

“MNEs in Puerto Rico and the Repeal of Tax Credits for U.S. Corporations.”

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Abstract

Puerto Rico, the Commonwealth Island and territory of the United States, headed for bankruptcy in June 2016. The island received a last minute rescue package from the US Congress to restructure the \$72 billion it owes to bondholders. The origins of the crisis in Puerto Rico have been attributed in part to the phase out of the IRS Section 936 provisions of tax exemption for mainland manufacturers on the island from 1995 to 2005. To date, there is no systematic study of the impact of the phase out of the IRS Section 936 tax exemption for US corporations on economic conditions in Puerto Rico. Using industry panel data, compiled from the IRS Statistics of Income for US Possessions Corporations, and the US Economic Census for Outlying Areas, we analyze the effects of the phase out of Section 936 on valued added, employments and establishments from 1987 to 2012. We find that the phase out of the tax program reduced the number of manufacturing establishments and employment in industries that received the highest levels of tax credits.

Puerto Rico and Section 936 of the IRS

In June 2016, Congress voted to approve a long-awaited rescue package for Puerto Rico that could allow the fiscally troubled U.S. territory to restructure the \$72 billion it owes bondholders in exchange for new federal oversight over its locally elected government. (The Washington Post, June 10th, 2016). Puerto Rico's economic problems have been blamed in part to the phase out of the Internal Revenue Service (IRS) Section 936 tax exemption program for US corporations located in Puerto Rico (Krueger, Teja and Wolfe). Despite this claim, there has been no systematic study of the impact of the phase out of the IRS Section 936 tax exemption for US corporations on economic conditions in Puerto Rico.

Using industry panel data, compiled from IRS Statistics of Income for US Possessions Corporations, US Economic Census for Outlying Areas, and the Junta of Planificación of Puerto Rico, we analyze the effects of the phase out of Section 936 on valued added, employments and establishments from 1987 to 2012. We find that the phase out of the tax program reduced the number of manufacturing establishments and employment in industries that received the highest levels of tax credits.

Section 936 of the IRS Tax Code

When a U.S. corporation locates in a U.S. possession territory such as Puerto Rico, Guam, American Samoa, Northern Mariana Islands and the U.S. Virgin Islands, the corporation is subject to U.S. taxation on income earned in that U.S. territory. For U.S. tax purposes, however, income earned in U.S. possessions is generally considered foreign-source income. Since 1921, Federal income tax laws have provided an incentive

for U.S. corporations to conduct business in U.S. possessions. The original legislation provided an exemption from taxation for all income derived from sources outside the United States if certain conditions were met. Specifically, the corporation had to derive 80 percent or more of its gross income from U.S. possessions and 50 percent or 93 more of its gross income from the active conduct of a trade or business in the possessions (Holik, 2009).¹

The Tax Reform Act of 1976 significantly changed the taxation of U.S. corporations operating in U.S. possessions, creating a new section 936 of the Internal Revenue Code. The new legislation allowed only a credit against taxes paid on income derived from the active conduct of a trade or business in a possession and “qualified possessions source investment income.” The intent of this legislation was to encourage employment-producing investments by U.S. corporations in U.S. possessions (Holik, 2009).

The Tax Equity and Fiscal Responsibility Act of 1982 and the Tax Reform Act of 1986 further restricted tax benefits available under section 936 by modifying the tax treatment of income derived from intangible assets and passive investments. The 1982 Act provided that a possessions corporation’s income from intangible assets, such as patents and copyrights, would be taxable to the U.S. shareholders (usually the U.S. parent corporation) of the possessions corporation. A possessions corporation could elect out of this general rule if it demonstrated that it had a significant business presence in the possession in which it operated, by meeting either a direct labor test or a value added test with respect to a specific product or type of service. The 1982 Act also increased the

¹ Unlike the foreign tax credit, the possessions tax credit could reduce and, in some cases, eliminate the U.S. tax liability on qualified possessions income whether or not the possessions tax that income.

percentage of gross income that a possessions corporation must earn from the active conduct of a trade or business in U.S. possessions to 65 percent. The 1986 Act increased this percentage to 75 percent (Holik, 2009).

