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Tax motivated transfer price manipulation in South Africa

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Abstract: This paper provides the first direct systematic evidence of profit shifting through transfer price manipulation in a developing country. Using South African firm-level customs data for 2011-2015, I directly test for transfer price deviations from arm's-length pricing. I find that multinational firms operating in South Africa manipulate transfer prices in order to shift taxable profits to low tax destinations. Using the same approach, I further investigate the implications of a recent transfer price legislation reform, which implemented a series of OECD recommendations in South Africa. I find that, although the reform limited transfer price manipulation in the immediate aftermath, the prevalence of transfer price manipulation returned to its original level after three years.

Keywords: tax, international taxation, profit shifting, multinational firms, developing countries

JEL classification: H25, H26, H87, O23

Graphs and tables can be found in the back of the paper

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1 Introduction

The global importance of multinational companies (MNCs) has been rapidly growing for several decades. As an example, the global market share of foreign held affiliates grew from 21 percent to 47 percent from 1990-2014.² This MNC expansion has been skewed towards developing countries, where growth rates in MNC sales, assets, and employment are highest (UNCTAD 2015). Historically, many developing country governments have welcomed MNCs on the grounds that they bring knowledge and technology with them - a notion that is somewhat supported in the academic literature.³ In recent years, however, sceptics have argued that MNCs are not paying their “fair share” of taxes and, as a result, are receiving an unfair competitive advantage while eroding the corporate tax base. This skepticism has been fueled by anecdotal cases of large MNCs paying effectively no taxes on substantial profits.⁴ MNCs can lower their global tax bill by shifting their earnings from subsidiaries facing higher tax burdens to those in low-tax environments - a phenomenon known as “profit shifting”. In a remarkable consensus, international organizations agree that profit shifting is a particular problem in developing countries, which lack institutional capacity and rely heavily on corporate tax revenue.⁵ However, credible profit shifting estimates for developing countries are in short supply, leaving room for much speculation. This lack of evidence has led to concerns among some economists who fear that the relevance of profit shifting in the development agenda may be overrated (Forstater 2015, Johannesen & Pirttilä 2016).

One important channel of profit shifting is transfer price manipulation. That is, firms can reduce their tax bill by applying a high price on items flowing from affiliates in low-tax countries to affiliates in high-tax countries, and vice-versa. This erodes the profits in the high-tax affiliate, which is paying a high price, but equally increase the profits in the low-tax affiliate, which is receiving the high price. Legally firms are supposed to use “arm’s-length pricing” when transacting internally. That is, firms should set prices internally “as if” they were trading with an external party. However, following the standard Allingham-Sandmo model (1972), firms may choose to deviate from arm’s-length pricing absent frequent audits. Furthermore, even when audited the OECD admits that “transfer pricing is not an exact science”

² Market share measured in terms of sale shares. Same pattern exists when looking at assets and employees (UNCTAD 2015).

³ A broad theoretical and empirical literature exists on the topic of “technology transfers” and “technology externalities”. See Blalock and Gertler, 2008, Kugler, 2006 and Javorcik, 2004 for concise overviews of the various channels). Recent empirical evidence include Newman et al (2015).

⁴ Most recently, Apple received attention as they were fined 14.5 Billion USD by the EU Commission for paying virtually no taxes in Ireland: <https://www.wsj.com/articles/apple-received-14-5-billion-in-illegal-tax-benefits-from-ireland-1472551598>

⁵ See e.g., UNCTAD (2015); www.imf.org/en/News/Articles/2015/09/28/04/53/sp022216 and www.oecd.org/g20/topics/taxation/g20-finance-ministers-endorse-reforms-to-the-international-tax-system-for-curbing-avoidance-by-multinational-enterprises.htm.

(OECD 2010, pp. 2) and this uncertainty leaves room for firms to produce convincing arm's-length price benchmarks in their favor. All in all the actual enforcement of arm's-length pricing requires substantial administrative resources and a common hypothesis is that tax authorities in developing countries do not have these resources. The main contribution of this paper is to test this hypothesis by providing direct systematic evidence of tax motivated transfer price manipulation in a developing country, which has not previously been possible due to data constraints.

I obtain access to a newly constructed confidential administrative-level customs dataset covering all imports of goods to South Africa in the period 2011-2015. The data is disaggregated at the country-firm-relationship-product-year level, which allows me to precisely estimate the arm's-length price of each transaction. I then compare the unit price on related (intra-firm) transactions to the estimated arm's-length price. I find that the estimated deviation from arm's-length pricing systematically move in accordance with the tax incentives to manipulate transfer prices. This is interpreted as strong evidence of firms engaging in tax motivated transfer price manipulation. Across all specifications I find evidence that related imports from low tax countries are overpriced by at least 8 percent compared to the estimated arm's-length price. This translates into a semi-elasticity of -0.5, implying that for each pct. pt. the partner tax rate decreases, the price wedge to the arm's-length price increases by 0.5 percent. This semi-elasticity is roughly 50 percent larger than what has been observed across French MNCs (Davies *et al.* 2016) but otherwise on par with what has been observed in the US (Bernard *et al.* 2006). Overall, the estimated response of transfer price manipulation to tax incentives is thus not conclusively above what has been observed in developed countries.

