the extension was not automatic.

3. For all companies, 50 percent of all tollgate taxes paid on distributions of income earned before converting to partial exemption were creditable against the post—conversion income tax liability. Dividends would also benefit from special reductions in the tollgate tax. Accumulated earnings would be subject to a 4 percent tollgate providing that pre—1973 earnings were paid out over a two—year interval, and that 1973—1977 earnings were paid out over a five—year interval.[25] Income earned in 1978 or thereafter would be subject to a reduced 5 percent tollgate, providing each year's income was paid out according to the five—year schedule just described. All earnings whose distribution was deferred to benefit from a reduced tollgate tax rate could be invested in designated Puerto Rican assets, in plant and equipment to be used in Puerto Rican industrial development, or in retiring the principal of the company's debt.

4. Finally, textile, apparel and shoe producers whose exemption grants expired within the five years of the new law were automatically entitled to a 90 percent tax exemption for an additional five years.

As an additional inducement to firms to convert to partial tax exemption, the Industrial Incentive Act of 1978 provided that under either conversion option, a firm may credit tollgate taxes

[25] No more than 10 percent could be paid out in each of the five years, and the balance at the end.

paid on distributions from pre—1978 earnings against the income taxes due in future years, up to 50 percent of such liability in any given year. In addition, dividend payments by converted firms would benefit from a reduced tollgate tax rate, if the following applies:

(a) Pre—1973 earnings would be distributed subject to a 4 percent tollgate tax, provided that only 50 percent of such amounts was distributed in a given year;

(b) Dividends paid out of income earned after 1972, but before 1980, were subject to a tollgate tax of 4 or 5 percent (depending upon the year in which the income was earned), provided that 50 percent of such income was invested for five years in the firm's own capital assets[26] or in assets designated in §2(j) of the 1978 Industrial Incentive Act. The designated assets, commonly referred to as 2(j) assets, included Puerto Rican government bonds, loans for the construction of buildings or acquisition of equipment used by a tax—exempt business, mortgages insured by the Puerto Rican Housing Bank and Finance Agency, and fixed—term deposits in certain banks doing business in Puerto Rico. Banks receiving these tax—exempt deposits are in turn required to reinvest the funds within Puerto Rico, although this requirement was not strictly enforced until 1980.[27]

(c) On liquidation, pre—1978 earnings of "converted" firms were exempt from the tollgate tax.

Despite all the permutations contained in the 1978 legislation the primary incentive for a firm to retain its earnings in the Commonwealth arose from the tollgate tax provisions of the new Industrial Incentive Act:

(a) Dividends paid out of income earned by an exempted business were subject to a tollgate tax of 5 percent, provided that 50 percent of such income was invested for five years in 2(j) assets or in the firm's own capital assets. To benefit from the

[26] These are defined as investments made for the acquisition of plant or equipment used in manufacturing, or the payment of the outstanding principal of a debt incurred for the acquisition of such property (Industrial Incentive Act of 1978, §4(h) (1)).

[27] Puerto Rican regulations in effect through March 31, 1980, permitted banks to "warehouse" 936 deposits outside Puerto Rico for up to six months.

reduced rate, the distribution must take place before June 30, 1980. The 50 percent of income reinvested during this period can be repatriated after the fifth year;

(b) On liquidation, undistributed earnings were subject to a tollgate tax of 4 percent, rather than 10 percent, provided that 50 percent of such earnings were invested in the firm's own capital assets or in 2(j) assets for a period of at least five years.

This entire set of complicated tax distortions created an environment where the primary motivator for firm location appeared to be the tax subsidy. Furthermore, given the unique relationship between U.S. multinationals and possession firms[28], the objective of maximizing tax subsidies led to certain business transaction that would facilitate income transfers between related parties. Rather than leading to greater incentives to further the economic development of Puerto Rico, these special tax exemptions led to greater maneuvering of income, deductions and credit among possession firms and their US parents. The history of U.S. Tax Court cases, discussed in the next section, attests to the creativity of the ensuing transfer of funds that these tax distortions generated. What these tax schemes did not address and continue to avoid is the lack of incentives present to local Puerto Rican entrepreneurs.

B. The New Industrial Incentive Act and the Transfer Pricing Problem

Under §482 of the IRC, the IRS may reallocate income, deductions or credits among two or more corporations under common ownership so as to prevent evasion of taxes. Nowhere has the

[28] In nearly all cases these are their own wholly owned subsidiaries.

application of §482 been more controversial than to transactions between a U.S. parent and its Puerto Rican possessions corporation.[29]

Section 482 cases involving possessions corporations first surfaced in the 1950's. In determining what percentage of a subsidiary's income came from a possessions corporation rather than the U.S., the IRS had initially ruled that exports from the subsidiary to the parent could be priced so as to attribute to the parent only the profit margin normally earned by an independent distributor.[30] In a 1955 private letter ruling, the IRS ruled that income derived from sales of goods made by a possessions corporation to its U.S. parent constitutes gross possessions source income of the possessions corporation for purposes of § 931.[31] The ruling did not explicitly address the issue of the sales price charged by the possessions corporation. In the ruling, the taxpayer had represented that sales of manufactured goods from the possessions corporation to the U.S. parent would be priced so as to give to the parent only the profit margin normally earned by an independent distributor. Under such a pricing rule, the affiliated possessions corporation would receive all of the income attributable to any patent, trademark, or customer goodwill for the product

[29] To see the issue of §482 consider the following example. Corporation X, a U.S. corporation, has a wholly owned subsidiary, Corporation Y, which manufactures Product Group A in Puerto Rico. Product Group A represents a type of product that is manufactured in the United States. Division 1 of Corporation X purchases over 80% of Corporation Y's output. The remainder is purchased by other divisions of Corporation X. The transfer prices between Division 1 and Corporation Y are being examined. When Division 1 bought products from Corporation Y, it resold 50% of them to unrelated parties, and retained 50% of them for either retail sale or integration into other products. Corporation X characterizes the method used to set prices between Corporation Y and Division 1 as a variant of the resale price method. Corporation X's method involves starting with the resale prices charged by Division 1 to unrelated parties (which vary according to whether those parties are manufacturers or distributors, and according to the volume of products sold), subtracting expenses (estimated at 15% of the net average sales price), and subtracting the net profit of comparable Product Group A distributors (estimated at 5% of the net average sales price). This results in a price to Corporation Y equal to 80% of the average resale price. The IRS proposes to make a § 482 allocation of income to Corporation X based on a cost plus methodology. The 1968 regulations apply to the years in issue, Years 1-3, and Corporation X has not yet elected to apply the 1994 § 482 regulations.

[30] In some, but not all, cases, the IRS subsequently clarified its initial ruling to indicate that it applied only to the 50 percent and 80 percent tests of eligibility for §931 benefits. Some other income allocation rule would be used under §482 to determine the tax liability of the parent.

[31] Private letter ruling, October 6, 1955.

it manufactured. In commenting on the pricing issue, the IRS subsequently stated that the 1955 ruling:

> "should not be construed to pass upon the propriety of the [pricing rule used by the taxpayer] as being an appropriate measure of the allocation of profits between [taxpayer] and its subsidiary operating in Puerto Rico."

The IRS noted that the proper income allocation rule is a factual question which the 1955 ruling did not address.[32]

In 1963, the IRS provided guidelines in Revenue Procedure 63—10 for the allocation of income from intangibles between a U.S. parent corporation and its affiliated possessions corporation. The Revenue Procedure was prepared after considerable discussion with, and review by, representatives of the Puerto Rican government. The guidelines state that if, under all facts and circumstances, intangibles "belong" to the affiliated possessions corporation, it is entitled to the income produced by the intangibles. The Revenue Procedure cautioned that where the U.S. parent corporation is the marketing and servicing organization for products produced by the possessions corporation, "no supportable contention could be made' that certain intangibles, such as "market position, consumer acceptance, or similar factors of good will attributable to the distribution and product servicing activities in the U.S." belong, as a matter of substance, to the possessions corporation. The Revenue Procedure did not specifically address the application of §482 to cases involving intangibles transferred from a U.S. parent corporation to an affiliated possessions corporation, largely because such transfers were not yet common.

> "They [guidelines] do not deal with other problems that may be involved in particular cases, including those which may be present in cases involving the transfer of income-producing intangibles from the U.S. to an affiliate located in Puerto Rico."[33]

[32] Private letter ruling, April 8, 1959.

[33] Revenue Procedure 63—10, 1963—1 C.B. 490.

The 1963 guidelines noted four situations where an improper shifting of profits might occur and a §482 adjustment would be appropriate.

1. When the §931 subsidiary overcharged its parent for exports.

2. When the §931 subsidiary sold to an independent third party, but derived a benefit from some intangible asset belonging to the parent (e.g., a patent or trademark) without paying an appropriate fee or royalty to its parent.

3. When the parent undercharged its subsidiary for raw materials or component parts furnished by the parent.

4. When the parent incurred a direct expense on behalf of its subsidiary without charging it back to the subsidiary.

In determining appropriate transfer prices, the general standard was always to be the arm's—length price, that which would have applied to a comparable transaction between unrelated parties. In any given instance, the specific methods for applying the general standard were ranked as follows:

1. *Directly Applicable Independent Prices.* In some instances, the subsidiary or the parent may sell the same product to, or buy the same product from, independent parties. If so, the price used in these transactions should also be used for the inter—affiliate transactions.

2. *Independent Prices for Similar Products.* Even though the parent and the subsidiary deal exclusively with one another, the same or similar product may be bought and sold by others at an identifiable price. This price should be used only if the first method cannot be applied.

3. *Other Methods.* If the two prior methods availed nothing, then the parent should establish how much the product would have cost if purchased from an independent U.S. manufacturer. This price would include all relevant U.S. costs of production plus a reasonable profit margin.

Under this last method, if a product could be manufactured in Puerto Rico and shipped to the U.S. more cheaply than it could be manufactured in the U.S.,[34] the additional profit from manufacturing in Puerto Rico would be allocable to the subsidiary. If the opposite were the case (e.g., because transport costs were higher), the Puerto Rican subsidiary would earn less than a U.S. manufacturer would.

The most difficult and contentious cases, the 1963 ruling noted, typically involve intangible property: patents, trademarks, brand names, access to established marketing and distribution channels, and goodwill with customers. For example, in the pharmaceutical industry, manufacturing and distribution costs are a small fraction of the selling price. The large profit margins reflect a return on valuable intangibles, such as a patent on the product. The value of a patent may, in turn, reflect substantial outlays for past research and development. If R&D is to be economical, the ultimate profits must cover not only the cost of the projects yielding commercial products but the "losers" as well. Regardless of whether current profits represent a low, reasonable or high return on past R&D, the tax saving of assigning those profits to a tax—exempt subsidiary can be substantial.

Because the total profit margin (i.e., that on manufacturing and distribution) often includes an implicit return on patents, trademarks, goodwill, etc., appropriate transfer prices can be established only by first determining whether the mainland parent or the §931 affiliate owns the intangibles. In some instances, an intangible asset could not possibly be owned by the affiliate (for example, goodwill with customers based on the parent's own marketing and distribution effort). In others, the intangible could have been transferred (for example, exclusive patent rights), but for one reason or another was not, so the parent, not the subsidiary, was still entitled to the return on it. Only if the intangible property truly belongs to the subsidiary could the transfer price appropriately allocate the return on the intangible to the subsidiary.

[34] Puerto Rican labor was usually cheaper than mainland labor.

In 1968, the IRS issued regulations under §482. These regulations provided detailed rules for the setting of transfer prices on transactions between related parties. Like the 1963 guidelines for the allocation of income to possessions corporations, the regulations did not specifically address the question of whether a §351 transfer of intangibles would be respected for purposes of the allocation of income attributable to those intangibles. On the same day that the §482 regulations were issued, the IRS issued Revenue Procedure 68—22, which provided that taxpayers may use the guidelines set forth in Revenue Procedure 63—10 if the result would be more favorable to the taxpayer than the §482 regulations.

Between 1963 and 1968, a number of U.S. parent corporations transferred intangibles to their possessions subsidiaries under §351. In computing the proper arm's—length price for sales of goods from a possessions corporation to its U.S. parent, the parent corporations asserted that the possessions' subsidiaries were entitled to all of the return on the intangibles. The IRS contested the claimed allocation of the income attributable to the transferred intangibles to the possessions corporations, and attempted to utilize §482 to reallocate that return to the parent corporations.

In Technical Advice Memorandum 8040019, issued in July 1980, the Internal Revenue Service took the position, under the particular facts involved, that even though the parent corporation had taken all steps to legally transfer intangibles to its affiliated possessions corporation, the intangibles would not be treated as "belonging" to the possessions affiliate. The IRS decided that the transfer lacked substance and was motivated solely by tax avoidance and that §482 would be applied to reallocate all of the income produced by the intangibles to the parent corporation. In issuing this finding, the IRS noted that, subsequent to the transfer, the U.S. parent corporation continued to perform the same promotional, marketing, and supervisory activities, and also continued to conduct further research with respect to the patented and trademarked product.

The 1963 revenue procedure did not necessarily preclude parents from allocating substantial income to their possessions corporations, but did force the companies to lay a careful legal foundation for those allocations. After 1963, the creation of the subsidiary was usually accompanied by the execution of legal documents irrevocably assigning exclusive patent and other rights to the newborn company.

Seeing that the 1963 revenue procedure and the 1968 regulations did not materially reduce profit shifting, the IRS brought a case against Eli Lilly involving a possessions corporation established to manufacture Darvon.[35] Because Eli Lilly executed the legal documents purporting to effect the transfer of intangibles, the argument that the IRS has traditionally used in such cases, that the parent and not the subsidiary is entitled to the return on the intangible, became much more difficult to make.

Concerned by the transfer—pricing disputes, various Puerto Rican Administrations have complained to the Secretary of the U.S. Treasury to protest that the IRS's practices are inhibiting Puerto Rico's ability to attract new investments through its tax exemption programs. Furthermore, because some companies do not have a complete exemption, and because all are subject to the tollgate tax, the various Puerto Rican Administrations maintain that the IRS's position erodes the Commonwealth's tax base.

Did this apparent uncertainty in the transfer pricing problem cause a decline in start-up activity of non-local investors? The simple answer is negative.

In Table 3 we present the data on investment in Puerto Rico by type of ownership for the period 1991-2001. The predominant investor (over 74 percent of total gross investment in Puerto Rico) is the private sector, with a minor role for public sector participation. If there was a risk

[35] This lengthy litigation is a textbook example of the complexity of transfer pricing problems when intangibles are involved. See Eli Lilly and Co. v. Commissioner, 84 T.C. no. 65 (May 28, 1985); aff'd in part and rev'd in part 856 F.2d 855 (7th Cir. 1988).

associated with the transfer problem the data would reveal a larger participation by the State sector, and it doesn't. In Table 4 we highlight a list of private venture capital activity in Puerto Rico over the same period. Here again there appears to be no adverse change due to the IRS enforcement. Our sample of venture capital activity using firm level micro data corroborates the continued growth of private sector activity in the Commonwealth.

Table 3
Domestic Investment in Puerto Rico by Type of Ownership

Year	Gross Fixed Domestic Investment	Investment by Private Sector	Investment by Public Enterprises	Investment by Commonwealth Government & Municipalities
	(Millions of Dollars)			
1991	5,006.2	3,382.5	1,135.6	488.1
1992	5,042.2	3,335.9	1,110.0	596.2
1993	5,552.2	3,810.4	1,081.5	660.3
1994	5,882.7	4,199.8	1,081.5	601.5
1995	6,558.9	4,639.1	1,219.6	700.2
1996	7,589.9	5,079.2	1,584.6	926.0
1997	8,528.7	5,578.5	1,797.6	1,152.6
1998	9,262.5	6,169.8	1,636.4	1,456.3
1999	11,572.5	8,268.5	1,833.4	1,470.6
2000	12,213.4	9,053.2	1,639.9	1,520.2

Source: Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis

Table 4
Private Equity and Venture Capital Activity in Puerto Rico
[1991-2001]
(Thousands of Dollars)

Year	Company	Industry	Investment (est.)	Stage	Private Equity Fund
1991	Direct Marketing & Media Group	Direct Marketing	250	Start up	Venture Capital Fund, Inc.
1993	Abaco P.R., Inc.	Software Development	500	Early Stage	Venture Capital Fund, Inc.
1993	Tahoe Surgical Instruments-PR, Inc.	Medical Devices	1,000	Start up.	Venture Capital Fund, Inc
1994	Celpage, Inc.	Telecommunications	12,000	Expansion	Providence , Media Partners, VCFI, Neva
1994	MOVA Pharmaceutivals	Pharmaceutical	10,000	Expansion	Merck & Co., Inc., EDB, Private Investors
1994	TPI, Inc.	Telecommunications	30,000	Expansion	Austin Ventures, Thomas H. Lee & Co.
1995	BacPlas, Inc.	Plastics	3,500	Buyout	Neva, VCFI, EDB
1995	Coca Cola	Food & Beverage	30,000	Buy Out	De la Cruz & Co.
1995	Olympic Mills	Apparel	6,000	Buy Out	Coachman
1995	Procesadora Camprofresco	Food & Beverage	1,500	Expansion	V. Suarez Investments
1996	Caribbean Grill, Inc.	Fast Food Restaurants	950	Start up	Venture Capital Fund, Inc.
1996	Caribbean Restaurants	Fast Food Restaurants	30,000	Buy Out	American Securities
1996	Don Rico	Casual Dining	950	Early Stage	Venture Capital Fund, Inc.
1996	Hotel El Convento	Hotel-Privatization	500	Start up	Venture Capital Fund, Inc.
1996	Islandwide Express	Transportation	1,000	Buy Out	Economic Development Bank
1996	MicroJuris Software	Development	180	Early Stage	A.F. Investment Fund
1996	Mova Pharmaceuticals	Pharmaceutical	1,500	Expansion	Economic Development Bank
1996	Navieras de PR	Transportation	35,000	Buy Out	Bankers Trust Capital, Birkshire Partners
1996	Nova Comm	Security Devices	500	Early Stage	Economic Development Bank
1996	Orange Crush	Beverage Processor	9,228	Turn Around	Eagle Investment Fund, Inc.
1996	Pharmaceutical Packaging	Pharmaceutical	1,500	Early Stage	Economic Development Bank
1996	Primedia	Communications	10,000	Buy Out	BCI Capital
1996	Seven Up- Bottling	Food & Beverage	20,000	Buy Out	Center Street, BancBoston, ABN Amro, VCFI
1997	Advanced Graphic Printing	Commercial Printing	2,500	Early	Asset Growth Fund, Inc.
1997	Baggette, Inc.	Food Processor	10,000	Start up	Eagle Investment Fund, Inc.
1997	Celpage, Inc.	Telecommunications	15,000	Expansion	Chase Capital, Asset Growth Fund
1997	Empresas Lausell	Building Materials	7,000	Buy Out	Sovereign Capital
1997	Horizonte	Newspaper	900	Expansion	Asset Growth Fund, Inc.
1997	Packers Provision	Food & Beverage	7,000	Buy Out	AMEP, V. Suarez Investment
1997	Pan Pepin, Inc.	Food & Beverage	12,000	Buy Out	Eagle Investment Fund, Inc.
1997	Primera Hora	Newspaper	1,400	Early	Asset Growth Fund, Inc.