Legislation in the 1990s continued to restrict, the possessions tax credit provisions. Congress, in the Omnibus Budget Reconciliation Act of 1993, required corporations to separate their possessions income and credit computations into active and passive components. While qualified passive income continued to receive unrestricted credit treatment, the possessions credit derived from active income was subject to a limitation.

The Small Business Job Protection Act of 1996 repealed the credit for tax years beginning after December 31, 1995. However, transition rules allowed an existing possessions corporation to claim credits, with certain restrictions, through taxable years beginning before January 1, 2006). The Act eliminated the credit for qualified possessions source investment income received or accrued after June 31, 1996. Existing credit claimants could, however, continue to claim reduced credit amounts for active income using the percentage or economic activity limitations. The Act also implemented a base period constraint that limits the taxable income eligible for the credit for claimants. This base period constraint is effective for tax years beginning after December 31, 1997(Holik, 2009).

Even though tax exemption through Section 936 applied to all U.S. Possessions, U.S. possessions corporations with operations in Puerto Rico accounted for virtually all of the possessions tax credits. For example, in 2005, 94 Puerto Rico-based possessions corporations claimed 94% of the 0.9 billion tax credits granted during the year. These

corporations also accounted for nearly all of the assets, receipts, and net income of corporations claiming the credit. (Holik, 2009). Most of the tax credit was given to manufacturing firms.

Literature

Previous research by Grubert and Slemrod (1998) investigated the impact of the 936 tax-free policy on investment and income shifting by creating and estimating a model using 419 Section 936 firms for the year 1987. They estimated an operating rate of return of possessions corporations of 98.5% and find most firms locating in the island have high levels of R&D. The evidence suggests that intangible assets are significant for most firms moving to Puerto Rico. Because there is nothing about Puerto Rico that gives it a comparative advantage for intangible related production, there is evidence that income shifting is a motivation for locating in the island. They predict that the elimination of tax exemption for Puerto Rico, would cause many firms to cease operations in the island or to reduce the size of their operations in the island

Data

We constructed a 2 digit SIC manufacturing industry panel data set for the years 1987, 1992, 1997, 2002, 2007 and 2012, using the US Economic Census for Outlying Areas and the IRS Statistics of Income for US Possessions Corporations. From the Economic Census we collected data on value added, employment and number of establishments. The IRS Statistics of Income data was used to obtain data on tax credits earned by US Possessions Corporations. These data were published biannually for the

years 1993 to 2005. After 2005 the 936 tax exemption program was phased out so there was no more tax credits granted under the program. Additional data on number of establishments and production by 936 and non-936 corporations for 1987 was collected from the report “Impacto 936” from the Junta de Planificación of Puerto Rico.

We created a concordance to convert 3 digit NAICS data to 2 digit SIC data since data for and prior to 1997 was classified by SIC and data after 1997 was classified by NAICS codes. IRS data was published biannually from 1993 to 2005 while the Economic Census was published every five years. To create our US Economic Census for Outlying Areas data for 1987, 1997 and 2007 was merged to IRS Statistics of Income data for the same years. However, US Economic Census for Outlying Areas data for 1992 and 2002 were merged to IRS Statistics of Income data for 1993 and 2003 respectively.

Methodology

We estimate a fixed effects model to analyze the impact of the phase out of the 936 tax exemption program for US corporations. The phase out of the 936 tax exemption program is a policy change imposed on Puerto Rico by the U.S. Congress. For this reason the policy is exogenous to economic conditions in the island and it is a natural experiment on the impact of removing tax exemptions on the location of US Multinationals.