Using the same methodology, I then move on to investigate the effects of a recent transfer price legislation reform. In April 2012 South Africa introduced a number of measures aimed at limiting transfer price manipulation through increased documentary requirements and audit discretion. These legislative changes were based on OECD recommendations. I find that this reform did seem to limit transfer price manipulation in 2012-2014 but that transfer price manipulation returned to its original level in 2015. One possible explanation of this pattern is that the immediate effect of the reform was primarily an (unjustified) expectation of highly increased audit capabilities in the tax administration. As firms then obtained information on the actual change in audit capabilities the transfer price manipulation behavior returned to its initial level.

Recent research suggests that firms may shift profits to loss making subsidiaries as these are effectively facing a zero percent marginal tax rate (Hopland *et al.* 2014). Contrary to what the theory predicts, I do not find evidence that loss-making MNC subsidiaries in South Africa are receiving profits from affiliates in other countries.

Most profit shifting studies rely on so called “indirect evidence”, which relates the taxable profits of each subsidiary to its inputs of labour and capital and the tax incentive to shift profits. This method is, however, also the subject of much criticism. The main criticism being that when simply investigating patterns in profitability, one might be capturing other “real” responses to tax incentives or tax avoidance not related to profit shifting.⁶ In a broader sense, the indirect evidence approach can be unsatisfactory as the method does not identify specific profit-shifting channels. This study addresses such critique by directly comparing the prices that MNCs apply to internal and external transactions.

A further critique of past profit shifting studies – especially relevant for developing country settings – is the common use of low coverage proprietary databases. In their G20 mandated report on profit shifting measurement the OECD stressed that the use of proprietary databases led to uncertainty on data quality and coverage, particularly outside of the EU and in developing countries (OECD 2015). The OECD thus advocates the use of tax-administrative micro-data in profit shifting studies, which has previously not been possible in developing countries. Unlike previous work, this study follows the OECD recommendation by using tax-administrative data.

This paper contributes to the scarce literature on “direct” evidence of transfer price manipulation. In fact, this is the first study applying this direct identification strategy outside the context of the US, France and Denmark. Swenson (2001) and Clausing (2003) introduced the method by estimating the impact of corporate tax rates on US trade price indices aggregated at the industry and country level. They both find evidence of transfer price manipulation, but there is a concern that product and firm compositional effects may drive the result. Bernard *et al.* (2006) address this issue by using customs data at the firm and product level, allowing them to accurately estimate arm’s-length price deviations. As opposed to exploiting the full sample of product prices at a country-by-country level, Bernard *et al.* (2006) instead calculate price wedges between related and unrelated transactions for each product group within each MNC. This makes their estimates less comparable to mine. Most recently, Davies *et al.* (2016) investigate transfer price manipulation in France using a method directly comparable to the one used in this paper, which make their results a good point of reference for this study. Vicard (2014) and Cristea and Nguyen (2016) also find strong evidence of transfer price manipulation in France and Denmark. They do not, however, observe whether transactions are in fact related but instead approximate this using firm ownership data.

This paper also contributes to a small literature on profit shifting in developing countries. Most related, Reynolds and Wier (2016) use South African tax-

⁶ See Hines (2014) for a discussion of this.

administrative data to show that profitability patterns of South African subsidiaries correlate with the tax incentive to shift profits (measured by the parent tax rate). They estimate that the profit shifting response to tax incentives is roughly twice as high in South Africa compared to what has been observed in developed countries. Using a proprietary micro data-set, Johannesen *et al.* (2016) find profitability patterns consistent with aggressive profit shifting in Eastern European transitional economies. Using macro-data, Crivelli *et al.* (2015) find that developing countries' tax bases respond to offshore exposure, which they interpret as suggestive evidence of profit shifting. Finally, Fuest *et al.* (2011) use micro-data on multinational subsidiaries with German parents to estimate profit shifting via the reallocation of debt. They find that debt shifting is more pervasive in developing countries. To my knowledge, this is the first paper that uses firm-product level customs data to directly test for transfer price deviation from arm's-length in a developing country.

The paper will proceed as following: Section 2 describes the South African context and transfer pricing legislation; section 3 gives a brief theoretical motivation; section 4 presents the data used; section 5 explains the identification strategy; in section 6 the empirical results are reported; finally, I conclude the findings section 7.

2 South African context and transfer pricing legislation

South Africa is an upper middle-income emerging economy with a GDP per capita of US\$5,692 in 2015.⁷ Total tax revenue constitutes 26.2 of GDP in 2015–16, which is substantially beneath the OECD average of 34 percent (National Treasury 2016).⁸ The South African statutory tax rate on business income is 28 percent, which places it slightly above the world average of 24 percent.⁹ The corporate income tax constitutes a significant share of 19 percent of total taxes in 2014/2015, which places South Africa on par with the developing country average.¹⁰ In comparison, developed countries corporate income tax share of total taxes was only 11 percent in 2014 (UNCTAD 2015).

Transfer price legislation was first enacted in South Africa in 1995 and requires that tax payers follow the arm's-length principle in their transactions with affiliated foreign parties. In recent years, the area has received increased attention, ultimately leading to an amendment of the transfer pricing rules on 1 April 2012 to follow OECD standards (PWC 2013, to be discussed further in section 6.4). South Africa

⁷ World Bank 2016 data from <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.

⁸ 2016 OECD data available at: <https://data.oecd.org/tax/tax-revenue.htm>.