Year	Company	Industry	Investment (est.)	Stage	Private Equity Fund
1997	Venture Steel, Inc.	Manufacturing	2,500	Buy Out	AMEP, AGF
1998	Abaco	Sofware & Hardware	6,000	Expansion	Benchmark, SAP Ventures
1998	Caribbean Plant Propagator, Inc. Plans	Laboratory	300	Seed	Eagle Investment Fund, Inc.
1998	CSA Group	Professional Services	1,500	Buyout	Economic Development Bank
1998	Euro Caribe Packaging	Food Processor	500	Acquisition	San Juan Capital Holdings
1998	Fruits International	Agriculture	7,000	Buy Out/ Expansion	Neva, V. Suarez Investments, Private Investors
1998	Holsum Bakers	Food & Beverage	10,000	Buy Out	Management, Private Investors
1998	Hospital Matilde Brenes	Health Care	4,000	Buy Out	Private Investors
1998	Medical Card Systems, Inc.	Insurance	6,200	Buy Out	AMEP, VCFI, Private Investors
1998	Norte	Newspaper	731	Expansion	Asset Growth Fund, Inc.
1998	Olympic Mills	Textiles	1,500	Buyout	Economic Development Bank
1998	Outdoor Media Display	Media	1,000	Buy Out/ Expansion	Neva Venture Fund
1998	Pepsi Cola Puerto Rico	Food & Beverage	7,500	Buy Out	V. Suarez Investments
1998	San Juan Plastics	Plastics	2,000	Buy Out	ECI Group (Local Investors)
1999	Caribbean Restaurants	Fast Food Restaurants	60,000	Buy Out	Oak Hill Capital
1999	Centennial Cellular, Inc.*	Telecommunications	400,000	Buy Out	WCAS, Blackstone, AMEP
1999	Dollar Express, Inc.	Retail	1,000	Expansion	Advent-Morro Equity Partners
1999	Eden Group	Distribution	1,000	Expansion	AMEP and others
1999	Hispanic Television Viewing	Communications	16	Early Stage	GM New Century
1999	Kiddies Manufacturing Corp.	Plastics	2,300	Buyout	EDB, Lindenwood Capital
1999	Microjuris	Legal Services	1,500	Expansion	Economic Development Bank
1999	Olympic Mills	Textiles	1,200	Buyout	Economic Development Bank
1999	QMC Media, Inc.	Outdoor Advertising	3,105	Seed	AMEP and others
1999	San Juan Plastics	Plastics	400	Buyout	EDB, Private Investors
1999	Telpri (PRTC)	Telecommunications	25,000	Buy Out	Popular, Inc.
1999	Venture Steel	Manufacturing	200	Buyout	Economic Development Bank
1999	Virtual	Internet Content Provider	4,000	Early	Asset Growth
1999	Wyndham International, Inc.*	Tourism	500,000	Buy Out	Apollo, Blackstone, AMEP
2000	Abaco Mobile solutions	software	15,250	Expansion	EDB, AMEP, Noro-Mosley, SAP, Benchmark
2000	Altamente.com	Internet services	150	Early Seed	Ventures Puerto Rico Inc.
2000	Bacplas	Plastics	1,500	Expansion	Economic Development Bank
2000	Eden Group, Inc.	Distribution	290	Expansion	AMEP, EDB
2000	Empresas Berrios	Retail Furniture	25,000	Buy Out	Private Investors
2000	Español.com	Internet	3,000	Start up	AMEP, Cornerstone Equities
2000	Isla Net	Data, video, voice & telecom services	1,500	Expansion	AMEP, CJ Communications, Private Investors
2000	IslaZ.com (Meganet)	Internet	600	Start-Up/Seed	AMEP, GM Ventures
2000	Kiddies Manufacturing Corop.	Plastics	450	Buy Out	EDB, Lindenwood Capital
2000	Microjuris	Legal Services	2,500	Expansion	Seed Ventures, Private Investors
2000	New Comm Wireless	Telecommunications	20,000	Expansion	Syndicated Communications, TLD PR

Year	Company	Industry	Investment (est.)	Stage	Private Equity Fund
2000	Outsourcing Solutions (AlChavo.com)	Internet	800	Start up	PRIDCO, A5 Development
2000	QMC Media, Inc./ Viu Media	Outdoor Advertising	3,100	Early/ Second	AMEP, Housatonic Partners,Private Investors
2000	San Juan Plastics	Plastics	250	Buy Out	Economic Development Bank
2000	tusexitos.com (CNG Networks)	Internet	100	Start up	Neva Venture Trust Fund
2000	Vidacool.com	Internet	1,000	Start up	Seed Ventures Puerto Rico Inc., Private Inv.
2000	Virtual, Inc.	Internet	8,000	Expansion	AMEP, AGF, V. Suarez, BPPR, Private Investors
2000	Zona MD.com (Directorio Medico Net, Inc.)	Internet Portal	250	Start up	AMEP
2001	BankTrust	Financial Services	11,341	Expansion	Private Investors
2001	Eurobank	Financial Services	6,644	Expansion	Private Investors
2001	Axexo Corp.	Media & Enterntainment	500	Start up	Seed Ventures Puerto Rico, Inc.
2001	New Comm Wireless	Telecom	20,000	Expansion	Syndicated Communications Partners, TLD PR
2001	Integration Technologies Corp. (Intech)	IT Consulting Services	1,500	Expansion	Advent-Morro Equity Partners
2001	Isla.Net	Data, video, voice & telecom services	5,000	Expansion	DCC Ventures, Coqui Capital, Seed Ventures and AMEP
Annual Total					
1991			250		
1993			1,500		
1994			52,000		
1995			41,000		
1996			111,308		
1997			58,300		
1998			48,231		
1999			999,721		
2000			83,740		
2001			44,985		

* Transactions of non-PR corporations with significant PR operations. Investment is equity for entire company. Transactions are estimates based on reports by the Funds and/or public information available/ Data through April 2001

Legend: AGF- Asset Growth Fund; Providence - Providence Equity Partners; VCFI - Venture Capital Fund, Inc.;WCAS - Welsh, Carson, Anderson & Stowe; EDB - Economic Development Bank; AMEP- Advent Morro Equity Partners.

Source: Grupo Guayacan Inc.

Despite the continued litigations by the IRS the problem of transfer pricing will continue along with the flow of private capital. Given that the transaction cost associated with litigation is perceived to be lower than the present value of the profits at stake, the transfer pricing problem will continue to be part of the possessions system of tax collection and §482 and its arms length standard.[36]

[36] For an interesting review of the "Arms Length Standard" see Reuven S. Avi-Yonah, "The Rise and Fall of Arm's Length: A Study in the Evolution of US International Taxation," 15 Va. Tax. Rev. 89., Summer 1995. A list of the most

recent IRS cases in this area point out the difficulty that the IRS has in enforcing the "arms length standard." Medchem, Inc. V. Commissioner Of Internal Revenue, 295 F.3d 118; July 10, 2002.; Taber Partners I v. Insurance Co. of N. Am., 798 F. Supp. 904,July 7, 1992.; Merck & Co. v. United States, 24 Cl. Ct. 73, September 10, 1991.; Elec. Arts, Inc. v. Comm'r, 118 T.C. 226; March 22, 2002,; Medchem, Inc. V. Commissioner Of Internal Revenue, 116 T.C. 308, May 18, 2001.; Coca-Cola Co. v. Commissioner, 106 T.C. 1, January 5, 1996.; Condor Int'l v. Commissioner, 98 T.C. 203, March 2, 1992.; Microsoft Corp. v. Commissioner, T.C. Memo 1998-54; 75 T.C.M. (CCH) 1747, February 10, 1998.; Bergersen v. Commissioner, T.C. Memo 1995-424; 418; 70 T.C.M. (CCH) 568, August 29, 1995.; Perkin-Elmer Corp. v. Commissioner, T.C. Memo 1993-414; 66 T.C.M. (CCH) 634, September 8, 1993.; Long Beach v. Aistrup, 164 Cal. App. 2d 41, October 3, 1958.; Standard Mfg. Co. v. Tax Com. of New York, 69 N.Y.2d 635, November 12, 1986.; Standard Mfg. Co. v. Tax Com. of New York, 114 A.D.2d 138, January 30, 1986.

III. US PARTICIPATION IN SUPPORTING THE CREATION OF A TAX DISTORTION VIA THE POSSESSIONS CORPORATION

In order to fully appreciate the significance of the concessions made by various U.S. Administrations to corporate interests that operate in the global market and Puerto Rico one must first examine the elements of the U.S. corporate tax system as it applies to domestic multinationals.

A. U.S. Taxation of Domestic and Foreign Operations of U.S. Corporations

The U.S. imposes a tax upon the worldwide taxable income of corporations organized under the laws of the U.S., the District of Columbia, or any of the states. The U.S. tax system is traditionally referred to as a "classical" system of taxing corporate earnings; that is, corporate earnings are taxed at the corporate level as they are earned and a second time, at the shareholder level, upon the distribution of dividends. The "double taxation" of corporate earnings would raise a serious obstacle to multiple—tiered corporate operations if separate tax liabilities were imposed at the subsidiary level, and again upon distribution of the subsidiary's earnings to its parent corporation. To eliminate this obstacle, the IRC makes two special provisions. First, an 85 percent dividends received deduction is allowed for any dividend received by one U.S. Corporation from another. Second, in the case of an "affiliated group" of corporations, the members of the group may report their income on a consolidated basis, or any corporation may claim a 100 percent dividends received deduction for any dividend received from another member of the group.[37]

The shareholder level tax on corporate earnings is imposed only when amounts are actually distributed as dividends to the shareholders. In addition, shareholders are subject to tax on the gain

[37] An "affiliated group" of corporations is defined as a group of corporations including a "common parent," which owns at least 80 percent of one of the other corporations in the group, and in which all corporations other than the common parent are at least 80 percent owned by other members of the group.

from the sale, exchange, or other disposition of the shares of the corporation. If a shareholder has held his shares for more than one year the gain will normally constitute long—term capital gain, taxable at considerably lower rates.

The IRC taxes property gain only upon sale, exchange, disposition, or other alienation, *in a legal sense*, of the property; it does not tax the mere change in market value of property in a taxable period. The existence of a one-time tax on disposition, together with an exemption in the absence of disposition, has led Congress to confer "non-recognition" treatment upon certain transactions in property. "Non-recognition" treatment applies principally in circumstances in which a taxpayer has alienated property, *in a legal sense*, so that he has "realized" whatever gain or loss he has borne on the property; but in which the taxpayer retains a continuing interest either in the property, the essential interests it represented, or in similar property, after the transaction. The "non-recognition" provisions play a significant role in giving businesses freedom to arrange and rearrange the legal form in which they are conducted.[38]

The U.S. imposes taxes on the worldwide taxable income of U.S. corporations. That is, all income is included in the tax base, regardless of the geographic place it was derived, and all allowable items of expense, deduction, and credit are taken into account, regardless of the place the income to which such items were related was derived. Consequently, U.S. corporations that operate their foreign operations in branch form take into account the income and expenses of the foreign branch and claim a foreign tax credit for any taxes paid to foreign governments with respect to their operations.

[38] The simplest and perhaps most important cases involve the transfer of property by a shareholder to a wholly owned corporation. The transaction involves an "exchange" of the property for an interest in the corporation, which constitutes a "realization" of any gain or loss the taxpayer has on the property. But the taxpayer has a "continuing interest" in the old property, and for this reason the tax law permits (and in most cases requires) that he not "recognize" the gain or loss for tax purposes.

In cases where the form of foreign participation is not of the "branch" type, the tax consequences are very different and the possibility for manipulation far greater. In general, the profits of a foreign corporation are not generally taxed by the U.S.; a foreign corporation is taxed by the U.S. only on certain U.S. source investment income, and on its income "effectively connected" with a U.S. trade or business. However, the U.S. parent corporation will be taxable on any dividends received from the foreign corporation. The insulation of the foreign corporation's profits from a corporate level U.S. tax makes the essential devices for mitigating the impact of the U.S. "double—tax" system on corporate organization, (the dividends received deduction and the opportunity to report income on a consolidated basis) unnecessary in the context of foreign subsidiaries. Therefore, U.S. companies may not claim a dividends received deduction for dividends from a foreign corporation which did not earn income from a U.S. business, and foreign corporations may not be included in a consolidated return. However, a U.S. corporation which owns 10 percent or more of a foreign corporation may take a "deemed paid" credit for foreign income taxes paid by the foreign corporation on income represented by dividends paid to the U.S. Corporation. The amount of deemed paid credit is limited in the same way as is the foreign tax credit claimed by U.S. companies operating in branch form abroad.

The insulation of foreign corporations from current U.S. tax, and the ability of U.S. companies (and other persons) to hold property or to conduct business through a foreign corporate organization, creates special potentials for abuse which require special anti—abuse provisions. The "non-recognition" provisions, noted above, for instance, create substantial abuse potentials in the foreign corporation area. When a person transfers appreciated property (such as patent) to a U.S. corporation, there is relatively little possibility for avoiding or deferring a capital gains tax in the event of a subsequent disposition of the property by the corporation. The transferee corporation is subject to a comprehensive U.S. tax liability, just as the transferor would be. Where the transfer is made to a foreign corporation, however, a much greater abuse potential arises. In these latter circumstances, the foreign corporation will not be taxable upon a subsequent disposition of the property; thus the capital gains tax will be deferred indefinitely until distribution of the proceeds to the U.S. shareholder, and may by certain devices be ultimately avoided.

A related problem grows out of the practice of U.S. corporations using a branch form for startup operations in foreign countries and incorporating the branch when the operations reach a "break—even" point. Startup business operations often entail substantial "front end" losses; these losses may be used by the companies to offset other income in computing their total U.S. tax liability. But some of those losses may be the product of deductions which, though allowable by the terms of the IRC in the year claimed, are properly allocable to income which will be produced in subsequent years.

An example of such a complicated transaction involves a company which may incur substantial research and development (R&D) expenses, which may be deducted for U.S. tax purposes in the period during which they are incurred. In most cases of R&D expenditures, the inflow of royalties or other licensing type income occurs with a substantial time lag. The same corporation undertaking substantial R&D activity, such as pharmaceutical companies, may by incorporating foreign operations in a timely manner, exaggerate the deferral effect of the insulation of foreign corporate earnings from U.S. taxes. This firm would be claiming R&D deductions against U.S. source income currently, but in "income years" when the R&D produces a positive flow of royalties, it will not incur any U.S. tax on its foreign earnings.

The IRC has two devices to combat these two related potential abuses. First, a 35 percent excise tax is imposed on the amount of untaxed appreciation borne by property transferred by a U.S. person as a contribution to the capital of a foreign corporation, unless the transferor satisfies the Internal Revenue Service that the transfer does not have a tax avoidance purpose. This excise tax essentially replaces the capital gains tax that is being avoided by the transfer. Second, in order to secure "non-recognition" treatment on certain transfers to foreign corporations which would be "non-recognition" transfers under the otherwise applicable IRC provisions, a transferor must obtain a ruling from the IRS that the transfer does not have a tax avoidance or evasion purpose. If the IRS refuses such a ruling "non-recognition" treatment is not accorded the transaction and the company is compelled to pay a "toll charge."

A third potential abuse arises from opportunities to manipulate "source" rules to reflect income in "tax haven" jurisdictions, and thereby to escape corporate level or current taxation of the income. For instance, income from the disposition of personal property is "sourced" in the jurisdiction where title passes. This "source rule" permits persons selling goods to the U.S., for instance, to pass title through a foreign base company and thereby to avoid U.S. source income, which would be taxable by the U.S. Similarly, income from shipping, from the performance of certain architectural, engineering, managerial or other services, or income from underwriting insurance contracts may be derived in such a manner as to characterize the income as having a source in a foreign base. In this way, the income can be sheltered from current U.S. tax through foreign incorporation; and it may receive effective exemption from current tax if the corporation is organized in a low— or no-tax "haven" jurisdiction. To combat this practice, the U.S. requires that U.S. shareholders of "controlled foreign corporations" [CFC] currently include in their income portions of the corporation's income attributable to certain base company or passive investment income.

A fourth potential abuse is the ability of a U.S. shareholder of a foreign corporation to "transmute" what would be ordinary dividend income of a foreign corporation into lower taxed "capital gain" income by selling shares of the company or liquidating it, instead of distributing accumulated profits from a company. In addition, a U.S. company could liquidate an 80 percent owned foreign subsidiary free of tax, receiving "non-recognition" treatment. In the absence of special provisions, it could therefore gain control of accumulated profits without the occurrence of any taxable event. To forestall "bailouts" of this type, the IRC requires that the gain realized on the sale of shares of any foreign corporation by a U.S. person who was more than a 10 percent shareholder of the company be treated as a dividend to the extent of the accumulated profits of the company. It also requires that in liquidating a foreign subsidiary, a U.S. person receive a ruling from the IRS that the liquidation does not have a tax avoidance purpose.

A final and important potential abuse of foreign corporations grows out of the ability of companies to "shift" profits from one corporate entity to another through artificial transfer pricing and other artificial pricing of inter-corporate transactions. By shifting profits to a foreign subsidiary, a U.S. parent may secure deferral of (or exemption from) U.S. tax on what may in reality be genuine U.S. business activity. This problem is especially acute where profits may be shifted to a tax haven jurisdiction where they will be taxed at a rate substantially lower than that imposed by the U.S. As in the case of profit shifting between domestic corporations, this potential abuse is addressed by §482 of the IRC, and discussed above.

Only domestic corporations are subject to comprehensive U.S. tax liability under the IRC. Domestic corporations are defined as corporations organized under the laws of the U.S. or of one of the states. Foreign corporations are defined as any corporations which are not domestic. Accordingly, a corporation organized under the laws of one of the possessions, or under the laws of the Commonwealth of Puerto Rico, is deemed to be a foreign corporation for purposes of the IRC. Such a corporation is taxable on a withholding basis on certain U.S. source investment income, and is taxed on income effectively connected with a U.S. trade or business; but it is *exempt* with respect to other income, including its foreign source business income.

Notwithstanding the above, the IRC never uses the colloquial terms "domestic" and "foreign" source income; it speaks of income "from sources within" and "from sources without" the U.S. Since under the IRC "United States" when used in its geographic sense includes only the states thereof, and also the District of Columbia, "possessions source" income is income "from sources without" the U.S., within the meaning of the IRC. In addition, the IRC explicitly permits taxes paid the possessions to be credited against U.S. tax liability to the same extent a credit for taxes paid foreign governments is permitted. Accordingly, even in the absence of special provision for possessions source income, embodied in §936 (and formerly §931) of the IRC, companies could claim a foreign tax credit for income derived from the possessions. This, together with the provision that possessions-incorporated corporations are foreign corporations, would give the companies the same option they have with any foreign operation, between a foreign branch and foreign subsidiary, with virtually identical tax consequences. Possessions subsidiaries are subject to the anti—avoidance measures described above to the same extent as any other foreign corporations.

An exception to this general rule arose as a by-product of §931 of the IRC which was created, in part, to provide assistance to US multinationals by exempting from U.S. income tax the income of any domestic corporation which derived 80 percent or more of its gross income from foreign sources.

B. Treatment of Possessions Source Income[39]

In 1921, Congress, for the first time in its history, enacted special tax treatment for U.S. individuals and corporations deriving income from U.S. possessions.[40] The Senate Finance

[39] The material presented in this section draws heavily on the reports by the Department of Treasury on the Operation of the Possessions Corporation. See Department of the Treasury, The Operation and Effect of the Possessions Corporation System of Taxation, Washington. First Annual Report, June 1978; Second Annual Report, June 1979; Third Annual Report, June 1980; Fourth Report, February 1983; Fifth Report, July 1985 and Sixth Report, March 1989.

[40] See Revenue Act of 1921, Pub. L. No. 67-98, 42 Stat. 227, 271 § 262(b) (allowing exemption from income).

Committee first proposed the incentives when it considered the Revenue Act of 1921.[41] Although the House version of the legislation contained a broader exemption, the joint House- Senate conference committee ultimately replaced it with the narrower Senate version.[42]

The reduction in the coverage of this legislation, from the whole world to the U.S. possessions, is not as astonishing as it might seem. The demand for exemption came primarily from a group of U.S. firms then operating in the Philippines (a U.S. possession in 1921). They argued that tax exemption would encourage export trade to the Far East from the U.S. base in the Philippines, while at the same time reducing the incentive for the U.S. firms operating there to reincorporate outside the United States. Little attention was paid to the effect of this law on the Philippine economy; Puerto Rico was virtually ignored in the public debate.

Congress codified the 1921 amendments into the IRC of 1939 in their entirety.[43] When Congress re-codified the IRC in 1954, the provisions were codified at a new I.R.C. §931.[44] Under

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[41] See H.R. 8245, 67th Cong. When initially introduced in the House out of the Ways and Means Committee, the bill exempted from Federal tax the foreign source income of U.S. "foreign traders" and "foreign trade corporations."(amended version introduced by Sen. Penrose) § 262 (1921) (proposing exclusion from gross income for U.S. citizens deriving possessions source income). Under the Senate amendments, the "foreign trader" exemption was struck. Instead a U.S. citizen or corporation could exclude from gross income all income earned in a possession of the United States if both 80% of the citizen's or corporation's income was derived from a United States possession and 50% of the citizen's or corporation's income was derived from the active conduct of a trade or business in a United States possession. See id. at § 262(a)(1) and (2); see also S. Rep. 67-275 at 23 (1921) (describing "new provision" of legislation).

[42] See H.R. Conf. Rep. No. 67-486, at 14-15 (1921) (describing House decision to recede to Senate amendments).

[43] See H.R. Rep. No. 76-6, at 3 (1939) (noting that Internal Revenue Code of 1939 was compilation of all internal revenue laws). The 1939 Code made "no change( ) in existing law." See id. The exclusion for possessions source income was contained at § 261(a) of the 1939 Code. The possession corporation exemption continued unchanged from 1921 until 1976.

[44] See H.R. Rep. No. 83-1337 (1954), reprinted in 3 U.S.C.C.A.N. 4025, 4400 (noting 1954 provision is "identical, in substance" with § 251 of 1939 Code).
In addition, the 1954 Code denied the benefit of the exclusion to U.S. citizens (but not domestic corporations) deriving income from Puerto Rico. Compare I.R.C. § 251(d) (1939) (excluding also income derived in U.S. Virgin Islands from exclusion) with I.R.C. § 931(c) (1954) (also excluding United States citizens deriving income from Puerto Rico from benefits of exclusion). The 1954 Code also provided that income earned by employees of the United States did not qualify for the exclusion. See id. at § 931(i) (providing income paid to United States government employees deemed to be United States source income). Cf. I.R.C. § 911(b)(1)(B)(ii) (1997) (denying $70,000 exclusion for income earned abroad by United States residents to United States government employees).

the terms of this section (as subsequently amended) a U.S. corporation deriving at least 80 percent of its gross income from sources within a U.S. possession and at least 50 percent of its gross income from the *active conduct* of a trade or business therein could exclude from its gross income for Federal tax purposes all foreign—source income except that received within the U.S. The corporation had to meet the 80 percent and 50 percent tests for the current and preceding two taxable years (or less if it was just initiating operations). Corporations that satisfied these requirements came to be called "possessions corporations,"

The exclusion created by §931 was different from the foreign tax credit in one crucial respect. The foreign tax credit shields a U.S. company's foreign earnings from tax only if and to the extent that the company pays tax to a foreign government. The 931 exclusion applied whether or not the company actually paid a foreign or possession income tax. The exclusion thus "preserved" the economic benefit of any tax incentive legislation adopted by a possession. The application to 931 corporations of the two basic means for mitigating the impact of the "classical" system on corporate organization, that is, permissive consolidation and the dividends received deduction, were modified. Prior to 1976, the IRC provided that a corporation "entitled to the benefits of §931" could not be an "includible corporation" in an "affiliated group." Failure to qualify as an includible corporation made the company ineligible for consolidation. And parent corporations could not take a dividends received deduction for dividends paid by §931 corporations.

