Detecting profit shifting in Indonesia using the Hines and Rice approach

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Abstract

1. I

Business enterprises view tax as an expense and may try to avoid it. Multinational enterprises (MNEs) are in a better position to avoid tax because different countries have different tax rates and tax rules that MNEs can exploit. The most widely known method of international tax avoidance involves shifting profits to low tax jurisdictions, causing erosion of the tax base of high tax jurisdictions.

Although most base erosion and profit shifting (BEPS) strategies are legal, according to the Organisation for Economic Co-operation and Development (OECD) (2015a), the process generates several undesirable consequences. First, BEPS distorts competition because MNEs may gain competitive advantages from BEPS opportunities that domestic companies do not have. Second, it may cause the inefficient allocation of resources by distorting investment decisions towards activities that have lower pre-tax rates of return, but higher after-tax returns. Finally, it discourages voluntary compliance of most taxpayers because they observe that MNEs legally avoid income tax. The three potential distortions, compounded by the fact that most developing countries heavily rely on corporate income tax (CIT) revenue, have positioned studies on BEPS – particularly studies that focus on developing countries – as highly important.

The incidence of profit shifting by MNEs in developed countries has been confirmed by many empirical studies over several decades (e.g., Hines & Rice, 1994; Huizinga & Laeven, 2008; Dowd, Landefeld & Moore, 2017). By contrast, similar studies that focus on developing countries have only emerged in the past few years (e.g., Janský & Prats, 2015; Salihu, Annuar & Obid, 2015). Fuest and Riedel (2012) argue that the reason why knowledge on profit shifting in developing countries is limited is because the data and method used to measure profit shifting are not reliable.

This article investigates whether foreign-owned Indonesian companies (FOICs) shift profits out of Indonesia using a research method introduced by Hines and Rice (1994) with some modifications. Hines and Rice's pioneering (1994) study on profit shifting by MNEs 'established a conceptual framework that continues to be highly influential' (Dharmapala, 2014a, p. 424). Dowd, Landefeld and Moore (2017) suggest that the Hines and Rice approach (hereafter HRA) has become a standard in the literature.

Despite the fact that the results in studies that adopt the HRA vary, they are consistent with the hypothesis that there is a negative relation between the level of CIT rates in the host countries and the magnitude of profits reported by MNEs in different host countries. However, few studies have adopted the HRA to measure the extent to which the tax rate of the parent's country of a foreign-owned company operating in a developing country influences the profits reported by the foreign-owned company. This article is one of the early studies that uses the HRA to examine the existence of profit shifting by MNEs in a developing country using tax return data that cover a relatively long period of study.

This study uses tax return data supplied by the Directorate General of Taxes (DGT) –

in the form of a tax rate difference between countries. Equation (1) represents the original HRA:

$$\log \quad = \quad + \quad + \quad \log \quad + \quad \log \quad + \quad \log \quad + \qquad (1)$$

where:

log the dependent variable, is the logarithm of the pre-tax income of all US MNEs' foreign affiliates in host country i calculated based on confidential US Department of Commerce survey data;

the independent variable, is the average tax rate in host country i; the HRA bases the average tax rate on the effective tax rate (ETR) or the statutory tax

revenue (IMF, 2014). Moreover, the IMF estimates that the loss is as high as 13% in developing countries, confirming the high vulnerability of developing countries to profit shifting.

In 2012, the G20 initiated a global project to tackle profit shifting by MNEs and asked the OECD to undertake the project. The OECD agreed and launched the project, called Base Erosion and Profit Shifting, in February 2013. The G20 countries which are not OECD members (e.g., Indonesia) became associates that have equal footing with OECD members in the project and agreed to adopt an Action Plan to address BEPS in September 2013 (OECD, 2013b). Since its launch, the project has received consistent support from the G20 and is known as the OECD/G20 BEPS Project or the BEPS

This premise is applicable to all MNE affiliates, either in many countries or in a single country.

However, this study modifies the original HRA in Equation (1) in several ways. The

is the pre-tax AP reported by FOIC i for year t;

is the TI reported by FOIC i for year t;

is the parent's STR of FOIC i for year t;

is the capital input of FOIC i in year t, proxied by fixed tangible assets;

is the labour input of FOIC i in year t, proxied by employment compensation;

is a set of six dummy variables that is expected to account for annual fluctuations in lnAP or lnTI (the dependent variable) that were not caused by PTR (the independent variable) and K and L (the control variables);

Table 3: Pearson Correlation Matrix

Table 4: Regression Results – Effect of Parent's Tax Rate on Reported AP and TI

ln /ln = + + ln + ln + +

	Expected sign	Dependent variable: Natural log of AP	Dependent variable: Natural log of TI

Indonesian tax return. The empirical results are consistent with the proposition that Indonesia suffers from profit shifting by FOICs.

The coefficients of lnK and lnL are both positive and significant at the 1% level. Moreover, the regression model represented by Equations (2) and (3) have an adjusted R-squared of 63.7% and 61.2%, respectively. The high explanatory power of the regression ory po l

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Appendix 2: final sample by country of parent, 2009–2015

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Belgium	1	1	2	2	1	2	2	11
Canada	1	2	3	4				

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
Czech Republic	0	0	0	0	0	0	1	1
Egypt	0	0	0	0	0	0	1	1

Country	Year							
	2009	2010	2011	2012	2013	2014	2015	Total
United Kingdom	**14**	**16**	**17**	**15**	**9**	**6**	**8**	**85**
British Virgin Islands	**15**	**12**	**17**	**12**	**8**	**10**	**10**	**84**

Country	2009	[illegible]	2011	[illegible]	[illegible]	2014	2015	Total
Liechtenstein	[illegible]	[illegible]	0	[illegible]	1	1	0	

Appendix 3: statutory tax rates, 2009–2015

Location	Tax Rate %						
	2009	2010	2011	2012	2013	2014	2015
Argentina	35	35	35	35	35	35	35
Australia	30	30	30	30	30	30	[illegible]

Location				
India				
Indonesia			25	25

United Arab Emirates	**55**	**55**	**55**	**55**	**55**	**55**	**55**

Appendix 4: unbalanced panel data

A. Accounting Profit Model

Frequency	%	Cumulated	Pattern
299	24.33	24.33	 1
[illegible]	[illegible]7	31.33	. . . . . 1 .
			XXXXXXX

Frequency	**%**	**Cumulated**	**Pattern**
64	**5.95**	**28.74**	**1111 . . .**