⁹ See the KPMG Corporate Tax Table <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

¹⁰ National Treasury 2016 and UNCTAD 2015

has implemented a series of measures in an attempt to curb transfer price manipulation, and participated actively in the OECD–G20 Base Erosion and Profit Shifting (BEPS) Project.

Following WTO stance on transfer pricing, South African tax authorities can require the importer to explain a chosen transfer price whenever the importer and exporter are “related” (e.g. through common ownership) and that this relation is suspected to have impacted the transaction value. In order to avoid a transfer price correction, the importer must demonstrate that the chosen transfer price can be justified according to one of the following methods:¹¹

- 1) The transfer price corresponds to the price observed in external comparable unrelated transactions (According to article 2, 3 or 4 of the Method of the WTO Valuation Agreement)
- 2) The transfer price is calculated by estimating the opportunity costs and gains to each party in the transaction. This can be done through methods such as cost plus pricing, profit split or most commonly the transactional net margin method. (According to article 5 of the Method of the WTO Valuation Agreement)

It is clear that that the multitude of valuation methods gives the importer a negotiable room of acceptable transfer prices – leaving space for tax avoidance. In addition both measures can be highly manipulated. In the case of comparable unrelated transactions, the firm can selectively choose which products to include in the comparison. In the case of cost plus pricing both costs and required profit margin can be manipulated by the firm.

3 Theoretical motivation

Following the broad literature of theoretical models describing the optimal price strategy within intra-firm trade, I present an illustrative example that can produce the main predictions related to tax motivated transfer price manipulation and tax enforcement. A more elaborate theoretical discussion can be found in Riedel *et al.* (2015).

Consider an MNC consisting of two affiliates located in a high tax country denoted H with tax rate τ_H and a low tax country denoted L with a lower tax rate τ_L . Further assume that the low tax affiliate sells q units of goods to the high tax affiliate at price p . Let Π_H and Π_L denote the exogenous taxable income in country H and L prior to

¹¹ Directive 2, Customs external directive method 1 valuation of imports
<http://www.sars.gov.za/AllDocs/OpsDocs/Policies/SC-CR-A-05%20-%20Method%201%20Valuation%20of%20Imports%20-%20External%20Directive.pdf>

paying the transfer price. The taxable profits in the high tax country will in this case be $\Pi_H - pq$ while the taxable profits in the low tax country will be $\Pi_L + pq$. Any transfer price increase will reduce the taxable profits in the high tax subsidiary but correspondingly increase the taxable profits of the subsidiary in the low tax country. As the after-tax value of profits is higher in the low tax country, the MNC would absent any additional constraints always choose the transfer price $p = \frac{\Pi_H}{q}$, such that all profits would be shifted from the high tax subsidiary to the low tax subsidiary. However, the MNC is by law required to price the internal sale at the “true” arm’s-length price p_a and any deviation from this is assumed to come at a cost (here assuming that such a price exists).¹² Costs may come in the form of additional documentational requirements, potential legal costs, worsened public relations etc. Efficiency costs may also occur; Nielsen and Raimondos-Moller (2008) describe how transfer mispricing strategies may lead to inefficiencies within the MNC. For simplicity, assume that these costs can be approximated by the functional form $\frac{\beta}{2} [(p - p_a)q]^2$, such that the marginal cost of deviating from the arm’s-length price is increasing in the size of the deviation, the quantity sold and the parameter β . The MNC seeks to maximize the sum of after-tax profits across the two countries minus the costs of transfer price deviation, which implies that the optimization problem becomes:

$$Max_{wrt p}: (\Pi_H - pq)\tau_H + (\Pi_L + pq)\tau_L - \frac{\beta}{2} [(p - p_a)q]^2$$

In an internal optimum, the MNC will choose a transfer price that satisfies the condition:

$$\frac{\tau_H - \tau_L}{\beta} = (p - p_a)q$$

As $\tau_H > \tau_L$ the firm will always choose to price the item flowing from the low tax affiliate to the high tax affiliate above the arm’s-length price. Intuitively, the transfer price deviation is furthermore increasing in the size of the tax differential, which is the tax saving per dollar shifted, and decreasing in the parameter β , which is proportional to the marginal cost of shifting one extra dollar. It is important to note that the cost parameter β is of course partly endogenous to the policies in place in both countries: e.g. strict documentational requirements, advanced audit strategies and a high risk of audit will increase the cost of deviating from the arm’s-length price. The common hypothesis is that β is low in a developing country setting such that for a given tax incentive arm’s-length price deviations will be larger in a developing country.