A §931 corporation would often operate at a loss for the first year or two. In 1971, the Tax Court ruled that a company was not "receiving the benefits" of §931 in a year in which it lost money, so it could join its parent and other affiliated corporations in filing a consolidated return for such a year. The owner of a §931 thus avoided taxes in profitable years but was able to offset any loss against other, taxable income in unprofitable years.

A §931 corporation usually avoided earning or receiving any taxable income within the U.S. and, thus, was wholly exempt from federal taxation on its earnings. In the majority of cases the §931 corporation's were engaged in manufacturing activity that qualified them for exemption from Puerto Rican taxes as well. Thus, for the period of the Puerto Rican exemption (10 to 30 years) the §931 corporation had a tax holiday.

In the U.S., however, the parent corporation could not claim a dividends—received deduction for dividends from §931 firms, so the dividend would be taxable upon receipt by the parent. To avoid payment of this tax, the typical §931 accumulated its earnings, investing them (tax free) in the Eurodollar market.[45] After a number of years[46] the §931 would be liquidated into its parent. If it was at least 80 percent owned by a U.S. corporation, as was generally the case, the liquidation was free of any federal income tax. So, although the parent had to wait for the liquidation to receive the accumulated earnings, those earnings would be free of either Puerto Rican or Federal income taxes. Moreover, this could be achieved without a ruling from the IRS that the transaction did not have a tax avoidance purpose of the kind which would have been required had the corporation been a regular foreign corporation or had it been organized in the possession.

In cases of dividend payment, the parent company could claim a "deemed paid" credit for any taxes the §931 corporation may have paid to a possession (or foreign country) on its earnings, and for any withholding tax imposed by the possession upon the dividend. The dividend was considered foreign source income which increased the recipient's foreign tax credit limitation. In addition, the §931 company was effectively insulated from the U.S. accumulated earnings tax, since that tax was based on accumulated taxable income, and by virtue of the exclusion under §931, the company had little if any taxable income.

[45] Because the income was not taxable as earned, the company was not subject to the Federal accumulated earnings tax.

[46] This would usually occur at the end of its period of Puerto Rican tax exemption.

Corporations operating under §931 were excepted from most of the anti—abuse provisions applicable to foreign corporations. Non-recognition transfers of appreciated property (such as patents) to §931 corporations were excepted from the provisions requiring a ruling that the transfers were not for a tax avoidance purpose, and from those imposing excise taxes on transfers as contributions to capital of a foreign company. These exceptions applied even though §931 corporations, because of their tax exemption, were subject to the same abuses as foreign corporations in this regard.

Furthermore, the sale of shares of a §931 corporation was not subject to the provisions characterizing gain on such sales as dividend income to the extent of the earnings of the company. This was true even though §931 corporations, because of their tax exemption on foreign source earnings, could be used to transmute those earnings from ordinary income to capital gain on the sale of shares.

Notwithstanding the advantages of the non—application of this provision to §931 corporations, this privilege may have been of little economic benefit since the liquidation option permitted a company to realize the benefits of the possessions subsidiary's earnings without paying any current tax on the income. But that liquidation was itself a product of a variation of the laws which would have applied to a foreign corporation, which would have conditioned non-recognition of gain in the absence of a tax avoidance purpose.

In addition, because a possessions corporation was a domestic corporation, it could not be deemed a CFC for purposes of the anti—tax haven provisions of the IRC.[47] Accordingly, either corporations chartered in the possessions or domestic corporations qualifying under §931 could be

[47] Those provisions also except corporations organized in Puerto Rico and the possessions that otherwise meet the general requirements of a possessions corporation.

used as tax haven base companies if they could fit base company income into the terms of the Puerto Rican tax holiday legislation.

Congress did not begin to limit the *benefits* provided to taxpayers deriving income from U.S. possessions until 1976.[48] Congress perceived two substantial problems with the operation of the §931 provisions. First, the exclusion of all foreign source income, together with the tax deterrent to non-liquidating distributions by §931 corporations to their U.S. parents, were viewed as producing an unjustified revenue loss, and as creating incentives to uneconomic investments of retained earnings by §931 corporations. As noted above, most of these earnings were invested in the Eurodollar market, where they continued to enjoy tax exemption. Congress was concerned primarily by the loss in tax revenue to the U.S. and the apparent irrelevance of §931. According to official statistics gross fixed investment as a percentage of GNP in Puerto Rico was actually higher in 1950 than it was in the early 1980s, and the net contribution to GNP from manufacturing was 13.9% in 1950 and only 14.9% in 1982. To what extent the lack of effectiveness of this tax incentive program was on Puerto Rico entered the minds of Congress is not clear. What is clear is that, Congress believed that if the earnings could not be profitably invested in the possessions, companies should be free to choose on the basis of non-tax considerations whether to invest in the U.S. or abroad. In effect Congress was more interested in tax revenue than in economic development of Puerto Rico.

The second problem grew out of the wording of the statute defining an "affiliated group." That statute provided that a corporation "entitled to the benefits of §931" did not qualify as an

[48] Between 1973 and 1976, the Ways and Means Committee held extensive hearings on the subject of tax reform. The Committee considered repeal of the possessions corporation exemption on the grounds that its original purpose, to expand U.S. trade with the Philippines and the Far East, was no longer being served as the Philippines had ceased to be a U.S. possession. However, proponents of the exemption argued that the possessions corporation system was "the backbone of Puerto Rico's development." See Public Hearings before the Committee on Ways and Means, House of Representatives, 94th Congress, 1st Session, p 1654. See also Public Hearings before the Committee on Ways and Means, House of Representatives, 93rd Congress, 1st Session, March 30 — April 2, 1973 pp. 4447—4451.

"includible corporation." In years when their §931 subsidiaries ran losses, U.S. companies sought to take advantage of the losses currently, offsetting them against other income subject to taxation, on grounds that the subsidiaries were entitled to no "benefit" in the years they had no income.[49] This gave §931 subsidiaries a best—of—both— worlds quality: parent companies could treat them like a branch in loss years, taking the losses currently, but like a foreign corporation in income years, excluding the income from taxation.

In the Tax Reform Act of 1976, Congress re-iterated its support for the general policy underlying §931[50] At the same time, however, it repealed the exclusion allowed under §931 replacing it with a new tax credit it believed would more appropriately target tax incentives.[51] The amendments made §931 applicable only to individual citizens of the United States. New §936 applies only to domestic corporations meeting the same "80—50 tests" as are applicable under §931. But unlike §931, §936 does not permit an exclusion from income by the §936 company. Instead, it permits the company to credit against its U.S. tax liability the portion of that liability attributable to

[49] The Internal Revenue Service resisted this theory, but in 1971 the Tax Court accepted it.

[50] See H.R. Rep. No. 94-658 at 254 (1975), reprinted in 4 U.S.C.C.A.N. 2897, 3150 (1976) (noting "important role" tax incentives play in attracting investment in possessions). The Senate Finance Committee used almost identical language to describe the reasons for the changes. See S. Rep. No. 94-938 at 277 (1976), reprinted in 4 U.S.C.C.A.N. 2897, 3708 (1976). It was argued that the possessions corporation system of taxation counteracted the minimum wage requirement, the requirement to use U.S. flag ships in transporting goods to the United States, and other Federally imposed requirements, and that through the possessions corporation system could Puerto Rico compete with neighboring countries as a site for U.S. investment. Finally, it was argued that the possessions corporation system cost the Federal government only $200 - $300 million a year in foregone tax collection a number far smaller then the $2 billion Federal expenditure in direct grants and transfer payments to Puerto Rico.

[51] See Joint Committee on Taxation, General Explanation of the Tax Reform Act of 1976 (1976) at 273 (noting reasons for replacing §931 Congress believed that the credit was not succeeding in its goal of generating employment in the possessions. See id. (describing shortcomings of §931. Congress, addressing another concern with §931 overturned a Tax Court opinion that had allowed a possessions corporation that had incurred a loss to include that loss on its consolidated tax return filed with its United States parent corporation. Burke Concrete Accessories, Inc. v. Commissioner of Internal Revenue, 56 T.C. 588 (1971) Congress believed this result was appropriate only in the case of start-up companies. See H.R. Rep. No. 94-658 at 256 (1975), reprinted in 4 U.S.C.C.A.N 2897, 3151 (describing reasons for limiting holding in Burke Concrete).

the favored income.[52] The 1976 amendments are simplistic in comparison to the complexity of the 1996 revisions of §936.[53]

There were only a few differences between §931 and the 1976 version of §936. A domestic corporation electing the application of §936 instead of excluding income may claim a credit against U.S. tax liability in an amount equal to the U.S. taxes imposed on income derived from the active conduct of a trade or business in a U.S. possessions.[54] The credit may also be claimed on certain types of investment income (interest, dividends, and other types of passive income earned on funds invested for use in a possession in which a trade or business is actively conducted) derived from investments in the possession.[55] The amounts of qualified possessions source investment income on which the credit can be claimed must be derived either from investment in a possession or from funds derived in the active conduct of a trade or business in the possession.[56]

A corporation may not claim the §936 credit as well as the foreign tax credit for income already used to qualify the corporation for the possessions credit.[57] A foreign tax credit offsets U.S. taxes only on income ineligible for the §936 credit.

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52 See Tax Reform Act of 1976, Pub. L. No. 94-455 §1051(a) (adding §33(b) to IRC of 1954 allowing §936 credit).

53 Compare I.R.C. §936 (1977) (taking two pages of Code text after enactment of Tax Reform Act of 1976) with I.R.C. §936 (1996) (taking eleven pages of Code text before enactment of Small Business Job Protection Act). The 1996 version also included 8 subsections; 27 paragraphs; 57 subparagraphs; 59 clauses; 46 sub-clauses; and 10 sub-subclauses. See id.

54 See I.R.C. §936(a)(1) (1977) (setting out new terms for credit). The term "possession" is not defined exhaustively; rather, the term "includes" both Puerto Rico and the U.S. Virgin Islands. See id. §936(d)(1) (1977) (defining term "possession").

55 See I.R.C. §936(a)(1) (1977) (including investment income in exemption). The statute refers to this income as "qualified possessions source investment income" (QPSII). Id.

56 See I.R.C. §936(d)(2)(B) (1977) (defining qualifications for credit).

57 See I.R.C. §936(c) (1977) (prohibiting corporations from receiving double credit). A United States taxpayer may generally claim a credit up to certain limits for taxes paid to a foreign taxing jurisdiction. See I.R.C. §901 (explaining foreign credit). In addition, taxes paid to a possession on amounts of income used to calculate the §936 credit cannot be used to generate a deduction for taxes paid under §164(a). See id. (deterring double benefits). The effect of the

A corporation may only claim the credit if 80% of the gross income of the corporation was derived from sources within a U.S. possession during each of the preceding three years (the total income test).[58] In addition, at least 50% of the corporation's gross income had to be "derived from the active conduct of a trade or business" in a possession (the active trade or business test).[59] Special definitions and operational rules apply throughout §936.[60]

A taxpayer must elect the application of §936 the section does not apply automatically.[61] Once elected, however, the election remains in effect until revoked by the taxpayer.[62] The taxpayer must obtain the consent of the Secretary of the Treasury to revoke the credit during the first nine years of the application of the credit.[63] Beginning with the tenth year that the corporation elects the credit, the corporation need not obtain approval of the Secretary to revoke it.[64]

The dividends—received deduction can be claimed, so the parent pays no tax on dividends received from a wholly owned §936 subsidiary. This is true not only for dividends paid out of current earnings, but also for dividends from earnings presumably accumulated while the subsidiary

restriction in I.R.C. §936(c) is to prevent a possessions corporation from avoiding all United States tax on income derived in the possession and then claiming a tax credit against United States taxes on other foreign-source income for taxes paid to the United States possession. See id. (restricting credits to avoid complete avoidance of taxation).

[58] See I.R.C. §936(a)(1)(A) (1977) (placing further restrictions on credit eligibility). The 80% test obviously has its genesis in the Revenue Act of 1921.

[59] See I.R.C. §936(a)(1)(B) (1977) (setting forth further requirements). Thus, a corporation earning significant, i.e., 50% or greater, investment income could not qualify for the credit, since it would fail the "active trade or business" test of subparagraph (B). See id. (defining "active trade or business").

[60] See generally I.R.C. §936(d) (1977)

[61] See I.R.C. §936(a)(1) (1977) (providing that credit only applies "if a domestic corporation elects the application of this section").

[62] See I.R.C. §936(e)(1) (1977).

[63] See I.R.C. §936(e)(2)(A) (1977).

[64] See I.R.C. §936(e)(2)(B) (1977).

qualified under section §931. Because the parent is entitled to the dividends—received deduction, it cannot claim a foreign tax credit for a withholding tax on the dividend.

Finally, the subsidiary must elect the benefits of §936, and that election is irrevocable for 10 years. During this period it cannot join with its parent in filing a consolidated return, although it can delay electing §936 status until profitable years begin.

Overall, the conversion of §931 to §936 provided greater tightening of some of the more egregious loopholes while at the same time creating some additional benefits to US corporations. The benefits to Puerto Rico from this conversion were very limited adjustments in the coordination of the Federal program and the Puerto Rico Industrial Incentive Act. On the one hand, §936 did not allow possessions corporations to avoid Federal taxes on Eurodollar and other foreign income, as did §931. On the other hand, a primary obstacle to paying dividends (and, thus, an inducement to accumulate earnings) was removed by allowing the parent a dividends received deduction. The dividends—received deduction eliminates the need to liquidate a possessions corporation to repatriate earnings free of Federal taxes. Under §931 liquidation was often accompanied by an actual cessation of operations and discharge of workers. The provisions of Puerto Rican law which lead to this practice were ameliorated, but not wholly eliminated, in the reforms of the Industrial Incentive Act.[65]

The 1976 changes also left unaffected the insulation of possessions corporations from most of the anti—abuse provisions applicable to foreign corporations. Thus, companies still need not obtain a ruling from the IRS to secure non-recognition treatment on transfers of appreciated property to a possessions corporation, nor are they subject to an excise tax on such transfers. The owners of such companies, even individuals, are not subject to current tax on their share of the personal holding company or base company income of possessions corporations, even in

[65] See June 1978.

circumstances where similarly situated shareholders would be currently subject to tax on such income if earned by a foreign corporation. Companies still need not treat gain realized on the disposition of shares in possessions corporations as dividend income, even in circumstances where they would have to do so were the corporation involved a foreign corporation. However, the inter-company transaction questions raised under the pre—1976 law continue to be a problem are under the 1976 revisions.

In explaining its motives, Congress cited its desire to leave undisturbed the tax exemption of earnings from a trade or business in Puerto Rico or from investments made with those earnings for use in Puerto Rico. At the same time, Congress desired to end the exemption for passive income from funds invested in foreign capital markets and to hasten their repatriation. Congress stated that it wanted to "assist the U.S. possessions in obtaining employment— producing investments by U.S. corporations, while at the same time encouraging those corporations to bring back to the U.S. the earnings from these investments to the extent they cannot be reinvested productively in the possession.[66]

C. The Tax Equity and Fiscal Responsibility Act of 1982 and the Puerto Rican Possession Corporation

In 1982, Congress acted to end perceived abuses to §936 that arose when taxpayers with substantial amounts of intangible property income elected the application of §936.[67] Congress believed that United States corporations improperly claimed the credit on income derived from

[66] Report of the Committee on Ways and Means, U.S. House of Representatives, on H.R. 10612, Report No. 94—658, November 12, 1975, pg. 255; and Report of the Committee on Finance, United States Senate, on H.R. 10612, Report No. 94—938, June 10, 1976, pg. 279.

[67] See I.R.C. §936(h) (1983) (setting forth statutory mechanism for attribution of intangible property income to U.S. shareholders) and Joint Committee on Taxation, General Explanation of the Revenue Provisions of the Tax Equity and Fiscal responsibility Act of 1982 (TEFRA), December 1982, 81-83.

intangible assets, created outside of a possession, but transferred or licensed to an electing §936 corporation within a U.S. possession.[68] Congress also feared that such use of the credit did little to stimulate the creation of jobs in Puerto Rico.[69]

Under the 1982 amendments, Congress limited the ability of a U.S. corporation to set up a possessions subsidiary with intangible property as the subsidiary's main asset.[70] The 1982 amendments provided that in the absence of an election by the possessions subsidiary, all "intangible property income" of the subsidiary would be allocated from the possessions corporation to the U.S. shareholders of that corporation, thus making the corporation ineligible for the §936 credit with respect to that income.[71] The intangible property income of an electing §936 corporation is defined as income derived by the corporation with respect to intangible property.[72] By definition, intangible property includes patents, inventions, copyrights, trademarks, franchises, and other types of intellectual property.[73] To the extent that an electing §936 corporation has intangible property

[68] See H.R. Rep. No. 97-760, at 505 (1982) reprinted in 2 U.S.C.C.A.N. 1190, 1282 (noting that Congress intended changes to lessen the abuse arising from taxpayers' use of credit).

[69] Id.

[70] See generally Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), Pub. L. No. 97-248, §213(a) (1982) (enacting §936(h).

[71] See I.R.C. §936(h)(1)(A) (1983) (setting forth standard for taxation of income attributable to shareholders regarding intangible property of corporation). The effect of the provision is to deny the credit with respect to any possessions-source income derived from an intangible asset, thus subjecting the income to full United States taxation at both the corporate and shareholder level. See id. Such a drastic result could only be avoided if the possessions corporation makes an election under §936(h)(5) See id. at §936(h)(5)(A).

[72] See I.R.C. §936(h)(3)(A) (1983) (defining intangible property income). The term does not include income derived with respect to property licensed to the corporation prior to 1947, nor does it include income derived on the disposition of such property. See id. at §936(h)(3)(C).

[73] See I.R.C. §936(h)(3)(B), clauses (i) through (vi) (1983) (providing exhaustive list of property). The property must have "substantial value independent of any services of any individual." See id. Thus, Congress intended to provide a wide definition of intangible income. See S. Rep. No. 97-494, 161 (1982), reprinted in 2 U.S.C.C.A.N. 781, 924 (noting provision intended to define term "broadly").

income and fails to make an election under §936(h)(5) that income must be allocated to United States shareholders of the corporation on a pro-rata basis and included in their gross income.[74]

An electing §936 corporation may avoid the harsh rules of current income inclusion to U.S. shareholders by making an election under section 936(h)(5)(c) at some tax cost to the corporation.[75] As a threshold matter, a corporation may make the election only if it has a "substantial business presence" in a possession.[76] The substantial business presence test ensures that a corporation producing a product outside of a possession under a valuable trademark or pursuant to another intangible asset held by a subsidiary within the possession would not qualify for the election, thereby requiring current inclusion in income of U.S. shareholders of amounts derived from the product sales. Congress delayed the effective date of the substantial business presence requirement until 1986.[77] Upon meeting the substantial business presence test, the corporation may make an election and choose one of two methods by which it can be taxed on its intangible property income: either the "cost sharing" method or the "profit split" method.[78] The 1982 amendments made one other minor modification to the operational rules of §936.[79]

[74] See I.R.C. §936(h)(1)(A) (1983) (describing income attributable to shareholders). To the extent that a United States shareholder includes the intangible income in gross income, it is excluded from the gross income of the electing §936 corporation, thus making it ineligible for the credit on that income. See id. at §936(h)(1)(B)

[75] See I.R.C. §936(h)(5) (1983) (specifying manner and requirements of making election).

[76] See I.R.C. §936(h)(5)(B)(i) (1983) (describing requirement of significant business presence). Section 936(h)(5)(B)(i) deems a corporation to have a "substantial business presence" with respect to a product or service if the corporation meets either of two conditions. See id. at §936(h)(5)(B)(ii) The first condition requires that the total production costs of any item produced in the possession must be at least 25% of the difference between the gross receipts derived from the sale of the item to unrelated persons and the direct costs of purchasing materials with respect to the item. See id. at §936(h)(5) B)(ii)(I). The second condition provides that at least 65% of the direct labor costs of producing the item must be incurred by the electing corporation. See id. at §936(h)(5)(B)(ii)(II) and (III).

[77] See I.R.C. §936(h)(5)(B)(iii)(I) (1983).

[78] See I.R.C. §936(h)(5)(C)(i), (ii) (1983) (enacting "cost sharing" method and "profit split" method).

[79] See Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. No. 97-248, §213(a)(1)(A) (1982).

D. The Omnibus Budget Reconciliation Act of 1993 and the Puerto Rican Possessions Corporations

In 1993, Congress enacted a significant limitation on the credit for active business income.[80] Congress enacted these changes because it believed that the existing credit did not successfully stimulate employment, and believed that the credit should be limited to actual amounts expended for those purposes by a possessions corporation.[81]

Under the 1993 amendments, an electing §936 corporation can choose one of two credit calculations.[82] Under the first calculation, called the economic activity limitation, the total amount of the credit that a corporation can claim with respect to active business income cannot exceed a fixed amount determined by reference to the credit claimant's expenditures on wages and equipment.[83] Under the second calculation, a corporation could elect a simplified yet reduced credit called the percentage limitation.[84] A corporation electing the percentage limitation is not subject to the economic activity limitations.[85] Rather, the corporation must claim a reduced credit that would have

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80 See Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, §13227(a)(2), 107 Stat. 312 (1993) (adding paragraph (4) to §936(a).