The goal of estimation (1) is to use a difference in difference approach. We experiment with potential controls and future versions of the paper will use alternative control groups. The dependent variable for this equation is the logarithm of value added, employment and number of establishments in the industry. The independent variable is

After936 which is a dummy that equals 1 if the year is after 1995 when the 936 tax exemption program was abolished and zero otherwise. This dummy variable was interacted with percent of production in industry coming from 936 firms in 1987 using the equation Junta de Planificación of Puerto Rico data. We used OLS with white standard errors.

$$\text{LogValueAdded}_{it} = \alpha + \beta_1(\text{After936})_t + \beta_2\text{After936} \times P936in_{it} + \text{Ind}_i + \varepsilon_{it} \quad (1)$$

where Log Value Added is the logarithm of the value added in industry i , After 936 is a dummy variable that equals 1 if the year is during or after the phase out of the 936 tax exemption program for corporations and Ind_i are 19 industry dummies.

Estimation 2 is an alternative estimation. The dependent variable for this equation is the logarithm of value added, employment and number of establishments in the industry. The treatment variable used for this estimation is the log of Tax Credits given to 936 Corporations in the industry. This variable is positive for years before 1995 and equals zero after 2005 since there were no more 936 tax credits to US Positions Corporations. At this point we do not have a control group for this equation where firms in all industries receive the treatment of 936 Tax Credits. In future versions of the paper we will use US industry averages as a control groups.

$$\text{LogValueAdded}_{it} = \alpha + \beta_1(\text{LTaxCredits936Corporations})_t + \text{Ind}_i + \varepsilon_{it} \quad (2)$$

where LogValueAdded is the logarithm of the value added in industry i , $\text{LTaxCredits936Corporations}$ is the logarithm of the dollar amount in thousands of tax exemptions received by firms in industry i . After the complete phase out of the 936 tax exemption program for corporations in 2005, the variable equals zero and Ind_i are 15 industry dummies.

Description and Trends for 936 Corporations

Figure 1 shows data from the IRS Statistics of Income for US Possessions Corporations: net income and tax credits for 936 Corporations and number of US Possessions Corporations tax returns. US Possessions Corporations 936 tax credits have been on decline since 1993, a decline that can be attributed to the phase out and ultimate elimination of the tax exemption program beginning in 1995. The number of returns from US Possessions Corporations declined since 1993. Net income of 936 corporations increased from 1995 to 1997 and experienced a sharp continuous decline since 1997. It is not clear why net income for 936 corporations increased from 1995 to 1997 but may be related to the phase out of the tax credits.

Table 1 shows statistics on the manufacturing industry from the US Economic Census for Outlying Areas. These data show a continuous decline in the number of manufacturing establishments since 1987. This suggests that some of the decline in manufacturing in Puerto Rico precedes the elimination of the 936 tax credit in 1995. Employment statistics show a decline in manufacturing employment since 1997, which coincides with the final phase out of the 936 tax exemption program. Value added

increased from 1987 to 2007 but declined in 2012. These statistics seem to be at odds with the rest of the manufacturing statistics that show a decline in manufacturing activity.

Table 2 show IRS Statistics of Income for US Possessions Corporations: number and percent of US Possessions Corporations tax returns by industry and percent of 936 tax credits awarded by industry in 1993. These statistics show four industries received most of the tax credits and filed most of the returns: food and kindred products, chemical and allied products, electrical and electronic equipment, and instruments and related products. The Chemical and Allied products industry stands out as the largest industry groups with close to 50% of 936 tax credits awarded. Most of these industries are pharmaceuticals.

Table 3 shows percent of manufacturing production in 936 US Possessions Corporations from the Junta de Planificación of Puerto Rico. These data show 936 corporations were a large proportion of most industry production. Over 90% of production in Tobacco products, chemical and allied products, petroleum and coal products, leather and leather products, industrial machinery, electronic and other equipment and instruments and other products originated in 936 Corporations.

Regression Results

Tables 4 and 5 show regressions results. Table 4 shows results for equation (1), where the independent variables are an after936 dummy variable and the after936 dummy variable interacted with the percent of production in 936 corporations in 1987. The results show no impact of the elimination of the 936 tax exemption program on value added, employment or establishments in Puerto Rico.