¹² Some economists have argued that the very idea of one true arm’s-length prices is inherently flawed

4 Data

Confidential customs data on imported goods is obtained from the South African Revenue Service (SARS) and covers the period 2011-2015. The unit of observation is at the firm-product-relation-country-year level, such that each observation includes a firm identifier, product code, a dummy indicating whether the transaction is intra-firm, the origin country and the year. Product categories are defined according to the Harmonized System (HS) at the 8-digit level. The fact that the code is eight digits allows for incredible precision in the product description (sample descriptions are included appendix). The data also includes information on the customs value and the number of units, which allows me to calculate the unit price. To remove outliers I censor observations with unit prices in the top 99 percentile within each year – this does not, however, impact the results quantitatively nor qualitatively. Table 1 shows the aggregate value of imports across years and partner relation. Two immediate concerns come to mind when looking at these aggregate values. First, the share of related (intra-firm) imports ranges from 0.7 to 3.2 percent. This share is markedly lower than what has been observed across French firms (9.2 percent, Davies et al 2017) and US firms (roughly 30 percent, Bernard et al 2006). This raises the concern whether a share of related imports are falsely registered as unrelated. Each firm is required by law to denote whether the import is coming from a related party, but it is of course a question of enforcement whether firms are actually filling out the forms right. If related imports are being misclassified as unrelated, this would bias our results downwards as firms with an incentive to manipulate transfer prices are included in the control group. The second concern table 1 invokes is that of overall coverage. Whereas the aggregate value of imports in the years 2011, 2012, 2014 and 2015 matches the aggregate customs statistics, coverage in 2013 is only 25 percent (a query concerning this is currently being processed by SARS). I replicate all results censoring 2013. This does not impact the results quantitatively nor qualitatively.

----- Table 1 here -----

This customs data is then merged with firm financials obtained from Corporate Income Tax database, which includes all South African corporate tax returns and is also obtained from SARS. Finally, information on global statutory corporate tax rates and macro-economic variables is obtained KPMG corporate tax table and the World Development Indicators (WDI).

Figure 1 shows the distribution of partner country corporate tax rates in the customs data. The vertical line marks the South African tax rate of 28 percent and there is substantial variation on both sides of the marker for both related and unrelated

imports. Table 2 reports the summary statistics, while the appendix table A1 list the top 40 import partner countries.

----- Figure 1 here -----

----- Table 2 here -----

5 Identification of transfer price manipulation

The great detail in the customs data allows for a direct comparison of the unit price of related and unrelated imports. This in turn allows me to estimate the arm's-length prices and the resulting transfer price deviations. If the estimated arm's-length price deviations systematically move in accordance with the tax incentives to manipulate transfer prices, this is taken as evidence of firms engaging in strategic transfer price manipulation. Table 3 illustrates this approach. Here I report the aggregate averages of (log) unit prices by partner relation and tax level. Column 1 shows that the average unit price of related imports is roughly on par (4 percent higher) with the unit price on external imports when imports originated from a high tax country (defined as a tax rate above the South African tax of 28 percent). Contrary to this, column 2 shows that the unit price on related imports is 57 percent higher when the import origin is a low tax country. Based on these aggregate numbers, the most plausible estimate of transfer price manipulation is the "difference-in-difference" estimate, i.e. 57 percent minus 53 percent = 53 percent. This is a first indication that related imports from low tax countries may be overpriced, which would be consistent with firms manipulating transfer prices in order to shift profits to low tax countries. Of course I am, quite literally, comparing apples and oranges in this simple example. This concern can be mitigated by looking at the same difference-in-difference estimate within product groups. In figure 2 the difference-in-difference estimate is hence calculated within the ten largest product groups. That is, the bottom dot in figure 2 corresponds to the overall difference-in-difference estimate of 54 percent, the dot above replicates this estimate but with a sample only consisting of plastic articles and so on. Albeit there is substantial variation in the estimates across different product categories, seven out of ten products show significant estimates and all point estimates are above 20 percent. In the very high end, "static converters" imported from related affiliates in low tax countries are "overpriced" by more than 80 percent.

----- Table 3 here -----

----- Figure 2 here -----

Whereas figure 2 further supports the notion of strategic transfer price manipulation several concerns still exist. First, country-specific quality of goods may confound the results. Table 3 indeed showed how there is a general tendency that imports originating from low tax countries are lower priced. Second, different firms will generally demand different qualities and even within firms, products may be imported at different levels of quality. To ensure that compositional effects are not driving the results I move to a regression framework. In the simplest version, the specification takes the form:

$$\log(\text{unit price}_{it}) = \beta_1 \text{related import} \cdot \tau_{it} + \beta_2 \tau_{it} + \beta_3 \text{related import}_{it} + \mathbf{X}'_{it}\mathbf{B} + \epsilon_{it}$$

Where \mathbf{X}_{it} is a vector of firm and country variables. *related*_{it} is a dummy indicator taking the value one whenever the import partner is a related subsidiary and accounts for any level differences in the price level of related and unrelated imports. τ_{it} is a variable indicating the tax incentive to shift profits- The null hypothesis is that the price wedge between related and unrelated imports increase as the tax rate of the partner country decreases. The rich detail of the data further allows me to move further and include a series of fixed effects. In the highest dimensional model this includes product-firm, firm-year, product-year and country-year fixed effects. In this case country and firm variables are absorbed by the fixed effects and only the interaction terms remain.

6 Empirical results

6.1 Basic results

Table 4a reports the basic results. The unit of observation is at the firm-product-relation-country-year level. Standard errors are clustered at the country-year level. Throughout all specifications the interaction term between the “related import” dummy and the low tax dummy is positive and highly significant. In column 1 the most basic results are reported using just a set of control variables and no fixed effects. The estimated average excess price on related imports from low tax countries is approximately 31 percent. This estimate remains fairly stable when including product fixed effects and product-year fixed effects but drops significantly to 10.2 percent when firm fixed effects are included. This indeed indicates that firm compositional effects may drive up the estimated magnitude of transfer mispricing if firm-specific characteristics are not accounted for. However, as seen in columns 5-9, after controlling for firm fixed effects the estimated transfer price manipulation does not change drastically. In the most demanding model which includes product-firm, firm-year, product-year and country-year fixed effects the estimated excess price on related imports from low tax countries is 8.6 percent.