81 See H.R. Rep. No. 103-111, at 676 (1993), reprinted in 3 U.S.C.C.A.N. 907 (describing limits on credit).

82 See I.R.C. §936(a)(4)(A) and (B) (1994) (outlining guidelines for a §936 corporation).

83 See generally §936(a)(4)(A) (1994) (enacting statutory limitation). The maximum amount of the credit is limited to 60% of the wages and fringe benefits paid to employees of the corporation performing services in the possession, plus allocable fringe benefits. See generally I.R.C. §936(a)(4)(A)(i)(I), (II) (1994) The total amount of wages allowable is limited to 85% of the maximum amount of wages subject to the Social Security payroll tax. See I.R.C. §936(i)(1)(B)(i) In addition, fringe benefits could not exceed 15% of total wages. See I.R.C. §936(i)(2)(A) flush sentence following clause (ii). In addition to these wage related costs, a credit claimant can add to those amounts the sum of various percentages of depreciation deductions allowed on assets used within the possession. See I.R.C. §936(a)(4)(A)(ii) (1994).

84 See I.R.C. §936(a)(4)(B) (1994) (enacting percentage limitation). See also H.R. Rep. No. 103-213, at 627-30 (1993), reprinted in 3 U.S.C.C.A.N. 1088, 1316-19 (describing operation of percentage limitation).

85 See I.R.C. §936(a)(4)(B)(i)(I) (1994) (describing election to claim reduced credit).

declined over time.[86] The amendments required that a corporation electing either the economic activity limitation or the percentage limitation to continue the use of whichever limitation it elected unless the election was revoked.[87]

Three years after the last significant amendments to §936 Congress announced that the current federal budget situation no longer warranted continuation of the credit for the "relatively small number" of taxpayers who claimed it.[88] Thus, as part of the Small Business Job Protection Act, Congress terminated the credit.[89] Although the credit is described as being "terminated," Congress left some temporary incentives for U.S. corporations that currently operate in Puerto Rico to continue to claim it.[90]

The remaining incentives for operation of a possessions corporation in a U.S. possession apply only to "existing credit claimants."[91] An existing credit claimant operating in a possession other than Puerto Rico that elects the economic activity credit may continue to do so through the end of tax year 2001.[92] An existing credit claimant, regardless of whether the claimant is operating in

[86] See matter following I.R.C. §936(a)(4)(B)(ii) (1994) (providing schedule for reduced amount of credit). Under the percentage limitation, the amount of the credit was 60% of the otherwise-allowable credit in 1994; 55% of the otherwise-allowable amount in 1995; 50% of the otherwise allowable amount in 1996; and declining until reaching 40% of the otherwise-allowable credit in 1998. See Table following I.R.C. §936(a)(4)(B)(ii) (1994) (describing percentage phase-out).

[87] See I.R.C. §936(a)(4)(B)(iii)(II) (1994) (stating period of election).

[88] See Small Business Job Protection Act of 1996 H.R. Rep. No. 104-586, at 131 (noting reasons for repeal of the credit).

[89] See I.R.C. §936(j)(1) (1997) (enacting termination of credit generally effective for taxable years after December 31, 1995).

[90] See I.R.C. §936(j)(2) (1997) (providing phase out for existing credit claimants). See also I.R.C. §30A (1997) (containing Puerto Rican Economic Activity Credit).

[91] See I.R.C. §936(j)(2), (3) (1997) and I.R.C. §30A(a)(2)(A) (1997) An "existing credit claimant" is defined as a corporation that was actually conducting operations in a possession on October 13, 1995 and claiming the credit during that taxable year. See I.R.C. §936(j)(9)(A)(i) (1997) An "existing credit claimant" can also be a corporation that acquires the assets of an existing credit claimant. See id. at (ii). A claimant may not, however, claim the credit with respect to a substantial new line of business which began after October 13, 1995. See I.R.C. §936(j)(9)(B) (1997).

[92] See I.R.C. §936(j)(2)(A)(1997) (providing credit will be allowed until taxable years beginning January 1, 2002).

Puerto Rico, who elects the reduced- percentage credit of section 936(a)(4)(A) may continue to do so through the end of taxable year 1997.[93] The credit terminated on December 31, 1995 with respect to corporations operating in Puerto Rico that claimed the economic activity credit.[94]

If an existing credit claimant continues to use the tax credit through 2001 (in the case of non-Puerto Rican corporations electing the economic activity credit) or 1997 (in the case of corporations located in all U.S. possessions that elect the reduced percentage credit), it may continue to claim a further restricted credit through taxable year 2005.[95] This restriction limits the amount of possessions income taken into account for purposes of claiming the credit during the period 2002-2005 (in the case of economic activity claimants) or 1998-2005 (in the case of reduced-percentage claimants).[96] In sum, the 1996 legislation divides the universe of existing credit claimants into two categories, which allow claimants to continue receiving tax subsidies for ten years.[97]

93 See I.R.C. §936(j)(2)(B)(i)(1997) (providing credit will be allowed until taxable years beginning January 1, 1998).

94 See I.R.C. §30A (1997) (containing operational rules for Puerto Rican Economic Activity credit for corporations conducting operations in Puerto Rico).

95 See I.R.C. §936(j)(3)(A)(i) (1997).

96 See I.R.C. §936(j)(3)(A)(ii) (1997) (limiting qualified income to "adjusted base period income"). In general, income taken into account for purposes of claiming the credit is limited to the average possessions income over three of the corporation's five taxable years preceding 1995, excluding the years in which the corporation had its highest and lowest possessions- source income. See I.R.C. §936(j)(5)(A) (1997) Before calculating the average, possessions income in each of the three years is adjusted for both inflation and growth. See I.R.C. §936(j)(4)(C),(D) (1997) Special rules apply if the corporation did not have significant possessions income throughout the five year period. See I.R.C. §936(j)(5)(B)(i) (1997) A corporation may, in lieu of electing the averaging method, choose either its income in taxable years ending in 1992 or its annualized income earned in the first ten months of 1995. See I.R.C. §936(j)(5)(C) (1997).

97 See I.R.C. §936(a)(4)(A) (1997) (describing the two categories). First, a corporation operating in a possession other than Puerto Rico and claiming the economic activity credit would claim the credit under I.R.C. § 936(a)(4)(A) through taxable years before January 1, 2002. See I.R.C. §936(a)(4)(A) (1997) From January 1, 2002 through December 31, 2005, the corporation would claim the credit based on income limited to adjusted base period income. See id. Under the second category, a corporation operating in any possession (including Puerto Rico) and claiming the reduced-percentage credit would claim the credit determined under I.R.C. §936(a)(4)(B) through taxable years before January 1, 1998. See I.R.C. §936(a)(4)(B) (1997) From taxable years beginning in January 1, 1998 through December 31, 2005, the corporation would claim the credit based on income limited to adjusted base period income. See id.

A second tax incentive remains for U.S. corporations operating in Puerto Rico under newly-enacted section 30A of the IRC.[98] Section 30A allows a qualified U.S. corporation to claim a tax credit against income earned from the active conduct of a trade or business in Puerto Rico, or from the sale or exchange of assets used in such a business.[99] Beginning in the year 2002, the amount of income on which a corporation may claim the credit is limited to the corporation's adjusted base period income, determined under the same principles as §936(j)(4).[100] A corporation may claim the credit only if it is an existing credit claimant with respect to Puerto Rico and had not elected the reduced-percentage credit under prior law.[101]

Section 30A carries over from §936 two requirements: that 80% or more of the corporation's gross income be derived from a possession, and that at least 75% of the corporation's income be derived from the active conduct of a trade or business within a possession.[102] The statute imports to section 30A the current rules of §936(a)(4)(A) limiting the credit to the sum of various percentages of wages paid by the corporation and depreciation deductions claimed by the corporation.[103] Finally, the statute applies all of the §936 definitional and operational rules to the

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98 See Small Business Job Protection Act of 1996, supra note 91, at §1601(b) (enacting IRC §30A).

99 See I.R.C. §30A(a)(1)(A)-(B) (1997).

100 I.R.C. §30A(a)(1).

101 See I.R.C. §30A(a)(2)(A)-(B) (listing criteria for "qualified domestic corporation" status). Paragraph (3) of section 30A(a) makes clear that to qualify for the Puerto Rican economic activity credit, the corporation will not be deemed an existing credit claimant unless it was operating in Puerto Rico. See id.

102 See I.R.C. §30A(b)(1)-(2) (1997) The statute refers to income derived in "a possession," even though the credit is clearly only available to existing corporations operating in Puerto Rico. See id. The legislative history of the provision apparently is inconsistent with the statute, which notes that the §30A credit is to be calculated based on "business income from Puerto Rico." H.R. Rep. No. 104-737 at 289. Under the statutory language, a qualified corporation presumably could claim the credit with respect to income not earned in Puerto Rico, even though that was clearly not Congress' intent. See also H.R. Rep. No. 104-586 at 132 (containing identical language).

103 See I.R.C. §30A(d)(1)-(2).

new Puerto Rican economic activity credit.[104] The credit only applies to taxable years beginning after December 31, 1995 and before January 1, 2006.[105]

104 See I.R.C. §30A(e)-(f) (noting § 936 principles and definitions apply under §30A For example, all of the rules relating to intangible income allocation contained in §936(h) remain applicable to corporations claiming the credit under §30A See I.R.C. §30A(e)(1) (applying §936 principles to §30A.

105 See I.R.C. §30A(g).

IV. THE CONTROLLED FOREIGN CORPORATION (CFC)

In addition to the general complication of Puerto Rico and the 'possession' status under §936, the reality of international business transactions is the more complicated by other tax rules which make it significantly easier for multinationals to design their operations in a manner that some critics argue is an abuse of their tax regimes. While non-tax factors play the primary role in the location of manufacturing facilities,[106] many aspects of a multinational's activities are not location-specific. Many countries and geographic entities such as Puerto Rico offer special tax regimes in order to attract foreign investment in manufacturing. Yet for low-margin goods the combination of lower real tax rates combined with higher wages and lower worker productivity does not lead to greater employment. The future for Puerto Rico appears to be in the geographically mobile activities which require a higher level of human capital. These activities include for example, head offices, distribution centers, R&D centers and financial service centers, including holding companies, offshore banking facilities and captive insurance companies.[107]

The existence of these capital flows from the United States to Puerto Rico not falling under §936 of the IRC, bumps up against the principals of the US tax code – e.g. tax deferral or tax avoidance. The general principal of US tax law is that a US person that conducts business or invests abroad directly is taxed by the US on the foreign income subject to a foreign tax credit under §901 for foreign taxes imposed on such income. By contrast, a US person who conducts business or invests abroad through a foreign corporation generally pays no US income taxes on the foreign

[106] See for example, OECD, *Taxing Profits in a Global Economy. Domestic and International Issues* (Paris: OECD) 1991, p.21; Ruding Committee, *Report of the Committee of International Experts on Company Taxation*. (Luxembourg: OOPEC), 1992, Table 5.5 at p. 114.

[107] With the appreciation of the peso in Mexico and the shifting of low-margin jobs to Asia, many of the border region development agencies are beginning to focus on just such companies with more sophisticated technology needs that can tap into the local supply of human capital.

corporation's foreign earnings unless and until such earnings are distributed to the US person or the US person sells the foreign corporation's stock.

In the jargon of international taxation, the foreign corporation's foreign earnings enjoy "deferral" of US taxes until they are repatriated to the United States by distribution or otherwise. Given the time value of money, this deferral of the US tax may produce significant tax savings for the US person and substantially reduce the ***effective*** rate of US tax on the US person's share of the foreign corporation's earnings. Furthermore, this deferral principle violates the capital-export neutrality standard because the US person operating through a foreign corporation abroad in a low-tax country paying less overall (US and foreign) current tax than a US person conducting a business or investing either in the United States or abroad directly through a branch.

To deal with the perceived abuses arising from the misuse of this deferral principle, Congress has over the years created four sets of complex and somewhat overlapping anti-deferral regimes directed at U.S. persons earning income through foreign corporations. These anti-deferral regimes represent exceptions to what remains of the general rule of deferral: (1) the foreign personal holding company provisions (§§ 551—558); (2) the controlled foreign corporation rules of Subpart F (§§ 95 1—964) and the related provisions in §§ 1248 and 1249; (3) the rules for foreign investment companies (§1246) and electing foreign investment companies (§ 1247); and (4) the passive foreign investment company provisions (§§ 1291—1297). In addition, two penalty tax regimes of general application may also apply to foreign corporations: the accumulated earnings tax (§§ 531—537) and the personal holding company tax (§§ 541—547).

The first regime specifically aimed at limiting deferral by U.S. persons earning income through foreign corporations was the foreign personal holding company provisions (§§ 551 through 558). These provisions were enacted in 1937 to prevent the avoidance of U.S. income tax by a concentrated group of U.S. individuals through channeling passive investment income and certain other income into a foreign corporation (sometimes referred to as an "incorporated pocketbook"), typically established in a "tax haven" foreign country. They also were intended to prevent U.S. taxpayers from converting ordinary investment income into capital gain by accumulating investment income in a foreign corporation and then selling the stock of or liquidating the corporation.[108] The approach taken to deal with these abuses was to impose constructive dividend treatment on the U.S. persons owning stock in a foreign personal holding company. Accordingly, every U.S. person that owns stock in the foreign personal holding company, no matter how small the stock interest, must include in gross income its pro rata share of the company's undistributed income, thus eliminating the benefits of deferral for such shareholders. A foreign personal holding company is defined with reference to both a stock ownership test (more than 50 percent of the vote or value of the foreign corporation's stock is owned by five or fewer U.S. individuals) and a gross income test (a specified percentage, either 60 or 50 percent, of the corporation's gross income consists of passive investment income and certain other types of income).

The use of foreign base companies by U.S. corporations enjoyed a surge of popularity in the years from 1950 to 1962. Generally, the primary purpose for establishing such companies was the desire to minimize the overall (foreign and U.S.) tax burden on the income generated by international business operations. Important tax savings were achieved by U.S. corporations through the use of foreign base companies to perform a variety of roles, including, for example:

(1) holding stock in foreign operating subsidiaries;
(2) serving as licensor or lessor to independent or affiliated foreign licensees or lessees;
(3) handling export sales from, or import purchases into, the United States and other countries;
(4) supplying technical, managerial or other services to independent or affiliated foreign companies;
(5) financing foreign operations through loans; and
(6) conducting insurance and reinsurance operations.

[108] See H.R. Rep. No. 1546, 75th Cong., 1st Sess. 15—16 (1937).

Typically, the foreign base company was a wholly owned subsidiary of the U.S. parent corporation and was organized in a tax haven country, such as Switzerland, Bermuda, Panama, the Bahamas or Liberia. In such countries, foreign-source corporate income and accumulated profits were subject to little or no tax. Furthermore, because before enactment of Subpart F in 1962, the foreign-source income of a foreign corporation could not generally be taxed in the United States, the income received by a foreign base company (from foreign sources) was not subject to U.S. tax unless and until it was remitted, as dividends or otherwise, to the U.S. parent corporation. Thus, the accumulated earnings of foreign base companies enjoyed deferral of the U.S. corporate tax. The difference between the foreign tax burden borne by the foreign base company and the then U.S. corporate tax rate of as high as 52 percent represented a tax saving which increased the pool of funds available to the base company that could be reinvested outside the United States. The tax saving through deferral of the U.S. tax was tantamount to an *interest-free loan* from the U.S. Treasury to the U.S. parent corporation (or to its foreign base company).

In 1961, the Kennedy Administration proposed a complete end of deferral of U.S. tax on the income of foreign corporations controlled by U.S. persons, except with respect to certain income from investments in underdeveloped countries. The basic concern of the Administration was expressed in President John F. Kennedy's 1961 Tax Message to Congress.[109]

Proponents of the Kennedy Administration's proposal invoked the capital-export neutrality standard and argued that eliminating deferral would remove an unwarranted incentive in the tax system for U.S. persons to move their business activities and investments to foreign countries (particularly tax haven countries). Opponents of ending or reducing deferral invoked the capital-import neutrality standard and argued that retaining deferral was necessary in order to enable U.S.

[109] President John F. Kennedy's 1961 Tax Message to Congress, at 107 Cong.Rec. 6458 (1961):

multinational corporations to compete effectively with their foreign competitors in the international business arena.

As a compromise between these competing arguments, Congress enacted the Subpart F provisions in 1962. These provisions use the constructive dividend technique previously used in the foreign personal holding company provisions with respect to foreign corporations controlled by U.S. persons. A controlled foreign corporation was defined solely with reference to a stock ownership test, which required that more than 50 percent of the corporation's voting power (under current law, voting power or value) be owned by U.S. shareholders. However, under Subpart F, only U.S. persons holding a ten- percent-or-greater interest in the foreign corporation's voting power count in determining whether the foreign corporation is a controlled foreign corporation and only such shareholders are subject to constructive dividend treatment. Moreover, such constructive dividend treatment applies only with respect to certain categories of the foreign corporation's undistributed foreign- source income, generally income that is both relatively movable from one taxing jurisdiction to another and subject to low foreign tax rates.

The controlled foreign corporation and foreign personal holding company provisions did not eliminate all possibilities for accumulating passive income in a tax haven corporation. For example, a publicly owned foreign investment company would normally not meet the definition of controlled foreign corporation (because there are no ten-percent U.S. shareholders) or the definition of foreign personal holding company (because five or fewer U.S. individuals would not control it). Congress was concerned that U.S. persons owning shares of a widely held foreign investment company could allow passive income of the foreign investment company to accumulate, thereby avoiding current dividend taxation, and eventually sell their shares at the favorable rates applicable to long-term capital gain. Accordingly, in 1962, in the same tax act containing the Subpart F provisions, Congress enacted the foreign investment company provisions of §1246. These provisions treat gain from the sale of shares in a foreign investment company, of which U.S. persons own 50 percent or more of the voting power or value of the stock, as ordinary income rather than capital gain. In 1962, Congress also enacted §1247, which permitted a foreign investment company to avoid application of §1246 by electing, before 1963, to have its shareholders taxed on their shares of the current ordinary income and capital gains of the company substantially like shareholders in a domestic regulated investment company.

In the case of a U.S. person owning a small interest in a widely held "offshore" investment company not controlled by U.S. persons, the controlled foreign corporation, foreign personal holding company and foreign investment company rules did not prevent the accumulation of income of the foreign investment company in a tax haven free of tax. The passive foreign investment company (PFIC) provisions were enacted as part of the Tax Reform Act of 1986 to close this loophole. In these provisions, a different technique for eliminating the benefits of deferral was adopted. Instead of treating the U.S. shareholder as having received a share of the undistributed income of the foreign investment company for the tax year as a constructive dividend, the PFIC provisions eliminate the economic benefit of deferral by imposing additional U.S. tax when the U.S. person owning stock in the PFIC disposes of the PFIC stock at a gain or receives an unusually large distribution from the PFIC. That is, when a U.S. person disposes of stock in a PFIC at a gain or receives a so-called "excess distribution" from a PFIC, the U.S. tax imposed at that time is increased by an interest charge based on the value of the tax deferral. This treatment generally applies to any U.S. person who is a shareholder in a PFIC, however small the interest. Alternatively, a U.S. person owning stock in a PFIC can elect to pay current U.S. tax on the PFIC's earnings under so-called "qualified electing fund" rules. §1293(a). The PFIC provisions were aimed at ending deferral on income earned by a U.S. person through a foreign corporation whose income consists largely of passive investment income or whose assets are predominantly passive investment assets. Thus, a

PFIC is defined as any foreign corporation if at least 75 percent of its gross income is passive income or if at least an average of 50 percent of its assets (by value or, in certain cases, by adjusted basis) produce passive income. § 1296(a). Unlike the other anti-deferral regimes, the PFIC provisions do not contain any stock ownership test that focuses on the percentage of stock owned by U.S. persons; thus, the PFIC provisions may apply to a foreign corporation in which U.S. persons own in total only a small percentage of the outstanding stock. Note that although the PFIC provisions were aimed particularly at U.S. persons holding stock in offshore investment funds, they may apply to U.S. persons holding stock in any foreign corporation, even one engaged in an active foreign business such as manufacturing, for any tax year in which the corporation derives enough passive income or owns enough passive assets to meet the definition of a PFIC.

As the above suggests, each of the four principal anti-deferral regimes has its own rules concerning the definition of the foreign corporations that fall within its scope, the types of income of the foreign corporation as to which the benefits of deferral are eliminated or reduced, the mechanism used to eliminate or reduce the benefits of deferral and whether a U.S. person must own some specified minimum percentage of stock (e.g., ten percent) to trigger the anti-deferral mechanism. The same foreign corporation may fall within the scope of more than one of these anti-deferral regimes. To deal with this overlap, the Code contains provisions that coordinate the application of these regimes.

The United States was the first country to attempt to use specifically targeted legislative provisions to deal with tax haven abuses arising from the deferral principle. Initially, the U.S. efforts to narrow the deferral principle were criticized by some European commentators as representing an unreason able extension of U.S. taxing jurisdiction that in substance, if not in form, conflicted with the principle, embodied in the vast majority of international income tax treaties, that the separate legal existence of a foreign corporation must be respected. In time, however, other industrialized countries found it necessary to follow the lead of the United States.

Under the original version of Section 957(a) enacted in 1962, a "controlled foreign corporation" (CFC) was defined as a foreign corporation of which more than 50 percent of the total combined voting power of all classes of stock entitled to vote was owned, directly, indirectly or constructively under §958 ownership rules, by "US shareholders" on any day during the foreign corporation's tax year. The Tax Reform Act of 1986 modified the definition of a CFC (§957(a)) by including as a foreign corporation if more than 50 percent of either the value of all of the outstanding stock or the total combined voting power is owned by US shareholders.[110]

According to the IRS, in 1996, the 7,500 largest active foreign corporations (CFC's) controlled by large U.S. multinational corporations held $2.7 trillion in assets, a 35.4 percent increase from 1994. These 7,500 largest CFC's generated $1.7 trillion in receipts and $141 billion in "earnings and profits" before taxes, an increase of 24.6 percent and 44 percent, respectively, from 1992.