Table 5 shows results for equation (2) where the independent variable is tax credits awarded to 936 Corporations. These results show that while the phase out of the 936 tax exemption did not affect value added in manufacturing industries, it had the effect of decreasing employment and reducing the number of manufacturing firms in Puerto Rico. Coefficients on Tax Credits for 936 corporations is positive and significant at the 10% level in employment regressions and positive and significant at the 5% level for number of establishments regressions.

Conclusion

After decades of tax exemption programs to lure US Corporations to locate in Puerto Rico, Congress phased out and eliminated the IRS 936 tax exemption program from 1995 to 2005. While many have attributed Puerto Rico's economic crisis and need for a US help to restructure its \$72 billion debt to bondholders, there has been no systematic study of the impact of the phase out of the 936 tax exemption program in Puerto Rico's economy.

Using industry panel data, compiled from IRS Statistics of Income for US Possessions Corporations, US Economic Census for Outlying Areas, and the Junta of Planificación of Puerto Rico, we analyze the effects of the phase out of Section 936 on valued added, employments and establishments from 1987 to 2012. Regressions using tax credits granted to 936 corporations as a control variable show the phase out of the tax program reduced the number of manufacturing establishments and employment in industries that received the highest levels of tax credits. Coefficients on the Tax Credits given to 936 corporations are significant at the 5% in establishment regressions and at the

10% level in employment regressions. Other regressions using percent of 936 corporations in production interacted with the after 936 dummy variable show no significant effect of the phase out of the tax exemption program.

Future versions of this paper will add controls in equation (2) for performance of US industries in the mainland as a control group. Moreover, we will attempt to extend our data back to 1982.

