

Cross-Jurisdictional Income Shifting: Employing a Multi-year Approach

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Purpose

- To investigate the income shifting patterns between the U.S. and foreign jurisdictions of U.S. multi-national companies (MNC)

Specific research questions for MNCs:

Is the tax incentive to shift income a multi-period construct?

Do investment opportunities affect income shifting?

Do financial reporting incentives affect income shifting?

Why are these questions important?

- Geographic income shifting is an important tax planning technique
 - MNC have some discretion over shifting income
 - saves tax dollars
 - reduces tax expense, i.e., higher EPS

- “Inappropriate profit shifting”
 - U.S. losing > \$17.4 billion more in 2004 relative to 1999 (Sullivan 2008)

- Policymakers in multiple jurisdictions care

Why are these questions important?

Prior research mixed...

- U.S. MNC shift income into but not out of U.S.
 - Collins, Kemsley and Lang (1998)
- U.S. MNC shift income to tax havens?
 - E.g., Desai et al. (2003), Callen, Hope and Segal (2005)
- U.S. MNC debt location choices consistent with tax incentives affecting income shifting
 - Newberry and Dhaliwal (2001)

What do we contribute?

- Develop a new, more stable proxy for the incentive to shift income
 - H1: Re-examine prior literature using the new proxy and provide evidence that firms engage in tax motivated income shifting on average
- Incorporate investment opportunities into model of income shifting and tests empirically
 - H2: $t_f > t_{US}$ - firm value maximized by shifting into U.S.
 - H3: $t_f < t_{US}$ - firm value maximized by shifting out of U.S. only when foreign investment opportunities are high
- Examine cross-sectional differences in financial reporting incentives
 - H4: Financial reporting incentives associated with more shifting

Why Multi-period Approach?

- Transaction costs of shifting
 - Establishing foreign operations
 - Modifying capital structure
 - Modifying transfer pricing calculations
- Changes in earnings patterns = **Red Flag**
- Multi-year carryovers for FTCs
- If managers consider multiple periods, a multi-period proxy more likely to reflect incentives to which managers respond

Proxy - Incentive to Shift Income

$$\overline{FTR} = \frac{\sum_{m=0}^4 TE_{f,t-m}}{\sum_{m=0}^4 PTI_{f,t-m}} - \frac{\sum_{m=0}^4 STR_{US,t-m}}{5}$$

- Captures firms' tax incentive conditional on their current mix of operations and reporting

HighFTR vs. *HighFTR*

➤ Table 3

- Panel A: $\approx 81\%$ of firms classified the same using annual vs. average measure
- Panel B (annual measure): $\approx 24\%$ firms switch classifications from $t-1$ to t
- Panel C (average measure): $\approx 10\%$ firms switch classifications from $t-1$ to t
- Panel D: Annual measure results in more frequent changes

➤ Take away – Average measure more stable proxy for foreign tax incentives! Does it matter?

Why CKL's Approach?

- Company-level data
 - Unlike aggregate economic data, controls for other factors that give rise to differences in profits across operations
 - Unlike transactional data, gives overall picture of company activities
- Commonly cited paper
- Asymmetric results counter conventional wisdom

Re-examining Collins et al. (1998)

$$FRoS_{i,t} = \beta_0 + \beta_1 RoS_{i,t} + \beta_2 HighFTR_{i,t} + \beta_3 LowFTR_{i,t} * FTR_{i,t} \\ + \beta_4 HighFTR_{i,t} * FTR_{i,t} + \sum \beta_{5k} IND_{i,t} + \sum \beta_{6t} YEAR_{i,t} + \varepsilon_{i,t}.$$

- ***FRoS*** - foreign PTI / foreign sales
- ***RoS*** - worldwide PTI / WW sales - control for cross-sectional variation in firms overall profitability
- ***LowFTR*** – indicator = 1 if $FTR \leq 0$
- ***HighFTR*** – indicator = 1 if $FTR > 0$

Table 4 Replication & Modification

Equation →	CKL Table 2	Full Sample	
	Eq (2)	1988 – 92	1988 – 06
Variables	(A)	(F)	(G)
<i>LowFTR</i> * <i>FTR</i>	0.036 (2.11)***		
$\overline{\text{LowFTR}} * \overline{\text{FTR}}$		-0.088 (-1.93)**	-0.112 (-4.88)***
<i>HighFTR</i> * <i>FTR</i>	-0.107 (-18.11)***		
$\overline{\text{HighFTR}} * \overline{\text{FTR}}$		-0.095 (3.29)***	-0.090 (-4.20)***
<i>Diff in FTR</i> Coefficients	0.143***	0.007	-0.022
<i>N</i>	2,517	1,710	6,912
<i>R</i> ²	0.28	0.43	0.44