With the phasing out of §936, multinational companies started to take advantage of the CFC umbrella. By 2002, most major Puerto Rican corporation eligible for §936 have converted to CFC status. In the past 12 months, the number of companies converting all or part of their local operations to controlled foreign corporation (CFC) status under Internal Revenue Code IRC Section 901 totaled 80, a 19% increase from the number registered a year earlier.[111]

[110] The test of CFC status is applied to a foreign corporation on a year-by-year basis. Thus, a foreign corporation may be a CFC in some tax years and not in others.

[111] In the past 20 months these companies were among the list that filed to convert their status from §936 to CFC (in part or whole). Alloyd Co.; Amgen Manufacturing Ltd./Amgen Puerto Rico Inc./Amgen Caribe Corp.; Amgen Inc./Amgen Technology Ltd.; Bard Puerto Rico; Beckton Dickinson Caribe Ltd.; Commonwealth Battery Development Inc.; Commonwealth Oil Refining Co.; Dean Steel Building P.R. Inc.; Dis-Pach Transportation Puerto Rico Inc.; EBI Patient Care Inc.; Kimberly-Clark Int'l. S.A.; Medical & Vaccine Products Inc.; and MSL de Puerto Rico Inc.

Table 5, below, presents some financial data on CFC activity in Puerto Rico. The full set of published data covers the period 1988 to 1996. The most important factor to point out is the limited degree of repatriation of capital back to the mainland. It should be noted that total distributions as a percent of total average assets declined from 1.72 percent in 1992 to 0.14 percent in 1996. Similarly total distributions as a percent of total receipts declined from 5.7 percent in 1992 to 0.42 percent in 1996. One can infer from the partial data we have for 1988 that these figures would be in the 2 to 6 percent range, respectively.[112]

The Joint Committee on Taxation estimated that the total loss of revenue associated with the deferral of income of CFCs would amount to 7.2 billion dollars for the period from 1999 through 2003.[113] These losses reflect the present value of the loss from the deferral of the taxes. To get a sense of the tax revenue losses in the case of Puerto Rico we begin with the 1999 tax payments of 431 million dollars made by 10 out of the existing 45 CFC to the local Puerto Rican tax authorities. The current "Flat Income Tax on Industrial Development Income" which is applicable to CFCs in Puerto Rico is 7%.[114] Based on this figure we can calculate the total taxable income of the CFCs in Puerto Rico in 1999 to be 6.15 billion dollars (0.431 divided by 0.07). If that income would has been subject to current US corporate tax at the rate of 35%, the CFCs would have paid 2.15 billion dollars of taxes instead of 0.431 billion (which were actually paid in Puerto Rico). Therefore, in 1999, a total of 1.72 billion dollars of tax revenues were deferred.

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112 This is consistent with the findings of Hines James, "Credit and Deferral as International Investment Incentives," *NBER working paper* 4191. He notes that in cases of CFCs in low-tax countries (such as Puerto Rico), the amount of repatriated income is lower than that of CFCs in higher-tax countries. His study points out that, when a CFC operates in a low-tax country, less than 20% of the foreign income is repatriated to the US parent.

113 Joint Committee on Taxation, *Description and Analysis Of Present Law Rules Relating To International Taxation,* JCX-40-99, June 28, 1999.

114 Title 13 P.R. LAWS ANN. § 256, 1999

As we see from the data in Table 5 a very small portion of earnings are repatriated from Puerto Rico. Consequently, the 1.72 billion dollars on potential tax collection in 1999 must be adjusted to reflect the present value of that amount when it is repatriated at some future date. In order to see how this loss can range over time and discount rate, we first assume that between 1999 and 2003 there will be a loss in tax revenue of 1.72 billion dollars growing at a constant 10 percent. If the deferral lasts 5 years for each of those amounts the present value of the lost tax revenue at a 5 percent discount would amount to 1.68 billion. If the deferral were to last 10 years the loss would be 3.37 billion.[115] Given the conventional wisdom that the deferral is a long-term event the opportunity cost of this lost tax revenue will be greater then the simulated 3.37 billion. If we shift the discount factor, the loss would increase even more. As §936 firms complete the process of re-constituting themselves as CFCs we should observe a continued accumulation of earnings in Puerto Rico and much greater revenue losses to the U.S. Treasury.

Under the assumption that these corporations are normal 'rent seekers' the affected CFCs would oppose any attempt to increase their tax exposure once the funds are accumulated. The proposed legislation to modify CFCs under HR 2550, which is the topic of the next section, represents such a corporate response to the growing capital overhang awaiting the maximum 35% corporate tax in the United States.

[115] The calculations are shown in the accompanying table.

	1999	2000	2001	2002	2003	Total
Deferred tax	1.72	1.89	2.08	2.29	2.52	10.50
5 years, 5%	$0.28	0.3	0.33	0.37	0.4	1.68
10 yeas, 5%	0.55	0.61	0.67	0.73	0.81	3.37

Table 5
U.S. Corporations with Total Assets of $500 Million or More and their 7,500 Largest Controlled Foreign Corporations
Country of Incorporation, Puerto Rico
($ Thousand)

	1988	1992	1994	1996
Number of US Corporation Returns	38	28	23	25
Number of Foreign Corporations	69	34	30	31
Total Assets - Beginning of Year	$6,481,722	$4,783,533	$5,390,389	$7,491,506
Total Assets - End of Year		$5,023,633	$5,720,617	$10,674,721
Total Assets - Average		$4,971,629	$5,555,503	$9,488,644
Total Receipts	$3,170,175	$1,504,722	$1,945,315	$3,103,576
Current Earnings & Profits before tax	$236,589	$149,242	$153,379	$255,460
Income Taxes	$63,153	$45,794	$45,999	$69,679
Foreign Corporation Current Earnings & Profits before tax	$252,5894	$157,514	$176,297	$267,063
Income Taxes	$63,153	$45,794	$45,999	$68,830
Total Distributions out of E & P		$85,736	$60,272	$13,084
Current Year E & P	$47,537	$17,265	$28,852	$12,000
Accumulated E & P		$68,471	$17,593	
Total Distributions as a % of				
Total average assets		1.72	1.08	0.14
Total receipts		5.70	3.10	0.42
Dividends Paid to Controlling US Corporation		$85,736		$12,000
Total Subpart F Income	$14,198	$64.285	$53,614	$75,499
Receipts by Foreign Corporation from				
All Sources				$3,103,576
Total, all related parties	$155,562			$209,165
US Corporation filling return	$151,274			$74,517
Domestic corporation by US Corporation filling return				$129,977
Any foreign corporation controlled by US corporation filling return	$4,288			$4,671
Unrelated parties				$2,894,410
Payments by Foreign Corporation to				
All Recipients				$2,872,203
Total, all related parties	$356,217			$696,193
US Corporation filling return	$344,996			$243,216
Domestic corporation by US Corporation filling return				$441,404
Any foreign corporation controlled by US corporation filling return	$11,221			$11,573
Unrelated parties				$2,176,010

Source: IRS, Statistics of Income Bulletin, various years.

V. CONTINUING CONGRESSIONAL INTERVENTION - HR 2550 - THE ECONOMIC REVITALIZATION TAX CUT ACT OF 2001

For the last 30 years neither §936 status nor the various Industrial Incentive Acts have had little if any downstream impact on the Puerto Rico economy. They have, however, created certain vested interests both in Puerto Rico and in the United States in continuing the state of corporate welfare with an illusory promise of future improved economic growth. This dependency on external capital as the driver of its economic growth has forced various Puerto Rican administrations to continuously focus on maintaining the distortionary tax programs under the corporate threat of capital flight rather then focusing on the fundamental problem of Puerto Rican economic development.[116]

The latest attempt to provide a welfare program to US corporations and to continue to preserve the advantages of §936 to a limited set of US corporate interest is contained in both the US House of Representatives (HR2550) and in its Senate (S1475)[117] counterpart. Both bills are considering amending the Internal Revenue Code (IRC) by providing special tax treatment for US-based companies operating in Puerto Rico and US possessions. The bills would apply only to CFC's that are incorporated or doing business in Puerto Rico and the possessions, but not to CFCs in other countries.[118] The bills have three major provisions that would:

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[116] If Puerto Rico's economy did not materially improve its growth as a result of the various capital market distortions, then who were the beneficiaries of these distortions? The answer appears to be multinational firms that took advantage of the "possessions" exception under §936. Now that §936 is being phased out, the same business interests that argued for its permanent existence have shifted their focus on the use of controlled foreign corporations (CFCs) and have attempted to subvert this exclusion in the IRC for multinationals doing business exclusively in Puerto Rico.

[117] There are several differences between the two bills, but none that alter the substance of the provisions.

[118] The bills permit corporations to elect annually such tax treatment and would apply to existing possessions corporations as well as newly established CFC.

a) Exclude from worldwide income otherwise taxable income
b) Provide generous transition rules for the transfer of intangibles
c) Allow interest-free loans between the CFC and the domestic operations

Under HR 2550, a CFC operating in the possession may exclude from income tax 90 percent of otherwise taxable qualified income. Qualified income is defined as income generated in active business operations or in the sale or exchange of substantially all assets used in the business.[119] To facilitate existing Puerto Rican firms to elect CFC status HR 2550 includes a generous transition rule designed to facilitate the transfer of intangible assets. The current tax regulations covering CFCs include super royalty provisions in the transfer pricing rules which impose a tax on the royalty value of the intangible. Under HR 2550, possessions corporations electing CFC status would be permitted to transfer intangibles without paying this tax. In addition to the generous tax benefits, HR 2550 allows interest-free loans between the newly created CFC and its US corporate owner. The CFC may loan to the US corporation from its qualified income without paying taxes on the interest income.

The economic impact of HR 2550 along with CFCs, in general, is discussed in detail in the next section. For now, we only present the obvious anecdotal facts. First, existing Puerto Rican corporations converting to CFC status could take advantage of existing tax benefits afforded to CFC's under the tax code as well as new tax benefits afforded under HR 2550.[120] Second, newly created Puerto Rican CFC's could exclude from tax up to 90 percent of qualified income. Thus, in 1999, based on the estimates presented above, the U.S. Treasury would have lost $1.5 billion in taxes on the income of US CFCs in Puerto Rico, for additional $500 million to $1.1 billion loss over the

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[119] Alternatively, the CFC may elect an 85 percent deduction for dividends received for such dividends paid from qualified income.

[120] The existing tax benefits available to all CFCs include: use of foreign tax credits; indefinite deferral of certain income accumulated in CFC's; and aggressive transfer pricing rules.

loss from a deferral. This proposed bill is equivalent to reconstituting §936 provisions Puerto Rican possession corporations.[121]

Third, the generous transition rules as applied to the transfer of intangibles could result in a sizeable transfer of intangibles to the Puerto Rican CFCs thus avoiding Federal income taxes on such transfers. It is estimated that US corporations currently hold $1.4 trillion in intangible assets. While it is unclear what percentage are attributable to US corporations doing business in Puerto Rico, some anecdotal predictions are that a further $1 to $2 billion in tax revenue would be lost due to these generous transition rules.

Finally, the ability for these CFCs to provide interest-free loans to their domestic counterparts would provide an additional opportunity to shelter accumulated earnings from income. Much of the later discussion on the role of CFCs in distorting investment flows rests on their ability to cloud the inter-firm transactions. The existence of these loan provisions would most likely result in a loss in tax revenue in the billions of dollars.

Overall HR 2550 would alter deferral of federal taxation to a 90% exemption. As § 936 firms in Puerto Rico complete their conversion to CFC status § 956 of the IRC this proposed bill would effectively restore § 936 incentives by exempting U.S. CFCs in Puerto Rico from federal taxation on 90% of profits generated in Puerto Rico and reinvested in the U.S. in an undefined category, "property." Moreover, while CFCs under current law, would eventually have to face federal tax on their income in Puerto Rico, under this proposal, the U.S. Treasury relinquishes even these deferred taxes.

Section 956 with the amendments contained in HR 2550, would be as ineffective in creating jobs and increasing wages, and heavily burdensome to the U.S. taxpayer as was the original §936

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121 . This is comparable to the generous provisions of §936 (30A) which is designed to be phased out in 2006. See discussion above on §936.

exclusion. More insidiously, §956 as amended, would represent a lucrative corporate welfare program disguised as an economic development program for Puerto Rico. Furthermore, the loss of revenue to the U.S. Treasury would be enormous. When all the § 936 firms in Puerto Rico switch to CFCs the loss using 1999 income data, would range from $3.5 to $4.0 billion. Under current legislation the Joint Committee on Taxation[122] estimated that the total loss of revenue from the deferral of income of U.S. CFCs worldwide would amount to an average of $1.45 billion per year or $7.2 billion for the period from 1999 to 2003.

The Puerto Rican economy has not declined with the phase-out of § 936. As the next section of the report will stress, since Congress voted to phase out § 936 in 1996, employment in Puerto Rico has increased and the economy has grown. Manufacturing jobs have declined, but at the same pace as in the mainland U.S. Economic performance during the phase-out negates the held assumption that Puerto Rico is, and has been, dependent on federal tax incentives.

A return to a questionable development program designed to bring back manufacturing tax incentives will not help the people and economy of Puerto Rico. In fact, this tax credit is linked strictly to corporate income and *not* to jobs created in Puerto Rico, or physical investment in Puerto Rico. The primary corporate beneficiary would be the pharmaceutical industry which was the original and major beneficiary of §936 status. As we noted above, with trade liberalization and intense global competition, manufacturing tax distortions have long since proved ineffective tools for development in Puerto Rico.

[122] See U.S. Joint Committee on Taxation, JCX-40-99, *Description and Analysis of Present Law Rules for International Taxation,* June 28, 1999.

VI. THE PUERTO RICAN IMPORTED CAPITAL DEPENDENCY MODEL OF ECONOMIC DEVELOPMENT AND THE MACRO OUTCOME DATA

Before beginning a detailed econometric analysis of the impact of the various tax holidays it is appropriate to first review some of the aggregate performance data on Puerto Rico. Keeping in mind that the fundamental Puerto Rican development model was based on imported capital we need to focus first on the size of capital infusion from outside the Commonwealth as opposed to internal savings. Once having done that we look at the overall growth of the economy in real and in nominal terms, as well as by major sectors. Finally, we focus on the employment outcome.

Table 6 presents the official Puerto Rican figures for local fixed investments in current dollars as well as constant 1954 dollars in comparison to the annual change in the imported capital inflow segmented between short and long-term. First, gross fixed investment doubled between 1991 and 2000 both in real and nominal terms. Second, and more importantly, the change in external investment in Puerto Rico has been positive in the 1990s with a big upswing in the post 1996 period when §936 was being phased out. The data contradicts those who said that with the removal of §936 there would be a reduction in net inflows and an expansion in outflows.

Table 6
Gross Fixed Domestic Investment and Net Change in External Investment in Puerto Rico

	Current Dollars	Constant 1954 Dollars	Average Annual Growth Constant Series	Net Change in External Investment		
				Total	Long	Short
1991	5,006.2	958.6		(552.7)	420.3	(973.0)
1992	5,042.2	947.0	-0.012	2,135.5	1,802.6	332.9
1993	5,552.2	1,026.0	0.083	564.3	474.7	89.6
1994	5,882.7	1,051.1	0.024	2,502.4	860.4	1,642.1
1995	6,558.9	1,157.7	0.101	654.3	353.4	300.9
1996	7,589.9	1,284.8	0.110	2,140.2	3,039.4	(899.2)
1997	8,528.7	1,440.7	0.121	1,310.4	806.4	503.9
1998	9,262.5	1,517.9	0.054	7,254.7	2,811.9	4,442.7
1999	11,572.5	1,901.3	0.253	5,243.7	1,233.5	4,010.2
2000	12,213.4	1,972.7	0.038	2,311.5	370.3	1,941.2

Source: Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis

To get a regional perspective on the flow of investments, we compare the gross fixed capital formation as a share of GNP for Puerto Rico, and as a share of GDP for Costa Rica, Dominican Republic and Mexico in the 1990s. Despite the pronouncement that in the post §936 phase out fixed capital formation would decline both in absolute and relative terms the data points to the opposite result. In is noteworthy that gross fixed investment in Puerto Rico does not lag behind that of its other Caribbean and Latin comparison group.

Table 7
Gross Fixed Capital Formation As A Percent Of Gross Product

	Costa Rica	Dominican Republic	Mexico	Puerto Rico
1991	18	21.6	18.7	21.9
1992	19.7	22.5	19.6	21.2
1993	20.4	26.4	18.6	22.1
1994	19.5	21.1	19.4	22.1
1995	19.3	19.2	16.2	23.1
1996	17.5	18.7	17.9	25.0
1997	18.5	19.5	19.5	26.3
1998	21	23.1	20.9	26.3
1999	19.8	24.8	21	30.2
2000				29.5

World Bank, World Development Indicators and Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis

Despite the growth in fixed domestic investment a weakness in the Puerto Rican economy can be seen from the data in Table 8 which outlines the sector distribution of those investment dollars. The obvious shortfall is these expenditure figures is the smallness of the expenditures on the infrastructure necessary for the 21st century, e.g. technology and education. While it is true that one can purchase all the new technology from the outside market, the largest multiplier effect on the local economy comes from home grown R&D shops and their upstream & downstream multiplier effects. Given the Puerto Rican comparative advantage does not step from cheap labor and thus not from manufacturing, the human capital area is the appropriate place to invest.[123]

[123] An example of this conclusion comes from the transition experience of the East European economies. Unlike the developing economies, the shortfall in banking services has led to a major buy-out of EE banks by multinational banks. This is a first in history and demonstrates the fact that a shortage of banking services in EE generated a market response that broke past barriers. In the case of Puerto Rico, cheap labor is not the answer for the coming century. Likewise manufacturing is not the answer. Tourism may buy a partial solution, but the largest impact will arise from a policy dependant on human capital investment.

Table 8
Distribution Of Gross Fixed Domestic Investment
(In millions of dollars)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000p
TOTAL	5,006.2	5,042.2	5,552.2	5,882.7	6,558.9	7,589.9	8,528.7	9,262.5	11,572.5	12,213.4
Construction (1)	2,633.2	2,644.3	2,827.4	2,942.4	3,255.4	4,095.1	4,689.8	5,355.4	6,551.4	7,030.5
Housing	754.2	586.1	639.8	773.7	859.9	1,066.5	1,242.4	1,459.2	2,089.7	1,980.9
Private	620.5	509.6	537.0	642.3	743.0	956.8	1,106.3	1,341.5	1,901.7	1,826.5
Public	133.7	76.5	102.8	131.4	116.9	109.7	136.1	117.7	188.0	154.4
Industrial and commercial										
buildings (2)	1,474.2	1,547.8	1,630.4	1,680.9	1,835.1	2,243.0	2,439.6	2,577.1	3,149.4	3,709.3
Private enterprises	549.7	604.6	725.2	782.5	801.2	863.2	867.7	1,144.2	1,584.5	2,320.3
Public enterprises	924.5	943.3	905.2	898.4	1,033.9	1,379.8	1,571.9	1,432.9	1,565.0	1,388.9
Roads, schools, and other										
public works	404.8	510.3	557.2	487.8	560.4	785.6	1,007.8	1,319.2	1,312.3	1,340.4
Commonwealth government	296.4	356.6	391.7	326.1	362.2	566.8	766.0	1,060.2	990.0	1,000.9
Municipal governments	108.4	153.7	165.5	161.7	198.2	218.8	241.8	259.0	322.3	339.5
Machinery and equipment	2,373.0	2,397.9	2,724.9	2,940.3	3,303.5	3,494.8	3,838.9	3,907.1	5,021.1	5,182.9
Private enterprises	2,212.3	2,221.8	2,548.3	2,775.1	3,094.8	3,259.3	3,604.5	3,712.7	4,782.3	4,906.4
Public enterprises (3)	77.4	90.3	73.6	51.6	68.9	95.1	89.6	57.3	80.4	96.6
Government (4)	83.3	85.9	103.1	113.7	139.8	140.4	144.8	137.1	158.4	179.9

p- Preliminary figures.
(1) Does not include investments by the Puerto Rico Maritime Shipping Authority
(2) Includes electric and telephone installations, aqueducts and sewers, and refineries.
(3) Includes investments by the Puerto Rico Maritime Shipping Authority
(4) Includes Commonwealth government and municipalities..

Source: Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis.

To get a better sense of Puerto Rico's position in the hemisphere we present a comparison of the sector distribution measured as shares of GNP for Puerto Rico and its Caribbean and Latin American comparison group, which are presented as shares of GDP. [124] Table 9 presents the comparison for agriculture, reinforcing that sectors declining role in the region. The once powerful sugar industry is a part of the pre-industrialization stage of Puerto Rico. Table 10 presents the comparison for the broad division called industry, which sets Puerto Rico apart from its comparison group. A comparison of the relative size of the manufacturing sector is presented in Table 11. Within manufacturing approximately 40 percent of the activity is in the pharmaceutical industry which is the primary beneficiary of §936 and CFC status. Electrical and non-electrical machinery are the second key components within manufacturing also benefiting from §936 and CFC status. In services we present in Table 12 Puerto Rico's service sector decomposed into three broad groups, banking, trade, business, personal and tourist services. A comparison with the other countries was not possible because of varying definitions of services. It should be no surprise that Puerto Rico's service sector is sizeable and well developed.

[124] These data originate from two sources so one should be cautious in leaping to overbroad conclusions.