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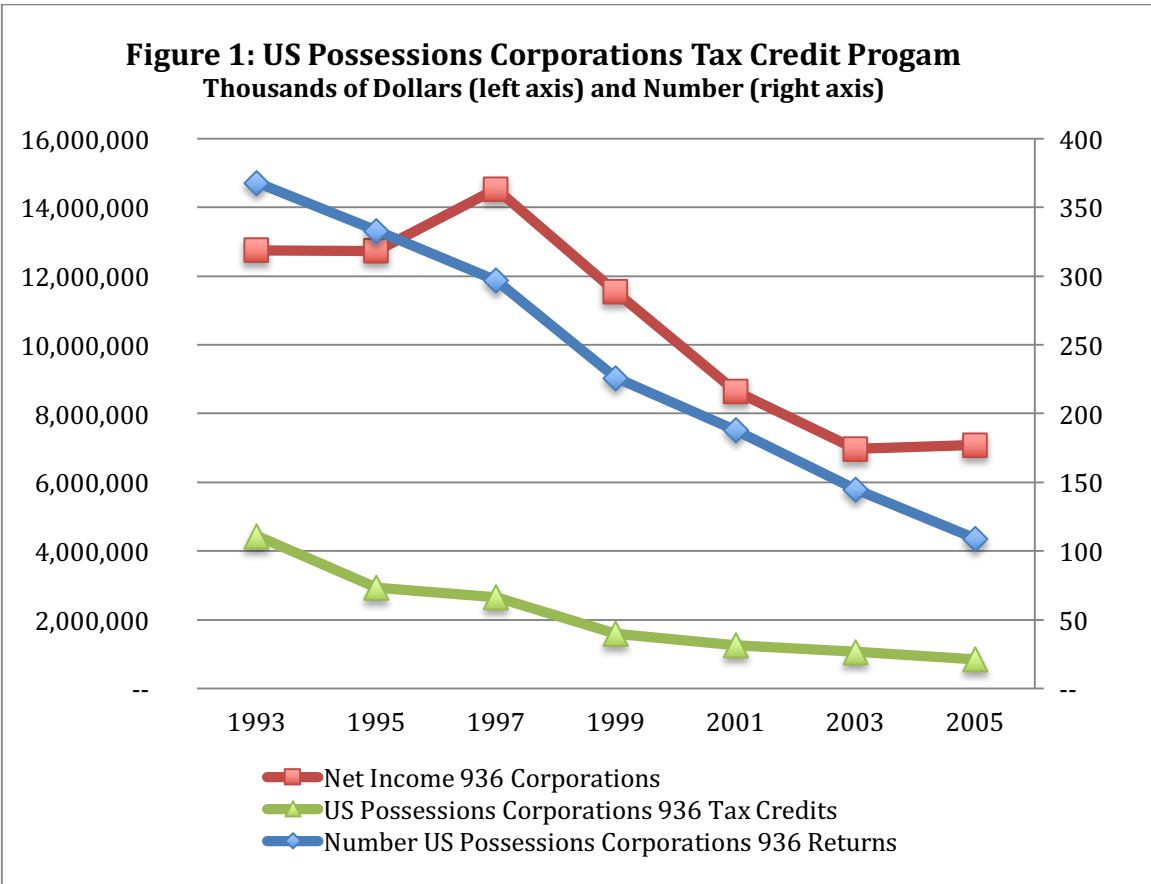
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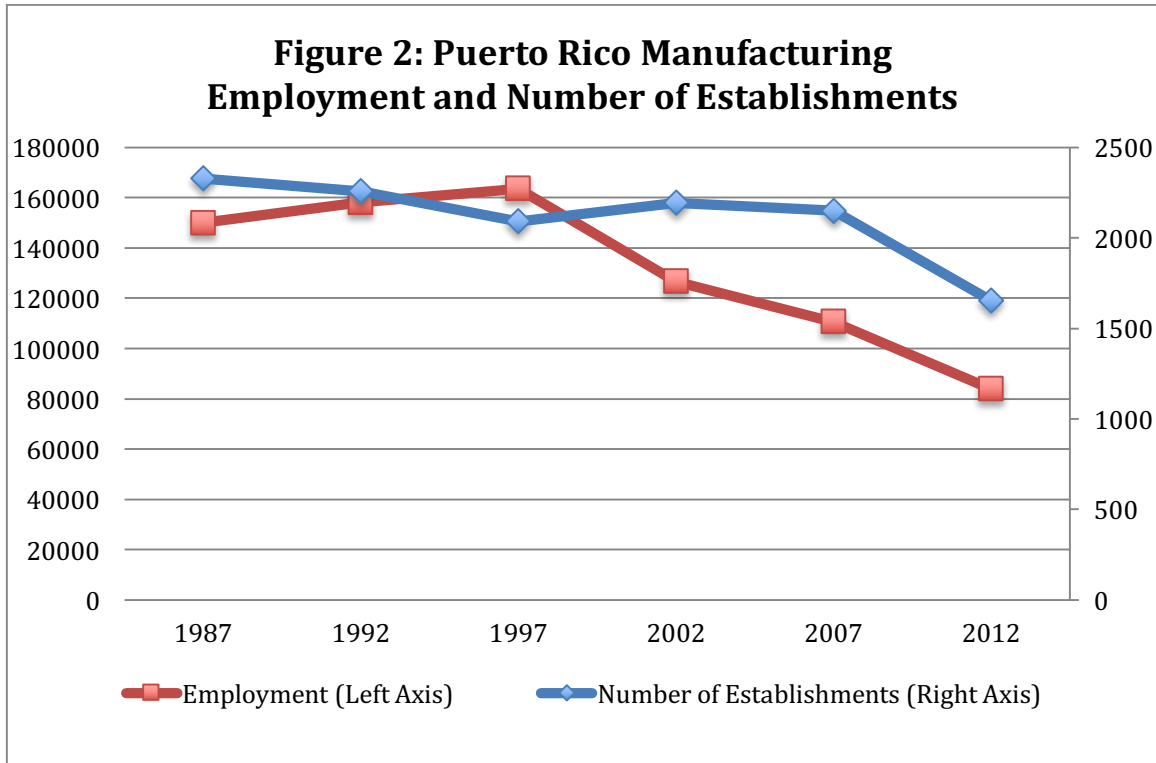
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Possessions: Puerto Rico, Guam, American Samoa, Northern Mariana Islands and US Virgin Islands.

