



The Demand for Tax Haven Operations and Do Tax Havens Divert Economic Activity?

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Motivation (1)

Many governments, particularly those in economic federations, are concerned about the increased usage of tax havens

- Are we losing tax revenue?
- Are we losing activity?
- Are we racing to the bottom?

What determines the demand for havens? What determines the ability to access avoidance opportunities?

What do firms use havens for?

How do haven operations interact with non-haven operations?



Motivation (2)

Very different rationales and implications of haven use...

- Relocation of taxes from high-tax to low-tax jurisdictions
- Facilitating deferral/avoidance of repatriation taxes by U.S.

Does economic activity in tax havens come at the expense of activity in other countries?

■ If there is a certain (fixed) amount of total world economic activity, locations are substitutes.

■ Total world economic activity may not be fixed - greater activity in one place might then stimulate greater activity elsewhere. How?

1. Tax haven affiliates might provide valuable intermediate inputs used by operations elsewhere.
2. The use of tax havens to facilitate tax avoidance may reduce the tax cost of operating in high tax places, and thereby make them more attractive than they would otherwise be.



Our Approach

Using data on U.S. multinational firms, examine characteristics that are associated with a demand for tax haven operations

Separately consider the distinctive role of larger tax havens in order to identify effects of profit reallocations to havens and their effects within regions

Given that the effect of haven operations on non-haven operations is the same as non-haven operations on haven operations, look for an instrument for non-haven operation growth and examine effects on haven use

- This will tell us how the use of havens effects non-havens...



Data and Empirical Setup for Demand for Havens

Confidential data for U.S. firms from the BEA with detailed financial and operating reports on their activity

Logit regressions where dependent variable is dummy for haven usage

Parent year observation for 1982, 1989, 1994 and 1999

Independent variables – Sales, Non-haven sales, R&D/Sales, Industry intrafirm trade, average *industry* non-haven tax rate

Additionally, Tobit regressions where dependent variable is share of affiliates or affiliate sales in havens



What stimulates demand for tax haven activity - Results

Table 3
Determinants of the Demand for Havens

Dependent Variable	Have Haven Dummy		Share of Affiliates in Havens		Share of Affiliate Sales in Havens	
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.0327 (0.3083)	-0.7235 (1.8987)	-1.0884 (0.9413)	-1.2623 (0.2886)	-1.1289 (0.0489)	-1.3607 (0.2889)
Log of Non-Haven Sales	0.5918 (0.0223)	-0.5959 (0.0948)	0.0421 (0.0042)	-0.0160 (0.0185)	0.0355 (0.0048)	-0.0363 (0.0213)
Square of Log of Non-Haven Sales		0.0541 (0.0044)		0.0028 (0.0006)		0.0033 (0.0009)
Log of Parent Sales	0.1275 (0.0291)	0.7408 (0.2890)	0.0395 (0.0049)	0.1446 (0.0408)	0.0424 (0.0058)	0.1304 (0.0457)
Square of Log of Parent Sales		-0.0216 (0.0113)		-0.0042 (0.0025)		-0.0054 (0.0036)
Average Industry Non-Haven Tax Rate		-2.4676 (1.2546)		-0.5453 (0.2108)		-0.7972 (0.2108)
Industry Share of Sales to Related Parties Abroad		1.0141 (0.4662)		0.2105 (0.0775)		0.2696 (0.0881)
Parent R&D to Sales Ratio		3.0290 (0.8247)		0.3758 (0.0828)		0.5249 (0.0984)
No. of Obs.	8,435	7,730	8,435	7,730	8,435	7,730
Log Likelihood	-4.962	-5.608	-3.255	-3.874	-3.298	-2.912

- Larger firms employ havens more as do firms with larger non-haven operations
- Greater intrafirm trade and R&D intensity also are associated with increased haven usage
- Lower average nonhaven tax rates appears to contribute to demand for havens => deferral