Table 9
Agriculture, Value Added
(Percent of Gross Product)

	Costa Rica	Dominican Republic	Mexico	Puerto Rico
		.	.	.
1965	26	23	14	
1966	26	22	13	5
1967	26	20	12	.
1968	26	20	11	.
1969	26	21	11	4
1970	25	23	13	3
1971	23	22	13	3
1972	21	21	12	3
1973	21	22	12	3
1974	21	22	12	4
1975	23	21	12	3
1976	23	19	11	3
1977	25	20	11	3
1978	24	19	11	3
1979	21	19	10	3
1980	20	20	9	3
1981	26	19	9	2
1982	28	18	8	2
1983	26	17	8	2
1984	25	19	9	2
1985	22	13	10	2
1986	24	17	10	2
1987	20	12	10	2
1988	20	16	8	2
1989	20	14	8	2
1990	18	13	8	2
1991	14	14	8	2
1992	13	14	7	1.7
1993	13	13	6	1.6
1994	14	13	6	1.3
1995	14	13	5	1
1996	13	13	6	1
1997	13	12	6	1
1998	13	12	5	1
1999	11	11	5	1
2000				1

World Bank, World Development Indicators and Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis.

Table 10
Industry, Value Added
(Percent of Gross Product)

	Costa Rica	Dominican Republic	Mexico	Puerto Rico
		.	.	.
1965	25.6	21.9	26.8	
1966	25.3	25.1	27.3	33.9
1967	25.3	27.3	28.2	.
1968	26.4	25.8	28.7	.
1969	26.5	26.6	29.2	34
1970	27.2	26.1	32.2	34.4
1971	28.5	27	31.1	32.2
1972	28.7	27.6	31.3	32.9
1973	29.6	28.1	31.2	33.8
1974	31	28.5	32.4	35.2
1975	31.3	31.6	32.4	34.5
1976	31.3	31.3	32.1	37.6
1977	30.1	29.5	32.9	36.6
1978	30	29	32.7	38
1979	30.1	30	33.4	37.7
1980	30.6	28.3	33.6	39.3
1981	30.2	27.6	33.2	39.1
1982	29.1	28.6	33.4	38.8
1983	33.4	29	35.2	38.8
1984	34.5	28.3	34.9	40.2
1985	33.4	18.1	35.3	40.6
1986	31.8	23.7	34.9	40.4
1987	30	20.7	38	41.5
1988	31	25.4	32.1	42.3
1989	30.6	31.9	29.4	41.7
1990	29.1	31.4	28.4	42
1991	30.4	30.6	28	41.6
1992	31.2	31.8	28.1	41.7
1993	30.5	31.6	26.8	41.7
1994	29.8	33	26.9	41.7
1995	30	32.6	27.9	42.0
1996	29.3	32.4	28.4	42.0
1997	29.6	33	28.6	42.0
1998	30.6	33.6	28.5	42.2
1999	36.5	34.3	28.2	42.3

World Bank, World Development Indicators

Table 11
Manufacturing, Value Added
(Percent of Gross Product)

	Costa Rica	Dominican Republic	Mexico	Puerto Rico
1965	18.6	15.6	19.5	
1966	18.9	18.2	19.6	23.5
1967	18.7	19.2	20	.
1968	19.6	17.5	20.6	.
1969	19.8	18.7	21	23.8
1970	20.6	18.5	23.2	23.6
1971	21.1	18.4	23.1	23.6
1972	21	17.5	22.9	25.2
1973	22.3	17	22.9	26.8
1974	23.3	18.6	22.8	28.6
1975	23.3	20.9	22.4	28.9
1976	22.5	20.6	22	33.2
1977	21.8	19	22.8	33.3
1978	21.6	18.3	22.6	35
1979	20.8	16.9	22.7	34.8
1980	21.1	15.3	22.3	36.8
1981	21.5	15.6	21.9	36.3
1982	23	18.3	21.7	36.5
1983	25.5	17.7	21.3	37.1
1984	26.4	16.5	22.7	38.5
1985	25.5	12.3	24	39
1986	24.5	12.7	24.8	38.9
1987	23.2	12.8	26.4	39.7
1988	24.2	12.1	23.9	40.2
1989	23.2	17.7	21.9	39.4
1990	21.9	18	20.8	39.6
1991	23.1	18.5	20.6	55.5
1992	23.6	18.9	20.2	59.8
1993	22.5	18.8	19	61.3
1994	21.9	18.8	18.8	62.8
1995	22.1	18.3	20.9	62.8
1996	22.3	17.6	21.5	60.8
1997	22.5	17.5	21.4	59.9
1998	23.5	17.3	21.3	65.3
1999	29.6	17	21.1	69.5
2000				66.3

World Bank, World Development Indicators and Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis.

Table 12
Services in Puerto Rico
(Percent of Gross Product)

	Traditional Services	Finance, Insurance & Real Estate	Trade Services *
		.	.
1991	14.5	18.8	21.2
1992	15.1	19.4	21.1
1993	15.5	19.5	21.1
1994	16.2	19.7	21.1
1995	16.6	20.1	21.1
1996	16.5	20.3	20.7
1997	16.4	21.4	20.8
1998	16.4	21.8	20.7
1999	15.9	21.7	20.6
2000	16.1	21.6	20.4

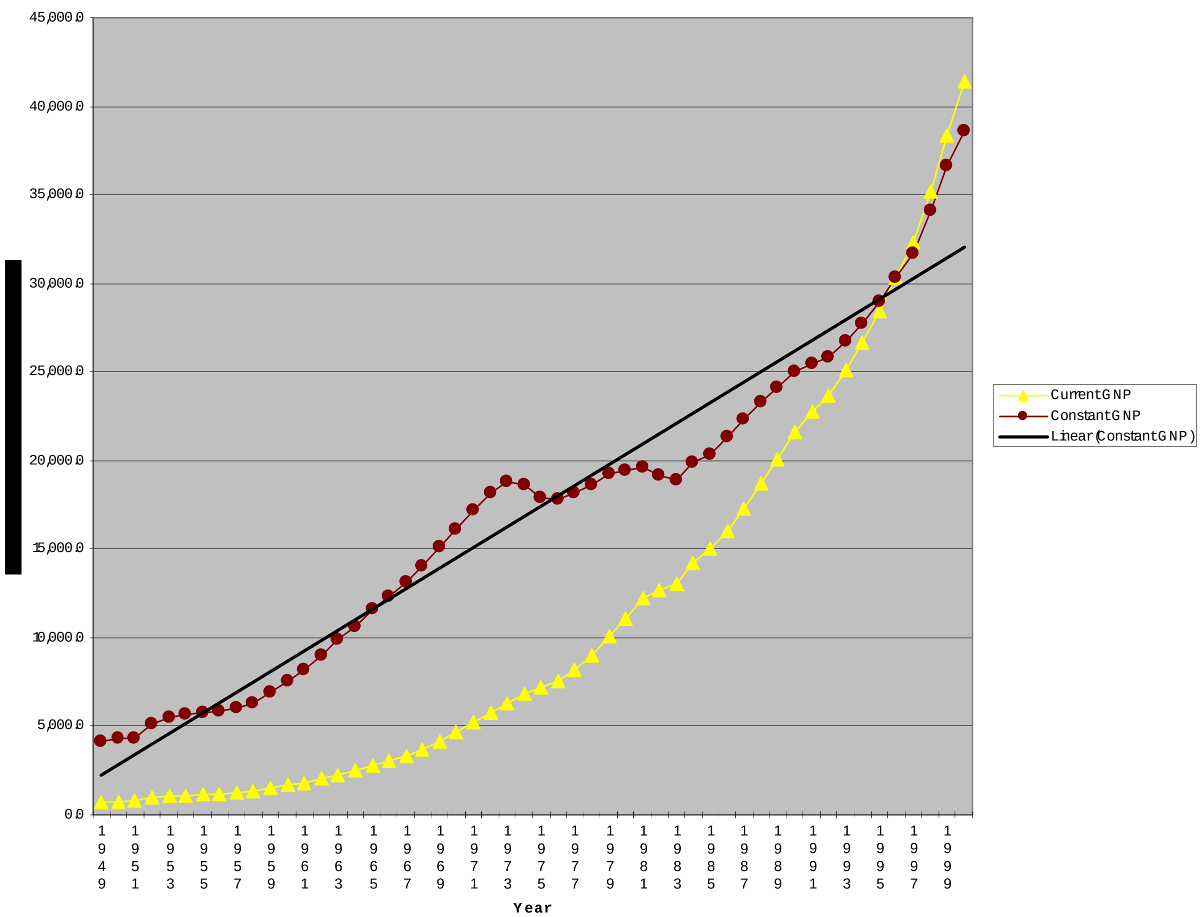
*Trade Services are reported as part of manufacturing activity.
Source: Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis.

Having seen that most of the §936 and CFC activity is limited to a number of sectors, the relevant question to ask is whether these two tax distortions managed to lead to any noticeable expansion in Puerto Rico's national output. One would expect that a costly tax holiday program along with local Puerto Rico tax holidays would result in a shift in Puerto Rico's national output. In order to test this hypothesis we present in Figure 1 a time series of both current and constant[125] GNP figures for Puerto Rico over the entire 1949 to 2000 period. What we find is that while pre-1996 there was no significant break in the growth of either series, there appears to be a statistically significant structural change after 1996 when §936 was being phased out. Until that point, both real and nominal GNP was rising at a respectable pace. The average annual growth in real GNP in the 1950s was 5.3 percent, followed by 8.1 percent in the 1960's and then declining to a steady state of 2.5 and to 2.3 percent in the 1970s and 1980's. The 1990's can be divided into two different growth regimes. The 1990-1995 period had an average growth rate of 3.2 percent, while the 1996-1999

[125] Because there has been a question about the use of constant GNP in 1954 dollars we recalculate the series in terms of 1996 dollars.

period had a 6.0 percent rate of growth. It appears that the greatest impact created by the tax distortions was when it was being eliminated. Rather than observing a decline in growth as many in Puerto Rico predicted the opposite is true.

Figure 1: Comparison of Current & Real GNP of Puerto Rico



The primary "official" argument of both the various Puerto Rican governments and the U.S. Congress is that §936 tax distortions are motivated by the need to create 'jobs.' While this is an admiral objective, the statistics on the Puerto Rican labor market point out that these programs have not been successful in creating either manufacturing jobs or employment opportunities in the skilled human capital segment of the economy. Despite the growth in overall employment, as seen in Table 13, the unemployment rate continues to be in double digits, suggesting that the 'full employment' in Puerto Rico is synonymous with a 'natural' rate of 11 percent unemployment. The employment picture in Puerto Rico is further complicated by the easy transfer of workers from the Commonwealth to the mainland. In effect one can observe two distinct distributions in the profile of workers in Puerto Rico, those that remain in the Commonwealth in relatively low wage occupations and those that transfer to the mainland, presumably to higher paying occupations. This transfer is akin to the 'brain drain' that characterizes much of the inflow migration from Asia. The data in Table 13 is further clouded by the low labor force participation rate, in comparison with the mainland, pointing out the very unique population distribution and the bias of the welfare payments.[126]

[126] In 2001, the labor forcer participation rate was 40 percent which is the lowest as compared to the mainland. The US average for the same period was 63.8 percent.

Table 13
Puerto Rican Labor Market
(Figures for End of Year, Thousand and Percent)

Year	Labor Force	Employment	Unemployment	Unemployment Rate	Annual Avg. Growth in Employment
1950	684	596	88	12.9	
1955	629	539	90	14.3	-0.019
1960	625	543	82	13.1	0.001
1965	699	617	82	11.7	0.027
1970	768	686	82	10.7	0.022
1971	787	699	88	11.2	0.019
1972	838	738	100	11.9	0.056
1973	844	745	99	11.7	0.009
1974	847	744	103	12.2	-0.001
1975	825	699	126	15.3	-0.060
1976	841	678	163	19.4	-0.030
1977	864	691	173	20	0.019
1978	900	732	169	18.7	0.059
1979	889	736	154	17.3	0.005
1980	933	768	166	17.7	0.044
1981	914	714	200	21.9	-0.070
1982	907	690	216	23.9	-0.034
1983	961	754	206	21.5	0.093
1984	971	772	199	20.5	0.024
1985	975	771	204	20.9	-0.002
1986	1,012	828	184	18.2	0.074
1987	1,038	861	177	17.1	0.039
1988	1,063	915	148	13.9	0.063
1989	1,068	917	151	14.1	0.002
1990	1,159	981	178	15.4	0.070
1991	1,173	974	199	17	-0.007
1992	1,182	991	191	16.2	0.017
1993	1,212	1,015	197	16.3	0.024
1994	1,204	1,036	167	13.9	0.022
1995	1,276	1,100	176	13.8	0.061
1996	1,294	1,147	147	11.4	0.043
1997	1,286	1,101	185	14.4	-0.040
1998	1,320	1,157	163	12.4	0.051
1999	1,298	1,149	149	11.5	-0.007
2000	1,295	1,161	134	10.4	0.011
2001	1,311	1,164	146	11.2	0.003

Source: US Department of Labor, Bureau of Labor Statistics, various years.

To make matters even more transparent, the data on average annual pay by state for 1999 and 2000, demonstrates that in addition to maintaining a natural rate of unemployment of 11 percent, Puerto Rico also can claim the lowest annual income in comparison to the mainland and the Virgin Islands. (See Table 14). This low average annual pay for Puerto Rico is in comparison with the United States and the Virgin Islands, it is not a comparison with Vietnam, the PRC or other emerging markets, where Puerto Rico's low wages do not translate to it becoming the cheapest labor cost destination in the Caribbean and the Latin labor markets.

Table 14
State[1] Average Annual Pay for 1999 and 2000 and Percent Change in Pay for All Covered Workers[2]

State	1999	2000	Percent Change 99-00
US	$33,340	$35,296	5.9
Alabama	28,095	29,037	3.4
Alaska	34,033	35,125	3.2
Arizona	30,525	32,606	6.8
Arkansas	25,371	26,307	3.7
California	37,577	41,194	9.6
Colorado	34,191	37,167	8.7
Connecticut	42,682	45,445	6.5
Delaware	35,157	36,677	4.3
District of Columbia	50,885	53,018	4.2
Florida	28,935	30,549	5.6
Georgia	32,332	34,182	5.7
Hawaii.	29,794	30,630	2.8
Idaho	26,044	27,709	6.4
Illinois	36,296	38,044	4.8
Indiana	30,027	31,015	3.3
Iowa	26,953	27,928	3.6
Kansas	28,031	29,357	4.7
Kentucky	27,783	28,829	3.8
Louisiana	27,216	27,877	2.4
Maine	26,887	27,664	2.9
Maryland	34,489	36,373	5.5
Massachusetts	40,352	44,326	9.8
Michigan	35,750	37,016	3.5
Minnesota	33,487	35,418	5.8
Mississippi	24,391	25,197	3.3
Missouri	29,967	31,386	4.7
Montana	23,260	24,264	4.3
Nebraska	26,632	27,662	3.9
Nevada	31,213	32,276	3.4
New Hampshire	32,141	34,731	8.1
New Jersey	41,038	43,691	6.5
New Mexico.	26,267	27,498	4.7
New York.	42,179	44,942	6.6
North Carolina	29,462	31,077	5.5
North Dakota	23,751	24,678	3.9
Ohio	31,395	32,510	3.6
Oklahoma	25,813	26,980	4.5
Oregon	30,872	32,765	6.1
Pennsylvania	32,696	33,999	4
Rhode Island	31,169	32,618	4.6
South Carolina	27,132	28,173	3.8
South Dakota	23,767	24,803	4.4
Tennessee	29,478	30,558	3.7
Texas	32,898	34,948	6.2
Utah	27,895	29,226	4.8
Vermont	27,597	28,920	4.8
Virginia	33,025	35,151	6.4
Washington	35,736	37,059	3.7
West Virginia	26,018	26,887	3.3
Wisconsin	29,607	30,697	3.7
Wyoming	25,647	26,837	4.6
Puerto Rico	18,553	18,796	1.3
Virgin Islands	26,111	27,633	5.8

1 Includes the District of Columbia, Puerto Rico, and the Virgin Islands.
2 Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs.
3 Data are preliminary.
4 Totals for the United States do not include data for Puerto Rico and the Virgin Islands

In Table 15 we present the distribution of employment in Puerto Rico from the late 1970s till 2001. The four major employers are government, trade, services and manufacturing. These data point out that apart from growth in service related employment, significant job creation in manufacturing is not occurring. This should not be surprising given the wage structure in the Commonwealth. In Table 16 we present the source of income by the ownership structure of the employer for the 1991-2000 period. The data point out that the private sector accounts for a consistent 70 percent of individual's income and the state sector's share is also constant at about 23 percent. There are no major structural shifts in theses broad divisions.

In order to see if the employment data would reveal additional information on the occupational breakdown in the Commonwealth, we present in Table 17 an employment breakdown by detailed occupations for the three year period 1999-2001.[127] It should not be surprising to find that 46 percent of the employed were in four occupation skills – office and administrative support occupation, sales, production, and transportation and material moving occupations. Seven percent of those employed were in education, training and library occupations. Elementary school teachers represented 2 percent of the workforce exactly the same proportion as police officers. What appears to be missing is a significant core in the skilled human capital areas, engineering and sciences. Given the relatively high wage structure in the Commonwealth, low skilled manufacturing should not be viewed as the path to rapid growth. On the contrary a shift towards science and technology revolving around the university system should be the target. Unfortunately neither §936 nor the various Industrial Acts managed to shift resources into these areas.

[127] The full data survey is available from the author.

Table 15
Distribution of Puerto Rican Employment by Major Sector
(Thousand)

Year	Government	Trade	Services	Manufacturing	Construction	Finance Insurance & Retail Trade	Transportation & Public Utilities
1977		103	73		35	24	18
1978		108	77		36	25	17
1979	246	115	83		35	26	18
1980	254	114	85	155	40	27	17
1981	245	113	90	153	34	28	16
1982	237	108	85	143	26	29	15
1983	240	108	87	144	23	28	15
1984	253	116	92	150	28	29	16
1985	255	121	95	148	26	31	16
1986	268	129	104	149	29	33	16
1987	281	137	112	151	36	35	18
1988	299	146	122	155	42	36	19
1989	298	152	127	157	45	37	20
1990	295	157	133	155	45	37	21
1991	291	154	137	152	44	37	21
1992	296	158	143	152	47	38	21
1993	290	168	152	150	46	40	22
1994	300	176	159	151	44	42	23
1995	305	184	169	154	48	43	23
1996	317	193	183	153	55	45	25
1997	310	199	194	152	58	47	26
1998	308	201	201	148	61	48	27
1999	291	212	211	143	68	49	33
2000	286	221	219	141	72	48	34
2001	276	221	219	135	72	48	34

Source: US Department of Labor, Bureau of Labor Statistics, various years.

Table 16
Distribution of Salaries and Wages by Private and Public Sectors
(Millions of Dollars and Percent)

	Salaries and Wages	Private Enterprises	% Total	Government	% Total
1991	12,192.5	8,622.1	70.7	2,907.0	23.8
1992	12,831.4	9,044.6	70.5	3,037.3	23.7
1993	13,737.4	9,657.6	70.3	3,200.4	23.3
1994	14,419.9	10,174.4	70.6	3,327.6	23.1
1995	15,299.7	10,656.0	69.6	3,731.1	24.4
1996	16,303.0	11,173.1	68.5	4,057.8	24.9
1997	17,472.4	11,983.2	68.6	4,390.5	25.1
1998	18,247.4	12,726.8	69.7	4,414.6	24.2
1999	19,339.2	13,501.0	69.8	4,665.5	24.1
2000	20,298.5	14,371.2	70.8	4,622.6	22.8

Puerto Rico Planning Board, Program of Economic and Social Planning, Subprogram of Economic Analysis

Table 17
The Occupational Structure of Puerto Rico's Employed Labor Force

Code	Occupation Classification	Number	Percent of Total
00-0000	All Occupations	978,750	
	Those With Over 10,000 Employees		
43-0000	Office and Administrative Support Occupations	184,670	18.9
41-0000	Sales and Related Occupations	98,070	10.0
51-0000	Production Occupations	96,650	9.9
53-0000	Transportation and Material Moving Occupations	75,010	7.7
25-0000	Education, Training, and Library Occupations	67,840	6.9
47-0000	Construction and Extraction Occupations	66,950	6.8
35-0000	Food Preparation and Serving Related Occupations	61,270	6.3
33-0000	Protective Service Occupations	61,210	6.3
37-0000	Building and Grounds Cleaning and Maintenance Occupations	44,060	4.5
29-0000	Healthcare Practitioners and Technical Occupations	39,090	4.0
11-0000	Management Occupations	37,690	3.9
49-0000	Installation, Maintenance, and Repair Occupations	37,200	3.8
41-2031	Retail Salespersons	36,450	3.7
13-0000	Business and Financial Operations Occupations	33,050	3.4
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	29,880	3.1
43-9061	Office Clerks, General	27,790	2.8
43-6014	Secretaries, Except Legal, Medical, and Executive	27,660	2.8
33-9032	Security Guards	23,950	2.4
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	23,750	2.4
41-2011	Cashiers	21,940	2.2
33-3051	Police and Sheriff's Patrol Officers	20,920	2.1
25-2021	Elementary School Teachers, Except Special Education	19,710	2.0
47-2061	Construction Laborers	17,780	1.8
43-5081	Stock Clerks and Order Fillers	16,140	1.6
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	14,460	1.5
21-0000	Community and Social Services Occupations	14,240	1.5
51-2092	Team Assemblers	13,340	1.4
29-1111	Registered Nurses	13,210	1.3
17-0000	Architecture and Engineering Occupations	12,300	1.3
31-0000	Healthcare Support Occupations	12,190	1.2
41-1011	First-Line Supervisors/Managers of Retail Sales Workers	11,560	1.2
39-0000	Personal Care and Service Occupations	11,530	1.2
53-3032	Truck Drivers, Heavy and Tractor-Trailer	11,510	1.2
43-6011	Executive Secretaries and Administrative Assistants	11,340	1.2
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	10,300	1.1
13-2011	Accountants and Auditors	10,290	1.1
25-2031	Secondary School Teachers, Except Special and Vocational Education	10,230	1.0

Source: Us Department of Labor, Occupational Survey, 2001.