Source: Statistics of Income, US Internal Revenue Service



Source: US Economic Census of Outlying Areas, US Census

Table 1: Manufacturing Statistics, Puerto Rico

Year	Number of Establishments	Value Added (\$1,000)	Employment
1987	2328	13708801	149968
1992	2258	22736655	158181
1997	2092	36426559	163605
2002	2195	45614305	126707
2007	2151	68564360	110691
2012	1653	52597911	83830

Source: US Economic Census of Outlying Areas, US Census

Table 2: U.S. Possessions Corporations, 1993

	Number of 936 returns	Percent of 936 returns	Percent of 936 Tax Credits
Manufacturing Totals	368		
Food and Kindred products	27	7.34%	12.58%
Textile mill products	5	1.36%	0.02%
Other Textile products	49	13.32%	1.73%
Allied	10	2.72%	0.10%
Printing and Publishing	10	2.72%	0.14%
Chemicals and Allied Products	88	23.91%	49.85%
Petroleum and Coal Products	4	1.09%	0.27%
Rubber and Miscellaneous Products	16	4.35%	0.18%
Leather and leather products	13	3.53%	0.46%
Stone, clay, and glass products	4	1.09%	0.08%
Fabricated metal products	19	5.16%	0.12%
Machinery, except electrical	10	2.72%	1.04%
Electrical and electronic equipment	46	12.50%	22.48%
Transportation equipment	4	1.09%	0.29%
Instruments and related products	41	11.14%	9.50%
Miscellaneous Manufacturing	22	5.98%	1.15%
Source: Statistics of Income, US Internal Revenue Service			

Note: Includes Puerto Rico, Guam, American Samoa, Northern Mariana Islands and the

U.S. Virgin Islands. Money amounts are in thousands of dollars

Table 3: Percent of Manufacturing Production in 936 U.S. Possessions Corporations in Puerto Rico, 1987.

SIC Code	Industry Description	Percent of Production by 936 firms
20	Food and kindred products	69
21	Tobacco products	99
22	Textile mill products	91
23	Apparel and other textile products	78
24	Lumber and wood products	3
25	Furniture and fixtures	3
26	Paper and allied products	45
27	Printing and publishing	09
28	Chemicals and allied products	98
29	Petroleum and coal products	95
30	Rubber and miscellaneous	70
31	Leather and leather products	94
32	Stone, clay, and glass	12
33	Primary metal industrial products	83
34	Fabricated metal products	32
35	Industrial machinery	98
36	Electronic and other	96
37	Transportation equipment	85
38	Instruments and related	97
39	Miscellaneous manufacturing	87

Source: Junta de Planificación de Puerto Rico, 1993

Table 4: Impact of elimination of 936 Corporation Tax Credits on value added, employment and number of establishments, Percent 936 production as controls.

Dependent Variable:	Manufacturing					
	Log Value Added		Log Employment		Log Establishments	
After 936 is Abolished (1995-2012)	-0.100		-0.149		-0.069	
	(.213)		(.141)		(.090)	
After 936 is Abolished x Percent 936 Corporations in Production of Industry in 1987	.280		-.327		-.213	
	(.373)		(.246)		(.153)	
Industry Dummies (19 dummies)	Yes		Yes		Yes	
Observations	111		111		111	
R-Squared	.83		.82		.90	

Data Source: Census of Manufacturing Data, Years 1987, 1992, 1997, 2002, 2007, 2012 and Impacto 936, Junta de Planificación de Puerto Rico, 1993

Table 5: Impact of elimination of 936 Corporation Tax Credits on value added, employment and number of establishments Tax Credits as control variable

Dependent Variable:	Manufacturing					
	Log Value Added		Log Employment		Log Establishments	
Log Tax Credits 936 Corporations (1995-2012)	.030		.098	*	.081	**
	(.092)		(.054)		(.037)	
Industry Dummies (15 dummies)	Yes		Yes		Yes	
Observations	100		100		100	
R-Squared	.64		.65		.68	

Data Source: Statistics of Income and Census of Manufacturing Years 1987, 1992, 1997, 2002, 2007, 2012, and