It is, however, not only related imports from low tax countries that seem to be overpriced. Across most specifications, Table 4a also shows an economically sizable price premium on related imports from high tax countries ranging from 20 percent to more than 100 percent. This premium is then further exacerbated when the partner is a low tax country. The price of related imports is 33.4 percent higher than the estimated arm's-length price in column 9 even after controlling for product-firm, firm-year, product-year and country-year fixed effects. This may be the result of MNE products being higher quality in general, but could also suggest that profits are shifted out of South Africa to low tax countries through intermediaries in high tax countries. If this is the case, the estimates in Table 4a will underestimate the overall tax motivated transfer price manipulation.

Table 4a also, unsurprisingly, suggests that country characteristics influence unit prices. Column 1-7 shows that GDP pr. capita of the origin country is positively correlated with the unit prices. This seems intuitive, as goods originating from high income countries are plausible higher quality. The low tax dummy estimate is also negative and highly significant in column 1-7. This suggests that, absent any partner relation, imports from low tax countries are priced lower than imports from high tax countries, which could be the result of the tax burden of corporate taxation being shifted towards consumers. Finally, across all specifications the macro-variable and related dummy interactions remain highly significant, supporting the notion that related imports are influenced differently by macro variables (discussed in Davies *et al.*, 2016). In the online appendix all regressions are estimated without these interactions - the results remain very similar.

In Table 4b I replicate the column 9 of Table 4a, but also replace the low tax dummy with two continuous tax incentive measures. In column 2 I simply use the corporate tax rate, meaning that the coefficient can be interpreted as a semi-elasticity. That is, a 1 pct. pt. increase in the corporate tax rate implies a 0.5 percent reduction in the unit price compared to the estimated arm's-length price. This semi-elasticity is on par with the one found for US firms in Bernard *et al.* (2006). In column 3, I replace the tax measure with the log of one minus the statutory tax rate. This implies that the coefficient can be interpreted as the elasticity of the unit price w.r.t. one minus the tax rate. The estimated coefficient is 0.3, which is 50% higher compared to the estimated coefficient in Davies *et al.* (2016).

----- Table 4a here -----

----- Table 4b here -----

6.2 Drivers of transfer price manipulation responses

In Table 5 I investigate whether specific subsamples of South African subsidiaries are more responsive to tax incentives. In column 1, the baseline specification using the full sample is reported in which the estimated semi-elasticity w.r.t. the partner tax rate was -0.53. In column 2 I restrict the sample to imports originating from countries with a tax rate below the South African. Interestingly the semi-elasticity almost triples in this case, which is an indication of outgoing profit shifting being a larger issue than ingoing. In column 3 the sample is restricted to firms with sales above the South African median – this does not impact the semi-elasticity estimates. Column 4 shows that profitable subsidiaries respond more to tax incentives, which is intuitive, as they have profits to shift. Differentiated goods may be easier to transfer price manipulate as there is less clear comparable prices. In column 5 I restrict the sample to differentiated goods using the “naïve” classification from Bernard *et al.* (2006), which indeed increases the estimated tax response. Finally, high leverage may be an indication of subsidiaries engaging in debt shifting, which could impact their transfer price manipulation. The results reported in column 6, where the sample is restricted to firms with leverage in the top median, does not seem to support this.

----- Table 5 here -----

6.3 Other tax incentives for transfer price manipulation

There might be tax benefits in tax havens other of a low statutory tax rate. Davies *et al.* (2016) find that the bulk of transfer price manipulation occurs through tax havens. In column 1 and 2 of table 6 the related dummy is interacted with a dummy variable taking the value one whenever the origin country is a tax haven. I use the tax haven definition from Hines (2010). Contrary to Davies *et al.* (2016) the results do not seem to support that tax havens are driving the semi-elasticity from previous specifications. This is to some extent not surprising, as only 4 percent of related imports to South Africa originate from tax havens.

Hopland *et al.* (2014) hypothesize that lossmaking subsidiaries may receive profits from foreign affiliates. The reasoning being that the lossmaking subsidiaries are effectively paying a zero percent tax on additional earnings. Loss-carry-forward rules complicate this reasoning as present losses can be converted into future tax savings (Dharmapala & Riedel 2012). I test the hypothesis of Hopland *et al.* (2015) by interacting a loss dummy with the related dummy. If foreign affiliates are shifting profits to South African subsidiaries we would expect this interaction to be negative, as related imports to lossmaking subsidiaries would be underpriced. In column 3 of table 6 the results are reported. There seems to be little support that South African lossmaking subsidiaries are receiving foreign profits as the interaction term is highly insignificant.