An additional wrinkle in the relationship between the Commonwealth and the mainland is the sizeable transfer payments directed to support the Commonwealth. While we are careful in separating out food stamps and other welfare programs from self financed social security payments the data presented in Tables 18 and 19 attempt to encompass the entire package of transfers. Table 18 presents the flow of funds to Puerto Rican individuals. It includes Pell grants, Medicare payments, social security and federal and veteran compensation. The data also lists expenditure under the food stamp program and housing assistance. In fiscal year 2000, the total transfer to individuals equaled $6.8 billion a substantial increase from $ 68 million in 1968.

The data in Table 19 present additional transfer payments from Federal government to Puerto Rico. On balance the entire transfer payments excluding payments to individuals equaled $5.6 billion in 2000 more than double the figure in 1985 of $2.3 billion (in current dollars).

The permanently high level of unemployment, the low annual income of Puerto Rican workers and the continued Federal welfare program suggest that the imported capital dependency model had a lackluster performance over the past three decades.

Table 18
Federal Direct Payments to Puerto Rican Individuals

($ Million, data is for fiscal year ending September 30)

Selected Program	1968	1981	1982	1983	1984	1985	1986
Total	69	1,936	2,252	2,240	2,339	2,381	2,615
Pell Grants	na	97	92	74	71	82	163
Medicare: Hospital Insurance							
Supplemental medical insurance							
Social security:							
Disability insurance							
Retirement insurance							
Survivors insurance							
Federal workers compensation							
Veterans:							
Pension and disability	59	231	274	289	303	325	336
Education assistance							
Federal retirement and disability	1	502	648	714	734	733	801
Federal payments for unemployment compensation							
Food stamps	5	993	1,016	946	990	935	946
Housing assistance							
Other	4	113	222	217	241	306	369

Source: Data for 1990-2000 are taken from U.S. Census Bureau, Consolidated Federal Funds Report, annual. http://www.census.gov/govs/www/cffr.html>; Data for the period 1968 to 1986 is far more fragmented and is taken from The US Department of Treasury, The Operation and Effect of the Possessions Corporation System of Taxation, Sixth Report, March 1989, Table 3-4.

Table 18 (Continued)
Federal Direct Payments to Puerto Rican Individuals
($ Million, data is for fiscal year ending September 30)

Selected Program	1990	1993	1994	1995	1996	1997	1998	1999	2000
Total	3,582	4,484	4,744	5,143	5,627	5,800	6,029	6,040	6,821
Pell Grants	241	297	353	290	258	295	211	231	283
Medicare: Hospital Insurance	187	276	331	388	465	506	502	483	478
Supplemental medical insurance	210	257	291	421	567	581	609	644	712
Social security:									
Disability insurance	561	705	765	873	907	952	1,016	1,087	1,223
Retirement insurance	1,077	1,321	1,387	1,460	1,546	1,633	1,701	1,782	1,878
Survivors insurance	462	576	610	644	682	736	722	801	846
Federal workers compensation	7	na	na	na	na	6	13	14	15
Veterans:	0	0	0	0	0	0	0	0	0
Pension and disability	281	335	358	358	363	358	353	386	377
Education assistance	3	2	2	5	15	5	5	5	7
Federal retirement and disability	161	158	163	199	210	193	227	236	269
Federal payments for unemployment compensation	129	na	na	na	na	303	282	264	210
Food stamps	0	1,019	1,083	1,111	0	0	0	0	0
Housing assistance	218	na	na	64	250	197	343	55	460
Other	45	556	484	442	363	33	44	52	63

Source: Data for 1990-2000 are taken from U.S. Census Bureau, Consolidated Federal Funds Report, annual. http://www.census.gov/govs/www/cffr.html>; Data for the period 1968 to 1986 is far more fragmented and is taken from

The US Department of Treasury, The Operation and Effect of the Possessions Corporation System of Taxation, Sixth Report, March 1989,

Table 3-4.

Table 19
Puerto Rico – Transfer Payments – 1985 – 2000.
($ Million)

Item	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total receipts	3,531	4,289	4,871	4,973	5,108	5,478	5,957	6,236	6,804	7,399	7,758	8,680	8,433
Federal government	3,348	4,082	4,649	4,708	4,903	5,279	5,630	5,912	6,519	7,077	7,364	8,110	7,740
Transfers to individuals	3,283	4,014	4,577	4,633	4,818	5,186	5,532	5,838	6,419	6,943	7,175	7,919	7,573
Veterans benefits	317	337	349	370	383	405	414	440	455	484	495	479	485
Medicare	220	320	368	415	487	517	570	661	941	1,164	1,117	1,112	1,196
Old age, disability, survivors (social security)	1,581	1,940	2,055	2,243	2,315	2,463	2,722	2,912	3,101	3,282	3,472	3,556	3,863
Nutritional assistance	780	853	880	916	957	975	995	1,063	1,071	1,087	1,109	1,088	1,009
Industry subsidies	65	68	72	75	86	93	98	74	99	134	189	191	167
U.S. state governments	17	17	18	18	29	33	23	18	17	17	18	17	15
Other nonresidents	166	191	205	247	175	166	304	307	268	306	376	553	679
Total payments	1,180	1,664	1,801	1,857	1,982	2,089	2,211	2,301	2,353	2,394	2,551	2,683	2,826
Federal government	1,145	1,651	1,756	1,839	1,912	2,021	2,055	2,132	2,273	2,355	2,496	2,617	2,757
Transfers from individuals	508	766	817	864	918	980	1,003	1,052	1,129	1,158	1,231	1,296	1,358
Contribution to medicare	44	89	97	101	108	122	142	162	167	165	173	182	191
Employee contribution for social security	463	675	720	762	809	856	859	888	960	991	1,056	1,112	1,165
Transfers from industries	13	15	16	19	24	26	32	49	37	48	45	47	51
Unemployment insurance	189	237	247	243	209	208	211	184	191	202	217	216	234
Employer contribution for social security	435	633	675	714	761	807	810	847	916	946	1,003	1,058	1,113
Other nonresidents	35	13	45	17	69	69	155	164	75	39	55	66	69
Net balance	2,351	2,625	3,070	3,117	3,126	3,389	3,746	3,935	4,451	5,005	5,207	5,997	5,608
Federal government	2,203	2,431	2,893	2,869	2,991	3,258	3,575	3,780	4,246	4,721	4,868	5,493	4,983
U.S. state governments	14	14	16	15	25	27	16	13	12	13	14	12	11
Other nonresidents	134	180	162	232	110	104	155	143	193	271	325	492	614

Source: Puerto Rico Planning Board, San Juan, PR, Economic Report of the Governor, annual.

VII. ECONOMETRIC METHODOLOGY FOR MEASURING THE IMPACT OF THE IMPORTED CAPITAL DEPENDENCY MODEL

The use of differential taxes and deferral of US taxes have a number of distinct impacts on transnational corporations. First, by affecting the rate of return on corporate profits, the location of real economic activity is directly impacted by tax differentials. Second, apart from the activity bias, there is a reporting bias as to the jurisdiction where income is reported. Third, deferral of tax obligations which is at the core of §936 and the proposed §956 of the IRS Code is essentially a tax reduction created to discourages repatriation of foreign source income. The true effective tax rate of transnational activity must therefore take into account the shifting of income facilitated by these programs.

The tax implications for the US Treasury of §936 has been estimated to equal $3.3 billion in 1993. In what follows we provide a structural econometric model that will allow the estimation of the effect on capital investment and income shifting of §936, CFCs and the proposed §956. The empirical results from the literature predict that §936 primarily provided transnational corporations with an ability to shift income. Investment in Puerto Rico was therefore not designed to augment economic development. The simulation of the proposed §956 of the IRS Code generates outcomes similar to §936, in that it primarily insures transnationals with a continued incentive to shift income with little incentive to further the economic development of Puerto Rico. Combined with the tax losses to the US Treasury, the proposed §956 appears to be a well designed welfare program for transnational corporations.

The empirical literature on the role of tax differentials has treated the issue in sub-parts. A segment of the literature has focused on the role of tax differentials on the investment location issue. Another segment has focused on the transfer problem whereby in response to tax differentials corporations shift income from high tax to low tax jurisdictions. A completely different research path focuses on the role of taxes differentials including deferral in re-shuffling transnational investment and in consequently equalizing the after-tax rate of return on investment.

A. Tax Differentials and the Location of Transnational Investment

Most of the literature investigating the effect of tax differentials on the location decision starts with the seminal work by David Hartman.[128] Hartman focused on providing empirical evidence on the influence of domestic tax policy on foreign direct investment in the United States. The classic proposition tested is that foreign investors base their decisions on where to make capital investments on the real after-tax rates of return available on investments in alternative locations. Using annual data from 1965 to 1979 Hartman estimated the following equation:

$$\ln\left(\frac{I_{re}}{Y}\right) = \alpha_0 + \alpha_1 \ln(r(1-t) + \alpha_2 \ln(r'(1-t) + \alpha_3 \ln\left(\frac{(1-t')}{(1-t)}\right) \quad (1)$$

Hartman used this equation to explain the response of FDI, separately for investment financed by retained earnings and by transfers from abroad. The three explanatory variables used include first, the after-tax rate of return actually realized by foreign investors in the U.S. (r(1-t)). It is expected that α_1 will be positive implying that an increase in the rate of return earned in the U.S. tends to increase investment. The second term in equation (1) r′(1-t) is the overall after-tax rate of return on capital in the U.S. It is expected that α_2 would be positive. The final term in equation (1) [(1-t′)/(1-t)], the tax rate on U.S. capital owned by foreigners relative to the tax rate on U.S. capital owned by U.S. investors. Hartman expected the sign of α_3 to be negative.

[128] Hartman, David G., "Tax Policy and Foreign Direct Investment in the United State," National Tax Journal 37:4 (Dec. 1984), 475-488.

Hartman found both a positive association of the after-tax rate of return variables with FDI financed by retained earnings as a ratio to U.S. gross national product (GNP), and a negative association of the FDI-GNP ratio with the relative tax rate on foreigners compared to domestic residents. The model did not explain transfers from abroad as well as it did retained earnings.

Joel Slemrod[129] extended Hartman's work and found that U.S. tax rules are more successful in explaining transfers of funds than in explaining retained earnings by foreign investors.

B. Tax Differentials and Income Shifting

Differentials in tax rates also provide an incentive for transactions that are designed to reduce world-wide tax liability by shifting income out of high-tax to lower tax jurisdictions. Much of this tax motivated income shifting takes place via transfer pricing.[130] A review of transfer pricing issues as it relates to Foreign-Controlled US Corporations (FCDCs)[131] and Controlled Foreign Corporations (CFCs)[132] will clarify some of complexity of international business transactions and highlight the tax revenue implications for both the United States and Puerto Rico.

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[129] Slemrod, Joel, "The Impact of the Tax Reform Act of 1986 on Foreign Ditrect Investment to and from the United States," in Joel Slemrod (ed.) Do Taxes Matter? The Impact of the Tax Reform Act of 1986 (Cambridge, MA: MIT Press, 1990).

[130] Transfer pricing involves the pricing of goods or services transferred internationally between related parties. In effect, these transactions are set in a non-market setting.

[131] A foreign-controlled domestic corporations is defined as a US corporation where "control" is generally defined as ownership by any foreign person or entity (including an individual, corporation, partnership, estate, or trust), directly or indirectly, of 50 percent or more of a U.S. corporation's voting stock (or the value of all of the corporation's stock) at any time during the accounting period.

[132] For Federal income tax purposes, a foreign corporation is a Controlled Foreign Corporation (CFC) if U.S. shareholders own more than 50 percent of its outstanding voting stock, or more than 50 percent of the value of all its outstanding stock (directly, indirectly, or constructively) on any day during the foreign corporation's tax year. A U.S. shareholder for these purposes is defined as a U.S. person who owns 10 percent or more of the foreign corporation's total combined voting stock. A foreign corporation is controlled, only if a single U.S. corporation satisfies either of the above 50-percent ownership requirements for an uninterrupted period of at least 30 days. In general, the foreign source income of a foreign corporation is not taxable to its U.S. shareholders until repatriated.

The Internal Revenue Code §482 requires that the 'standard' for firm-to-firm transactions be governed by the principal of "arm's length price' whereby the transfer price between related parties be made equivalent to that between unrelated parties. The problem of establishing acceptable prices is particularly difficult in the case of foreign controlled US corporations (CFDCs) which operate in Puerto Rico among other places. Often the products being sold between the related parties have no ready market of their own. In general the amount that is established to reflect the price of sub-component sales, source of loanable funds, cost of advertising, corporate operations, etc. may be the key factors in determining the profitability of the two related entities. In order to establish a sense of magnitude of the transfer pricing problem we need to merely look at the rate of return on the assets of related parties.

Table 20
Foreign-Controlled US Corporations
(Money Amounts in Million Dollars)

Category	1971	1972	1990	1995	1997	1998	1999	Number of Times 1999 is of 1971
Number of Returns	5,154	6,198	44,113	60,157	61,621	61,658	59,514	11.5
Total Assets	36,674	46,868	1,652,255	2,762,747	3,392,051	3,917,687	4,761,072	129.8
Total Receipts	39,181	50,814	1,060,295	1,536,705	1,781,382	1,890,493	2,167,523	55.3
Business Receipts	38,043	48,932	950,083	1,372,489	1,582,576	1,662,560	1,888,652	49.6
Interest Received	420	752	67,315	96,269	114,610	129,040	142,325	338.9
Total Deductions	38,050	49,496	1,056,921	1,499,219	1,730,418	1,851,059	2,109,522	55.4
Cost of Sales & Operations	28,804	37,613	709,052	1,000,691	1,119,276	1,177,416	1,322,100	45.9
Interest Paid	733	1,071	77,562	92,417	112,219	128,845	144,833	197.6
Net Income (less Deficit)	1,111	1,295	3,966	38,455	52,365	40,615	60,213	54.2
Return on total Assets	3.0%	2.8%	.02%	1.4%	1.5%	1.0%	1.3%	
Income tax before credits	650	741	8,719	15,834	22,492	21,262	28,107	43.2
Income tax after credits	610	658	7,438	13,157	19,730	18,273	23,937	39.2

Source: James R. Hobbs Foreign-Controlled Domestic Corporations, 1999, IRS, SOI

From the data in Table 20 one can see 11.5 fold increase in the number of returns from foreign-controlled US corporations with total assets rising 129.8 fold, far in excess of the rate of inflation over the 72-98 period. But what is astonishing is the extremely low rate of return on these assets. From a 3.0 percent return in 1971 the rate fell to 1.3 percent in 1999, an amount less than half of the 1998 return of 2.2 percent for all US corporate tax return filers. Another interesting observation is that the percentage of the "income tax before credits" to "net income (less deficit)" is above 50 percent both in 1971 and 1999, reflecting the reporting of losses by these corporations.

Given that there are no specific US tax provisions that create more favorable results for foreign-owned as opposed to US-owned domestic corporations the only reasonable explanation for the return on assets in 1999 (as well as earlier years) for foreign-owned corporations to be less than 50 for all US corporations is the existence of improper transfer pricing. The complexity of determining what is out of the norm with respect to transfer pricing is easily demonstrated by looking at the reported 1996 transactions between large Foreign-owned Domestic Corporations and their Puerto Rico and US Possessions related foreign persons in Table 21. Most of the transactions are not loan related but rather stock-in-trade or inventory related. Unless there is a recognized market for these semi-manufactured goods, short of an audit, there is no discernable mechanism for determining if there is or is not income shifting.

Table 21
Transactions Between Large
Foreign-Owned Domestic Corporations
and Puerto Rico and US Possessions
Related Foreign Persons, 1994-98
($ Money Amounts in Thousands or Dollars)

	1994	1996	1998
Number of Related Foreign Persons	49	191	49
Amounts received from related foreign person			
Total	779,467	448,787	329,368
Sales of Stock in Trade	661,370	359,673	228,650
Sales of Tangible Property	2,299	1,047	1
Rents and Royalties	92	31,134	111
Sales, leases, and licenses of intangible			
property rights	na	2,165	19,272
Consideration for technical, managerial			
or like services	85,974	23,802	64,633
Commissions	4	2	29
Interest	867	648	1,211
Premiums for Insurance or Reinsurance	63	13,397	107
Other	28,799	16,918	15,354
Amount Borrowed			
Beginning Balance	21,367	150,094	7,274
Ending Balance	3,304	439,225	35,148
Amounts paid to related foreign person			
Total	702,760	1,739,292	2,500,984
Purchase of Stock in Trade	655,076	1,650,364	2,481,119
Purchase of Tangible Property	1,577	na	na
Rents and Royalties	na	na	1
Purchases, leases, and licenses of intangible property rights	na	na	na
Consideration for technical, managerial			
or like services	16,304	192	17,989
Commissions	699	659	na
Interest	27	16,577	929
Premiums for Insurance or Reinsurance	na	na	44
Other	29,078	71,500	902
Amount Loaned			
Beginning Balance	20,331	28,058	25,349
Ending Balance	22,572	17,675	72,819

Source: *Transactions Between Large Foreign-Owned Domestic Corporations and Related Foreign Persons*, 1994, 1996, 1998. IRS. SOI Bulletin. Note that for this table, the IRS considered that a domestic corporation was foreign-owned if at least 25 percent of the total voting power of all classes of stock permitted to vote, or 25 percent of the total value of all classes of stock of the corporation, was owned, directly or on directly, at any time in the tax year, by a single foreign shareholder, (usually a parent corporation).

The anecdotal evidence concerning the location of transnationals in Puerto Rico, either in response to CFCs or to §936 doesn't establish the necessary and sufficient argument that the primary incentive for these corporations is income shifting. These firms can always point to the positive employment effects that these investment flows generate in Puerto Rico and claim that this is the prevalent effect.

There have been four recent empirical attempts to uncover systematic evidence of income shifting by transnational corporations. Grubert and Muti[133] using 1982 data on US multinationals' affiliates aggregated by 33[134] host countries regressed two measures of affiliate profitability against the host country's statutory corporate income tax rate. The theoretical argument is that transnational corporations will allocate capital across countries such that in equilibrium the risk-adjusted marginal after-tax returns will be equal across all host countries. To see the firm's allocation decision more precisely consider the following profit maximizing problem:

$$\prod = (1-t)[P(Q,\tau)\cdot Q - wL - \phi iK] - e(1-\phi)K \qquad (2)$$

where:

t	=	income tax rate faced in the host country;
P	=	price of output produced in the host country, which is a function of the quantity sold and the tariff rate (τ);
Q	=	quantity of output produced in the host country;
wL	=	expenditure on labor input;
φ	=	share of capital that is debt financed;
i	=	return paid on debt; and
e	=	return on equity.

133 Grubert, Harry and John Mutti, "Taxes, Tariffs and Transfer Pricing in Multinational Corporation Decision Making," *The Review of Economics and Statistics* 33 (May 1991), 285-293.

134 The 33 country data set excluded Puerto Rico. It included data on Canada, Mexico, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, United Kingdom, Norway, Portugal, Spain, Sweden, Switzerland, Argentina, Brazil, Chile, Colombia, Venezuela, Hong Kong, Malaysia, Phillippines, Singapore, South Korea, Taiwan, Thailand, Australia, India, Japan, and South Africa.

Grubert and Muti assume that the production function is of Cobb-Douglas form and the demand function for output is constant elasticity. The demand for capital is:

$$K = \frac{Z^{\delta}(1+\tau)^{\beta}}{[\varphi i + (1-\phi)\dfrac{e}{(1-t)}]^{S}} \tag{3}$$

where the vector Z stands for exogenous variables. The reduced form of the equation tested is:

$$ln\ NPE = \alpha_0 + \alpha_1 \ln Y + \alpha_2 \ln Y/N + \alpha_3 \ln(1+\tau) + \alpha_4 \ln(1-t_e) + \alpha_5 D + \alpha_6 P + \mu \tag{4}$$

where:

NPE	=	net plant & equipment, separately estimated for majority owned and all affiliates;
τ	=	is the average tariff rate on manufactures;
Y	=	Real GDP;
Y/N	=	Real GDP per capita;
t_e	=	effective tax rate;
D	=	0,1 dummy for distance where 1 is for Canada and Mexico and 0 for all others;
P	=	Policy dummy where 1 equals all countries where US majority-owned affiliate sales are < 50% of all US foreign affiliate sales.

They find that taxes and tariffs play an important role in determining the allocation of capital across countries. The magnitude of the estimated tax coefficients indicate that tax incentives are important not only as an explanatory variable in the decision making of transnationals but also in their shifting of investment flows across countries. Their estimated equation suggests that a reduction in host country statutory tax rates from 20 percent to 10 percent will increase US affiliates' net plant and equipment in the country by 65 percent. This is consistent with the anecdotal evidence of income shifting and inconsistent with the often cited argument that in order to equalize after-tax returns, higher tax rates will require higher pretax rates of return. That is, a lower tax rate is associated with a higher pretax rate of return and is not a reflection of a smaller slice taken by taxation out of a fixed level of profitability.