H2/H3: Investment Opportunities

$$\overline{FRoS_{i,t}} = \beta_0 + \beta_1 \overline{RoS_{i,t}} + \beta_2 \overline{HighFIO_{i,t}} + \beta_3 \overline{LowFIO_{i,t}} * \overline{FTR_{i,t}} \\ + \beta_4 \overline{HighFIO_{i,t}} * \overline{FTR_{i,t}} + \sum \beta_{5k} IND_{i,t} + \sum \beta_{6t} YEAR_{i,t} + \varepsilon_{i,t}.$$

- Estimate separately for $\overline{HighFTR}$ (H2) and \overline{LowFTR} (H3) subsamples
- $FIO = 1$ if $r_f > r_{US}$ (after-tax return)
- β_3 = income shifting when low FIO
- β_4 = income shifting when high FIO

H4: Financial Reporting Incentives

$$\overline{FRoS_{i,t}} = \beta_0 + \beta_1 \overline{RoS_{i,t}} + \beta_2 \overline{HighFRI_{i,t}} + \beta_3 \overline{LowFRI_{i,t}} * \overline{FTR_{i,t}} \\ + \beta_4 \overline{HighFRI_{i,t}} * \overline{FTR_{i,t}} + \sum \beta_{5k} IND_{i,t} + \sum \beta_{6t} YEAR_{i,t} + \varepsilon_{i,t}.$$

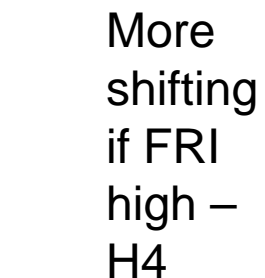
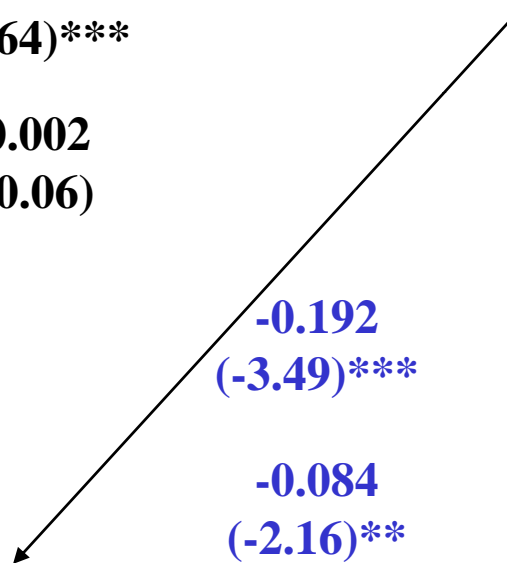
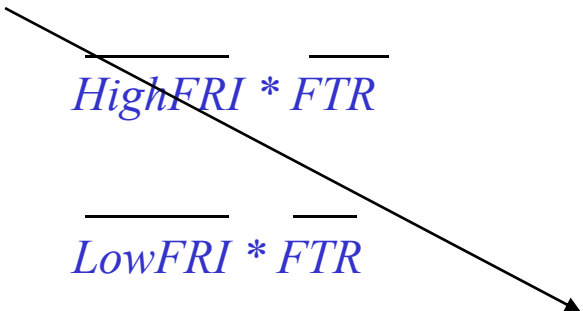
➤ Estimate for \overline{LowFTR} subsample

- $HighFRI = 1$ if firm states that it has PRE and either
 - (1) gives value for the taxes not recorded, or
 - (2) states that amount of such taxes not practical to estimate
- β_3 = income shifting when low FRI
- β_4 = income shifting when high FRI

Table 5 – Further Analysis

Variable	Foreign Investment Opportunities		Financial Reporting	When $t_f < t_{US}$, shift out of US only if <i>FIO</i> high – H3
	<i>HighFTR</i> Sub-sample	<i>LowFTR</i> Sub-sample	<i>LowFTR</i> Sub-sample	
<i>HighFIO</i> * <i>FTR</i>	-0.058 (-1.51)*	-0.082 (-3.64)***		
<i>LowFIO</i> * <i>FTR</i>	-0.045 (-2.68)***	-0.002 (-0.06)		
<i>HighFRI</i> * <i>FTR</i>			-0.192 (-3.49)***	More shifting if <i>FRI</i> high – H4
<i>LowFRI</i> * <i>FTR</i>			-0.084 (-2.16)**	
<i>Diff in FTR Coeff</i>	-0.013	-0.080 ***	-0.108 **	
N	3,301	3,611	527	
R ²	0.63	0.55	0.41	

When $t_f > t_{US}$, shift into US – H2



Conclusions

- Develop a new, more stable proxy for the incentive to shift income
- Provide evidence that
 - Firms engage in tax motivated income shifting into and out of the U.S. on average
 - Investment opportunities do not affect shifting into U.S., but affect shifting out of U.S.
 - Firms with financial reporting incentive to shift income are more active income shifters