----- Table 6 here -----

6.4 Evaluation of transfer pricing reform in 2012

On 1 April 2012 South Africa revised their transfer pricing legislation to follow the standards of the OECD and WTO. The practical consequences of this revision were surrounded by uncertainty at first.¹³ Formally, the change in legislation could in large be traced back to the change of a single paragraph:

- Prior to 1 April 2012¹⁴: the *Commissioner may... adjust the consideration in respect of the transaction* to reflect the arm's length price for the goods or services
- After 1 April 2012¹⁵: “the *taxable income or tax payable by any person... must be calculated as if that transaction, operation, scheme, agreement or understanding had been entered into on the terms and conditions* that would have existed had those persons been independent persons dealing at arm's length

Firstly, as marked in *italic* letters, previous legislation only gave the tax authority the *right* to intervene whenever they found that the arm's-length principle was overstepped. However, under the new legislation the tax payer was now obligated to prove that internal relations had been organized according to the arm's-length principle. The onus of proof was thus shifted from the tax authority to the tax payer. In practice, it was less clear what this distinction meant as the previous legislation had also required firms to present transfer pricing documentation in support of transfer pricing decisions. In the end the consequence of this distinction was that SARS would now require the same documentation with shorter notice (PWC 2013). Secondly, as underlined in the above paragraphs, previous legislation only related to specific transactions whereas the new legislation followed the OECD tax model by applying a more holistic view. This implied taking factors such as overall profitability into account when determining whether chosen transfer prices were acceptable. This broader definition of audit strategy first of all introduced uncertainty among firms, but was widely regarded as an increase in audit risk.¹⁶

To test the impact of the legislation I estimate the baseline specification on a year-by-year basis. The results are striking. Table 7 shows that the tax motivated arm's-length price deviation fell dramatically from above 0.7 in 2011 to below 0.5 in 2012 and falling further to below 0.4 in 2013 and 2014. Furthermore, the tax motivated

¹³ <http://www.internationaltaxreview.com/Article/3052220/South-Africa-The-new-South-African-transfer-pricing-rules-may-be-risky.html>

¹⁴ https://www.saica.co.za/integritax/2010/1901._Transfer_pricing.htm

¹⁵ http://www.oecd.org/ctp/transfer-pricing/SouthAfrica_TPCountryProfile_Jan2013.pdf

¹⁶ PWC (2013) e.g. informs tax payers that they have “seen increased audit activity by the specialist Transfer Pricing unit within SARS across all industries”

deviation from the arm's-length price is not significant from 2012 to 2014. We also see that the general overpricing of related imports from high tax countries fell to essentially zero in 2012 and 2013. This suggests that firms responded to the reform by closing the gap to estimated arm's-length pricing in the immediate aftermath. Interestingly, however, the tax motivated arm's-length price deviation in 2015 is not only on par but even above the one measured in 2011 with a semi-elasticity of 0.85. This could indicate that the immediate response to the transfer price legislation reform was based on an unfounded expectation of increased audit capacities and that firms returned to their original transfer price manipulation practice after they obtained certainty on the implication of the new policy.

----- Table 7 here -----

7 Conclusion

This paper provides the first direct evidence of transfer price manipulation in a developing country. Using highly detailed firm-level customs data I find that deviations from estimated arm's-length prices correlate with the tax incentive to shift profits. The responsiveness to tax incentives is estimated to be 50 percent larger than what has been observed across French firms and on par with what has been observed across US firms. In addition, I find that a recent transfer pricing legislation, following OECD recommendations, had no long term effects on tax motivated arm's-length price deviations.

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Table 1: Imports to South Africa by year and partner relation

Year	Unrelated imports (Bn. Rnd.)	Related imports (Bn. Rnd.)	Related imports (Share)
2011	1005,8	7,2	0,70%
2012	1169,6	26,4	2,30%
2013	238,6	7,5	3,20%
2014	1432,1	39,5	2,80%
2015	1199,5	38,8	3,20%

The table shows the distribution of South African imports of goods. Related denotes a transaction that is intra-firm (controlled), i.e. trade between affiliates of the same MNE.