Grubert and Slemrod[135] provide an interesting theoretical approach to the income shifting issue with respect to Puerto Rico. Their results are for 1987 US companies using the §936 election. They begin their analysis by ignoring the firm's decision on the scale of operation in the host country and focusing on the binary choice to locate in Puerto Rico and if in the affirmative what rate of return to report.[136] The starting point for their analysis is a basic profit subdivision:

$$\Pi_p = f_p K_p + t(r_p K_p - f_p K_p) - C(r_p, f_p, K_p) - iK_p \tag{5}$$

where

Π_p	=	After tax profit from operating in Puerto Rico, net of the opportunity cost of capital;
$f_p K_p$	=	The returns to capital if location decision is based on economic principles where f_p is the actual pretax average product of capital in Puerto Rico and K_p is the prdermined capital in Puerto Rico;
$t(r_p K_p - f_p K_p)$	=	Tax saving from shifting US earnings to Puerto Rico, where t is the statutory tax rate in the US, and r_p is the reported rate of return in Puerto Rico;
$C(r_p, f_p, K_p)$	=	The cost of shifting income; and
iK_p	=	The opportunity cost of shifting income.

Since many of the variables noted in the above equation are not observed, Grubert and Slemrod estimate the following binary choice equation:

$$\begin{aligned} &P(\Pi_p > 0) = \alpha_0 + [\alpha_1 EARN + \alpha_2 TRANA + \alpha_3 COS + \alpha_4 START + \alpha_5 LNK] \\ &+\alpha_6 TS + [\alpha_7 RD + \alpha_8 AD + \alpha_9 PK] \cdot TS + \mu \end{aligned} \tag{6}$$

where:

[135] Grubert, Harry and Joel Slemrod, "The Effect of Taxes on Investment and Income Shifting to Puerto Rico," *The Review of Economics and Statistics* 40 (May 1998), 285-293.

[136] The decision with respect to the amount of reported rate of return does not imply that profits will be hidden from tax authorities but rather that profits can be moved between Puerto Rico and the United States.

EARN	=	Industry hourly wage rate in the US;
TRANA	=	Industry average measure of transportation costs;
COS	=	Ratio of parent's cost of goods sold to operating capital;
DSTART	=	0,1 dummy, equal to 1 if parent was incorporated within the last 10 years, 0 otherwise;
LNK	=	Log of consolidated operating capital of parent;
TS	=	0,1 dummy, equal to 1 if parent firm had positive operating profit and 0 otherwise;
RD	=	Ratio of parent's R&D expenditures to the parent's sales;
AD	=	Ratio of parent's advertising expenditures to its sales;
PK	=	Ratio of consolidated gross profits to operating capital of parent; and
KP	=	Capital in Puerto Rico.

The results reported for 1987 are that income shifting is the only reason for locating an affiliate in Puerto Rico.

By setting the net benefits of locating in Puerto Rico to zero, (setting RD, AD, PK, and TS to zero) Grubert and Slemrod simulate that in 1987 approximately 50 percent of the §936 firms are there only for income shifting purposes. In the pharmaceutical industry 80 percent of the firms would exit because the income shifting opportunities would no longer be in place. Given that these results are point estimates only and are subject to error because the parameter estimates are imprecise, an update based on a time series would provide a more robust estimate of the degree of non-income shifting transnationals locating in Puerto Rico.

What is apparent from the data we have is that there is a transition process of converting §936 operations to CFCs. Furthermore, as noted above, there has been no decline in foreign inward investment.

C. Tax Deferral as an Alternative to Tax Differentials

While income shifting can be demonstrated as a major incentive for much of the Puerto Rico location preference both for §936 and CFCs, the proposed modification of §956 contained in

HR 2550 and S 1475 bring back the debate around the general issue of deferral[137]. In Rousslang and Pelzman[138](1983) a methodology was developed to assess the effects of deferral on US income. In what follows, I will restate the basic elements of the model.

The main argument used against deferral is that it contributes to balance-of-payments deficits by encouraging foreign investment and discouraging repatriation of foreign source income. Proponents of deferral argue that it helps preserve tax neutrality against tax breaks for domestic investment. One way of addressing this debate given the proposed modification of §956 is to examine the contribution of deferral to two different types of tax neutrality; capital export neutrality and national neutrality. Taxes have capital export neutrality if they do not discourage U.S. firms from locating their productive facilities wherever the pre-tax rate of return is highest. Taxes have national neutrality for the United States if they cause U.S. firms to be indifferent between new domestic and foreign investment when the before-tax return on the new domestic investment is equal to the return on the new foreign investment after foreign taxes, less any reduction the new foreign investment would cause for the returns after foreign taxes on the U.S. foreign investment stock already in place.

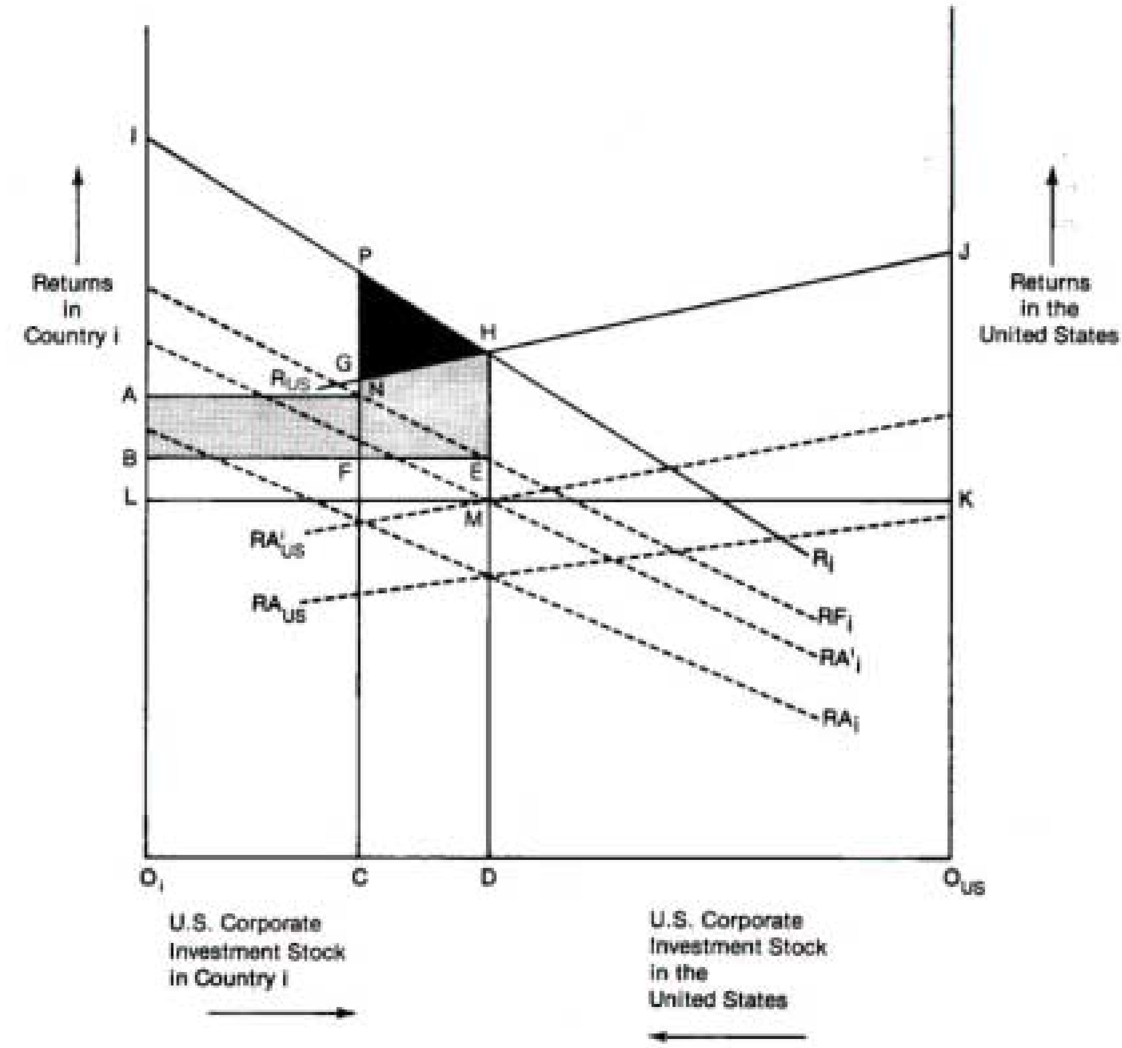
The contributions of deferral to capital export neutrality and national neutrality are measured as the amounts by which deferral increases world and U.S. incomes, respectively. Either contribution can be positive or negative. World and U.S. incomes are compared with what they would have been if the deferral had been replaced by equal reductions in the U.S. tax rates on domestic and foreign source corporate income such that the average after-tax rate of return on all U.S. corporate investment remained unchanged. (With these compensating tax reductions, elimination of deferral

[137] Deferral' means the United States does not tax the retained earnings of foreign subsidiaries until this income is repatriated.

[138] Rousslang, Don and Joseph Pelzman, "The Benefits and Costs of the Deferral of U.S. Taxes on Retained Earnings of Controlled Foreign Corporations," *European Economic Review* 20 (1983), 79-94.

should cause some substitution of domestic for foreign investment, but should not alter total corporate investment.) The contributions of deferral to world and U.S. incomes were calculated by Rousslang and Pelzman on a country by country basis.

Figure 2 from Rousslang and Pelzman provide an example of how removal of deferral would affect world and US incomes in a two country case, Puerto Rico and the US, when the stock of US corporate investment is fixed. The distance O_iO_{US}, on the horizontal axis represents the US stock of investment. The lines R_{US} and R_I are schedules of the before-tax rates of return to capital (the marginal productivity of capital schedules) for the United States and country i, representing Puerto Rico. The lines RA_{US} and RA_I are the corresponding schedules of after-tax rates of return when all corporate income is taxed at the U.S. statutory rate and a tax credit is given for foreign income taxes. U.S. tax incentives for domestic investment and deferral of U.S. taxes due on retained earnings abroad shift the schedules RA_{US} and RA_I to RA'_{US} and RA'_I , respectively. The line RF_I is the schedule of rates of return on foreign investment stocks after foreign taxes, but before U.S. taxes.



With deferral, after-tax rates of return are equalized at the intersection M. The domestic corporate investment stock is DO_{US} and the Puerto Rican investment stock is O_ID. The area under the R_I schedule and to the left of D gives total income generated in Puerto Rico by the foreign investment stock O_ID. Similarly, the area under the R_{US} schedule and to the right of D gives total income generated in the United States by the domestic investment stock DO_{US}. Total world income from these investment stocks is thus given by trapezoid O_IDHI plus trapezoid $DO_{US}JH$. Corporate after-tax income is given by rectangle $O_IO_{US}KL$. Total U.S. income from these investment stocks, including tax revenues, is given by rectangle O_IDEB plus trapezoid $DO_{US}JH$. Without deferral, after-tax rates of return would be equalized at the intersection of RA'_{US} and RA_I. The domestic corporate investment stock would be CO_{US} and the foreign investment stock would be O_IC. Total world income would be given by trapezoid O_ICPI plus trapezoid $CO_{US}JG$. Total U.S. income would be given by rectangle O_ICNA plus trapezoid $CO_{US}JG$.

In Figure 2, U.S. taxes with deferral are capital export neutral, because after-tax returns in the United States and Puerto Rico are equalized at the same allocation of capital as the before-tax returns. The darkly shaded triangle shows the gain in world income attributable to deferral. The lightly shaded area shows the loss in income to the United States caused by deferral. This loss is composed of two parts: (1) a reduction in returns on the U.S. foreign investment stock O_IC (from A to B), and (2) a loss in returns from the foreign investment stock CD. (This stock yields only rectangle CDEF in income to the United States, whereas an equivalent amount of domestic investment would yield trapezoid CDHG.)

A-priori, a deferral need not always cause a loss or an increase in income to the United States. It could increase U.S. income if the foreign tax rate were low, the difference between the foreign and domestic before-tax rates of return were high when after-tax rates of return were equalized, and additional foreign investment due to deferral caused only a small loss in returns on the existing stock of U.S. foreign investment. Nor does deferral necessarily increase net world income. In terms of Figure 2, deferral could cause the intersection of RA'_{US} and RA'_I to move to the right of D by so much that U.S. taxes would be closer to capital export neutrality without deferral.

The exercise performed here is to replace deferral with equal reductions in the U.S. tax rates on domestic and foreign source corporate income such that the after-tax rate on all corporate investment remains unchanged. These equal reductions in the tax rates on domestic and foreign, source income should not affect the equilibrium distribution of capital between the United States and Puerto Rico as long as the U.S. tax rate on foreign source income exceeds the foreign rate. Also, since these compensating reductions leave the average after-tax rate of return on all corporate investment unchanged, removal of deferral should not change total corporate investment. Therefore, the analysis first developed in Rousslang and Pelzman can be used to calculate the effects of replacing deferral with the compensating reductions in U.S. tax rates without assuming that the total stock of U.S. corporate investment is fixed. Furthermore, this analysis can be applied without actually measuring these compensating reductions in U.S. tax rates.

Assuming the marginal productivity of capital schedules are linear, the contributions of deferral to world and U.S. incomes may be calculated from the schedules of after-tax rates of return, the existing after-tax rate of return, tax rates, corporate investment stocks, and the slopes of the marginal productivity of capital schedules. The schedules of after-tax rates of return and the slopes of the marginal productivity of capital schedules cannot be observed directly and must therefore be calculated. The equations used for these calculations are as follows:[139]

With deferral, the schedule of after-tax rates of return on U.S. corporate investment in Puerto Rico ($RA_i^{'}$) is calculated from the equation

$$\mathbf{RA_i^{'};=(1/E)[D(1- TWD_i)+I(1- TI_i)+U +RE]R_i} \quad (7)$$

or

$$\mathbf{RA_i^{'}=(l/E)\{[(D+U)/(l-T_i)+I](l-T_{US})+RE\}R_i} \quad (8)$$

whichever is less.

D	=	dividends gross of foreign withholding taxes;
TWD_I	=	foreign withholding tax rate on repatriated dividends;
T_I	=	foreign corporate tax rate;
T_{US}	=	U.S. statutory corporate tax rate;
I	=	income repatriated in the form of interest payments;
TI_I	=	foreign withholding tax rate on interest payments;
RE	=	retained earnings;

139 The calculations of the geometric areas shown in Figure 1 and the associated equations are presented in Appendix A.

U	=	earnings of unincorporated affiliates (branches) net of foreign income taxes;
E	=	before-tax income=I+(D+RE+U)/(1-T_I); and
R_I	=	the schedule of before-tax rates of return on investment in Puerto Rico.

The bracketed expression in (7) represents foreign source income after foreign income and withholding taxes. The bracketed expression in (8) represents foreign source income after U.S. taxes on repatriated income. Since U.S. firms receive a tax credit, up to their U.S. tax liability, for foreign income and withholding taxes paid, their after-tax income will be the lesser of the bracketed expressions in (7) or (8). Dividing the after-tax income by before-tax income (E) and multiplying by the before-tax rate of return (R_I) gives, the after-tax rate of return on investment (RA_i'). Note that there is no U.S. tax liability on retained earnings in (8) due to the assumption that the firm's decision-makers maximize consolidated after-tax earnings. Also note that the foreign tax rate T_I represents foreign income taxes paid as a percent of taxable income measured according to U.S. tax accounting conventions. Thus interest payments (I) are an expense to foreign subsidiaries and are not subject to the tax T_I.

With no deferral, the schedule of after-tax rates of return on U.S. corporate investment in Puerto Rico would be given by the equation:

$$\mathbf{RA_i=(1/E)\{[(D+U+RE)/(1-T_i)+I](1-T_{US})\}R_i} \qquad (9)$$

or (7), whichever were less. The schedule of after-tax rates of return on investment in the United States is given by the equation

$$\mathbf{RA_{US}'=(1-T_r)R_{US}} \qquad (10)$$

where T_r is the U.S. tax rate on domestic corporate income after accounting for U.S. tax incentives for domestic investment. With deferral, corporations will distribute their investments so as to equalize RA_i' and RA_{US}'; without deferral, they would equalize RA_i and RA_{US}'.

To get a sense of the impact of deferral on US and Puerto Rico we point to the tax calculations made earlier. For 1999, using the tax payments of a number of CFCs in Puerto Rico and recalculating their purported US taxable income and resulting tax obligations. In 1999, a total of 1.72 billion dollars of tax revenues were deferred. The 1.72 billion dollars on potential tax collection in 1999 must be adjusted to reflect the present value of that amount when it is repatriated at some future date. If the deferral lasts 5 years the present value of the lost tax revenue at a 5 percent discount would amount to 1.68 billion. If the deferral were to last 10 years the loss would be 3.37 billion. Given the conventional wisdom that the deferral is a long-term event the opportunity cost of this lost tax revenue will be greater then the simulated $3.37 billion. The tax revenue gain for Puerto Rico would be less then $1 billion.

D. Impact of Factor Movements on Comparative Advantage in Puerto Rico

An important element of the tax incentives contained in the various IRS codes is the expectation that it will induce substantial investment flows. These investment flows are then supposed to alter the resource endowment of Puerto Rico and then have a positive impact on its output and trade sector. It is this direct effect of resource endowment changes on trade which has yet to be determined.

The intent here is to focus on the Rybczynski effect, where holding fixed the input requirements in each sector, we estimate the impact on the composition of trade resulting from a change in factor supplies. The latter being a function of the tax incentives noted above.

Using a cross-section methodology introduced by Bowen (1983)[140] trade in a specific commodity is regressed across countries on country characteristics. Since resource endowments are the explanatory variables, such regressions reveal the direct influence of resources on trade for both the subset of products representing that country's top net exports and its net imports. The equation estimated for each commodity group is:

$$t_{ij} = \sum_k b_{jk} R_{ik} + u_i \tag{11}$$

where

t_{ij}	=	Net exports of commodity group j by country i,
R_{ik}	=	Level of resource k in country i,
b_{jk}	=	Coefficients which indicate the impact on net trade of commodity group j due to augmentation of the kth resource, and
u_i	=	Residual error reflecting the presence of omitted resources.

The coefficients, b_{jk} indicate directly the total effect of an increase in a resource on net trade of a specific commodity. While these coefficients indicate the net impact of increased resources on trade there is no relationship between these coefficients and factor intensity. Bowen's estimates for the US as a whole indicate a positive relationship between skilled labor and trade performance as well as for an expansion in capital stock (e.g. investment). Surprisingly, his results show that increases in semiskilled labor and not unskilled labor may be more important determinants of US comparative disadvantage.

140 Harry P. Bowen, "Changes in the International Distribution of Resources and Their Impact on U.S. Comparative Advantage," *The Review of Economics and Statistics*, 65:3 (Aug., 1983), 402-414.

The results on Puerto Rico show no significant resource shifts to the Commonwealth in a bilateral exchange with the US. In fact, the results show that skilled labor is leaving as Puerto Rico's capital stock expanded in the 1990s.

E. Impact on Employment Arising from Capital Market Distortions

The final issue to address is the impact of the capital distortions on employment. In order to measure the short-run effects of output changes (originating from the investment distortion) on total employment in a given industry we need to measure a production relationship and factor demand equations. The analysis begins with the assumption of long-run cost minimization. The procedure for estimating the output elasticity of employment follows that presented in Pelzman and Martin[141] where output is assumed to be exogenous and input adjustment take into account "the stock and flow dimensions" of labor and capital.

[141] Joseph Pelzman and Randolph C. Martin, "Direct Employment Effects of Increased Imports: A Case Study of the Textile Industry," *Southern Economic Journal*, 48:2, October 1981, 412-426.

We begin with a familiar Cobb-Douglas production function:

$$Q_{i,t} \leq A \prod_{h=1}^{6} (Y_{h,t})^{a} h \tag{12}$$

where:

$Q_{i,t}$	=	output in the industry corresponding to commodity i.
Y_1	=	the stock of production workers.
Y_2	=	the average weekly hours per worker.
Y_3	=	the capital stock.
Y_4	=	capital utilization.
Y_5	=	inventory.
Y_6	=	the stock of non-production labor.
a_h	=	output elasticity of each input.
A	=	an exogenous technology shift parameter.
t	=	subscript denoting the time period.

Long run optimal factor demand functions (Y_h^*) are determined by minimizing total costs subject to the production function (12). These factor demand equations are expressed as functions of relative factor prices (w.r) and the long run equilibrium level of output Q_i^*.

$$Y^* = f[(w/r), Q_i^*] \tag{13}$$

The adjustment of factor inputs towards their long run equilibrium levels is estimated by the following set of partial equilibrium adjustment equations:

$$Y_{h,t} = Y_{h,t-1} = \sum_{k=1}^{6} \Theta_{hk} [Y_{k,t}^* - Y_{k,t-1}] + \varepsilon_{h,t} \tag{14}$$

h= 1…..6

Substituting (13) into (14) and replacing Q_i^* with current output $Q_{i,t}$ yields, in matrix form the basic equations to be estimated:

$$Y_t = AQ_t + B(w/r)_t + CY_{t-1} + \varepsilon_t \tag{15}$$

where A is a 6 x 1 vector of output coefficients B is a 6 x 1 vector of relative factor price coefficients and C is a 6 x 6 matrix of own and cross adjustment coefficients equal to (1-Θ), where Θ is the matrix of partial adjustment coefficients in equation (14).

Specifying equation (15) in log-linear form yields:

$$\log Y_{h.t} = \log d_{h0} + d_{h1} \log Q_{i,t} + d_{h2} \log(w/r)_{i,t} + d_{h3} \log Y_{1,t-1} + ... + d_{h8} \log Y_{6,t-1} + \varepsilon_{h,t} \quad (16)$$

h=1….6.

This formulation permits the estimation of a consistent set of response patterns of all inputs.

The results of our estimates for the pharmaceutical industry indicate that the utilization of capital is more significant then changes in its stock. The same can not be said for labor, where the stock effects dominate, suggesting very little transaction costs in the local labor market. These results may be sensitive to the ease of migration from the Commonwealth to the mainland.

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