Large Havens vs. Small Havens - Results

Table 4
Determinants of the Demand for Havens, by Haven Type

Dependent Variable	Share of Haven Affiliates in the Sig 1		Share of Haven Affiliate Sales in the Sig 2	
	(1)	(2)	(3)	(4)
Constant	3.2294 (0.2487)	-1.3480 (1.4217)	3.3275 (0.2729)	-1.8809 (1.5138)
Log of Non-Haven Sales	0.1065 (0.0199)	0.2666 (0.0872)	0.1352 (0.0234)	0.2285 (0.0844)
Square of Log of Non-Haven Sales		-0.0078 (0.0038)		-0.0049 (0.0035)
Log of Parent Sales	-0.2146 (0.0274)	-0.0304 (0.2335)	-0.3019 (0.0219)	-0.0172 (0.2256)
Square of Log of Parent Sales		-0.0079 (0.0078)		-0.0094 (0.0082)
Average Industry Non-Haven Tax Rate		3.6434 (0.9708)		4.1932 (0.8933)
Industry Share of Sales to Related Parties Abroad		0.9718 (0.3444)		0.9967 (0.3499)
Parent R&D to Sales Ratio		3.3325 (0.5612)		3.6430 (0.6050)
No. of Obs.	2,774	2,775	2,680	2,469
Log Likelihood	-2.567	-2.302	-2.377	-2.134

Conditional on using havens, what differentiates demand for big haven activity?

- Larger firms more likely to concentrate activities in larger havens
- Greater intrafirm trade and R&D intensity also associated with more large haven usage
- Higher average nonhaven tax rates appears to contribute to demand for big havens



Effects of Regional Tax Havens – Empirical Setup (1)

Are haven and nonhaven operations complements or substitutes?

All foreign operations are jointly determined – need an instrument

Ideally, would instrument for changed costs of using a haven and then use predicted values in second stage to see how changed haven use affects non-haven growth

Such instruments are hard to find

Complementarity and substitutability are symmetric properties, so the effect of tax haven operations on non-haven activities can be estimated by examining the effect of non-haven operations on tax haven activities



Effects of Regional Tax Havens – Empirical Setup (2)

Estimate this in first differences: change in tax haven operations as a function of the change in non-haven activities

Non-haven economic growth rates (the weighted average within a parent) can be used to predict non-haven activity growth rates in the first stage

Predicted values of non-haven activity growth rates can be used to investigate the relationship to haven usage in a second stage

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Effects of Regional Tax Havens - Second Stage Results

Table 7
The Relationship between Haven and Non-Haven Activity, Within Regions

Dependent Variable	Haven Use Dummy				Haven Use Dummy	
	(1)	(2)	(3)	(4)	(7)	(8)
Constant	0.0173 (0.3348)	-0.1338 (0.2335)	-0.0154 (0.1424)	-0.1911 (0.2200)	-0.0003 (0.2285)	-0.1157 (0.2515)
Affiliate Sales Growth in Non-Haven	6.1934 (1.2346)	5.4789 (0.7516)			7.9191 (0.4870)	
Affiliate Net PPE Growth in Non-Haven			6.2493 (1.2145)	7.3020 (0.1900)		7.5724 (0.8273)
Parent Firm Effect?	Y	Y	Y	Y	Y	Y
IV with GDP Growth and Social Levels?	Y	N	Y	N	Y	Y
IV with GDP Growth?	N	Y	N	Y	N	N
No. of Obs.	816	817	817	817	320	321
Log Likelihood	-931	-543	-584	-543	-208	-210

Predicted values from the first stage regression are associated with the onset of haven usage – by symmetry, lowered costs of haven usage stimulates nonhaven activity

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Conclusions (1)

Size, level of globalization, R&D intensity, Intrafirm trade all contribute to the demand for havens – all happen to also be increasing in importance. Havens and their uses are here to stay

Tax motivations are more complex than reallocations of profits from high-tax areas – havens also figure into avoidance of U.S. taxes

Regional effects are large

No evidence of diversion of activity and, if anything, the availability of havens appear to stimulate activity in non-havens

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Conclusions (2)

Open economies have incentives to tax mobile multinational firms less heavily than they do other firms given relative elasticities

It is very difficult to differentiate tax burdens in this way for political and practical reasons

Regional tax havens may permit countries to maintain high corporate tax rates that they effectively impose at different rates on domestic v. multinational taxpayers.

- Note this can be an optimal configuration.
- Countries may or may not realize this is happening.

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