Source: SARS and author calculations

Table 2: Descriptive statistics

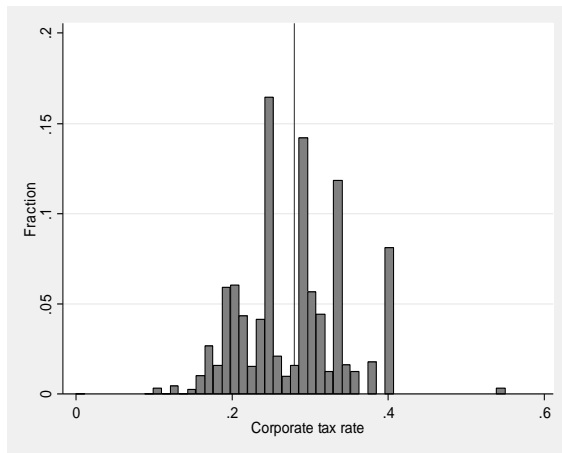
Variable	Related imports					All imports				
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
Panel A: Customs										
Log(unit price)	120,301	5,9	1,7	-6,8	17,2	4,914,601	5,6	2,3	-12,1	22,5
Unit price (1000 Rnd.)	120,301	7,2	176,0	0,0	29700,0	4,914,602	20,2	4577,0	0,0	6190000,0
Customs value (1000 Rnd.)	120,301	993,1	20400,0	0,0	3700000,0	4,914,603	1026,6	51600,0	0,0	27700000,0
Statistical Quantity (1000 Units)	120,301	79,5	10800,0	0,0	2530000,0	4,914,604	55,3	5281,2	0,0	2930000,0
Related party dummy	120,301	1,0	0,0	1,0	1,0	4,914,603	0,0	0,2	0,0	1,0
Panel B: Financials - SA importer										
Log(Sales)	71,507	20,6	2,0	10,2	25,8	2,459,574	18,5	2,4	6,4	25,8
Log(Wage)	71,690	17,9	1,8	9,4	22,3	2,477,314	16,3	2,3	0,0	24,0
Leverage	22,075	0,2	0,3	0,0	4,6	1,334,794	0,2	0,5	0,0	18,5
Loss making	106,504	0,2	0,4	0,0	1,0	4,234,601	0,1	0,3	0,0	1,0
Taxable income (Mill. Rand)	72,998	182,0	748,0	-2230,0	13900,0	4,234,602	130,0	831,0	-17500,0	31500,0
Panel C: Macro data - foreign exporter										
Low tax	120,301	0,5	0,5	0,0	1,0	4,914,603	0,5	0,5	0,0	1,0
Corporate tax	117,729	0,3	0,1	0,0	0,6	4,800,978	0,3	0,1	0,0	0,6
Log(GDP pr. cap.)	119,077	14,5	1,4	5,6	16,7	4,886,696	14,7	1,8	4,4	16,7
Log(Exchange rate)	82,159	1,4	2,3	-1,0	10,2	3,789,190	1,3	1,9	-1,3	10,2
Log(Population)	119,077	4,3	1,6	-2,9	7,2	4,886,696	4,7	1,9	-5,3	7,2
EU dummy	119,211	0,5	0,5	0,0	1,0	4,890,506	0,3	0,5	0,0	1,0
OECD dummy	119,211	0,7	0,5	0,0	1,0	4,890,506	0,5	0,5	0,0	1,0
Haven dummy	119,211	0,0	0,2	0,0	1,0	4,890,506	0,0	0,2	0,0	1,0

Note: The table shows descriptive statistics of the gross sample. The sample period is 2011-2015. All observations are imports going to South Africa from a foreign country. The table is split across related imports (between affiliates) and unrelated. A unit of observation is a firm-relation-origin-product-time quintuple. Unit prices are calculated as the transaction value divided by the statistical quantity. Observations with unit prices in the 99th percentile are dropped from the sample. Panel A describes the customs data. Customs Value denote the registered value of the transaction in the customs data. Statistical quantity denote the number of units. Related party is a dummy variable indicating an internal (controlled) trade between affiliates of the same MNE. Panel B describes the financials of the importing firm in South Africa obtained from the South African CIT database. Sales denotes turnover, Wage denotes the labour costs, Leverage is measured as total long term debt over assets, Loss making is a dummy variable indicating whether the firm incurred a loss in the period in scope. Panel C describes the macro data on the import origin country. "Low tax partner" is a dummy variable indicating whether the trading partner (import origin) country's corporate tax rate is below the South African corporate tax rate of 28 percent. Corporate tax is the corporate statutory tax rate of the import country. Haven is a dummy indicating whether the the import origin country is a tax haven following the definition used in Hines (2010)

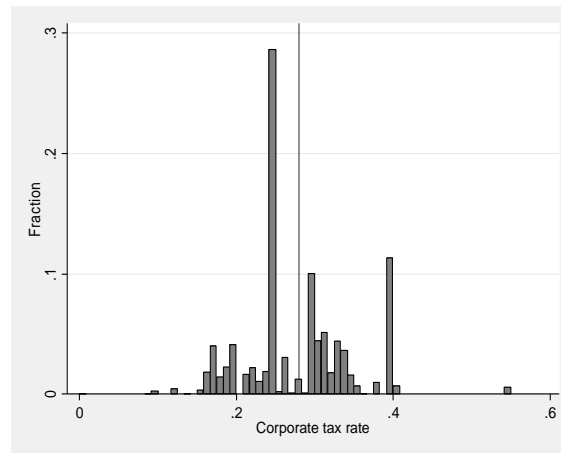
Source: SARS, KPMG, WDI and author calculations

Figure 1: Distribution of import partner corporate tax rate

1a: Related imports



1b: Unrelated Imports



Note: The table show the distribution of import partner corporate tax rates. Related denotes a transaction that is intra-firm (controlled), i.e. trade between affiliates of the same MNE. The sample period is 2011-2015

Source: SARS, KPMG and author

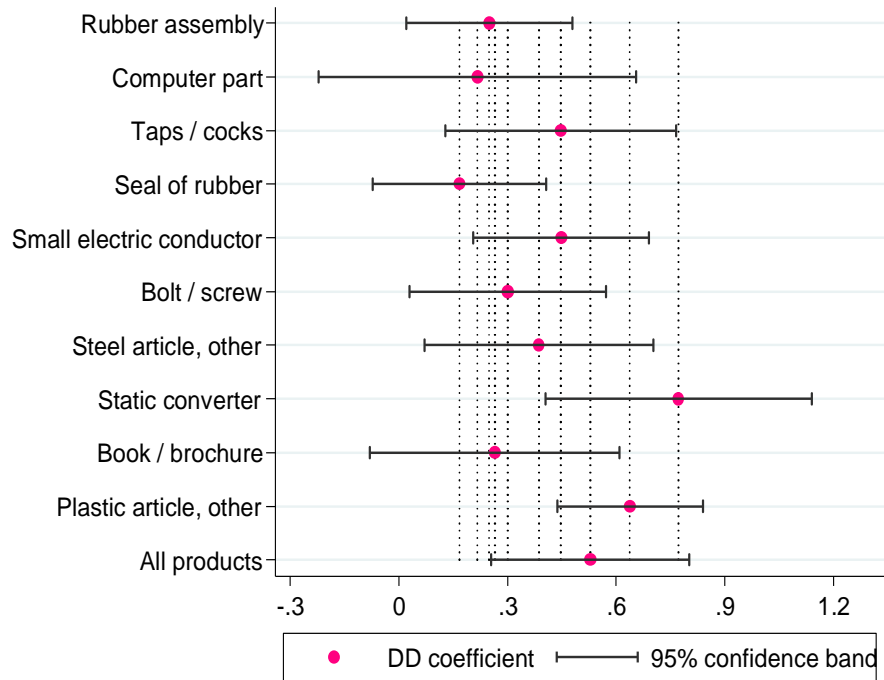
Table 3: Related and unrelated average import prices across high and low tax partners

	Average log(unit price)		
	High tax partner (1)	Low tax partner (2)	Difference: (1) - (2)
Unrelated partner	5.95*** (0.17)	5.26*** (0.33)	0.69*** (0.18)
Related partner	5.99*** (0.09)	5.83*** (0.84)	0.16** (0.08)
Difference: related minus unrelated	0,04 (0.04)	0,57*** (0.13)	0,53*** (0.14)

Note: The table explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The dependent variable is the Log(Unit Value). The product is defined by HS8 codes. "Low tax partner" is a dummy variable indicating whether the trading partner (import origin) country's corporate tax rate is below the South African corporate tax rate of 28 percent. Related party is a dummy variable indicating an internal (controlled) trade between affiliates of the same MNE. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the country-year level.

Source: SARS, KPMG and author calculation

Figure 2: “Overpricing” of related low tax imports within 10 largest product groups



Note: The figure explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms within the 10 largest product groups. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The pink dots reflect the coefficient value β_1 obtained from estimating the regression: $\text{Log}(\text{Unit price}_{it}) = \beta_1 * \text{Related}_{it} * \text{Low tax}_{it} + \beta_2 * \text{Low tax}_{it} + \beta_3 * \text{Related}_{it} + \epsilon_{it}$. "Low tax" is a dummy variable indicating whether the trading partner (import origin) country's corporate tax rate is below the South African corporate tax rate of 28 percent. Related party is a dummy variable indicating an internal (controlled) trade between affiliates of the same MNE. The product category names are simplified descriptions of the longer detailed HS8 code descriptions. The corresponding HS8 codes are: "Rubber assembly" 40169390, "Computer part" 84818090, "Taps/cocks" "Seal of rubber" 40169310, "Small electric conductor" 85444290, "Bolt/screw" 73181590, "Steel article, other" 73269090, "Static converter" 85044000, "Book/ brochure" 49019900, "Plastic article, other" 39269090.
 Source: SARS, KPMG and author

Table 4a: Basic results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Related partner × low tax partner	0.310*** (0.0608)	0.262*** (0.0526)	0.259*** (0.0522)	0.102*** (0.0265)	0.0921*** (0.0268)	0.0802*** (0.0253)	0.0792*** (0.0221)	0.0855*** (0.0192)	0.0859*** (0.0159)	
Related partner	1.344** (0.674)	1.337** (0.574)	1.342** (0.572)	0.474 (0.322)	0.522* (0.306)	0.307 (0.274)	0.337 (0.242)	0.214 (0.206)	0.334** (0.150)	
Related partner × ln(Population)	0.233*** (0.0543)	0.189*** (0.0459)	0.188*** (0.0459)	0.0616** (0.0259)	0.0666*** (0.0248)	0.0309 (0.0221)	0.0322* (0.0195)	0.0481*** (0.0170)	0.0565*** (0.0123)	
Related partner × ln(Ex. Rate)	0.0192 (0.0181)	0.000145 (0.0153)	0.000340 (0.0154)	0.0143* (0.00766)	0.0118 (0.00718)	0.00244 (0.00609)	0.00238 (0.00538)	-0.00532 (0.00446)	-0.00951*** (0.00332)	
Related partner × ln(GDP pr. cap.)	-0.175*** (0.0597)	-0.158*** (0.0509)	-0.158*** (0.0508)	-0.0623** (0.0286)	-0.0683** (0.0271)	-0.0347 (0.0244)	-0.0372* (0.0216)	-0.0332* (0.0186)	-0.0447*** (0.0134)	
Low tax partner	-0.374*** (0.0608)	-0.350*** (0.0544)	-0.351*** (0.0542)	-0.135*** (0.0280)	-0.135*** (0.0282)	-0.113*** (0.0249)	-0.114*** (0.0220)			
Log(GDP pr. cap.)	0.525*** (0.0474)	0.412*** (0.0392)	0.411*** (0.0391)	0.270*** (0.0229)	0.264*** (0.0221)	0.174*** (0.0192)	0.174*** (0.0170)			
Log(Population)	-0.574*** (0.0463)	-0.459*** (0.0411)	-0.458*** (0.0409)	-0.273*** (0.0218)	-0.270*** (0.0211)	-0.192*** (0.0189)	-0.193*** (0.0167)			
Log(Exchange rate)	-0.0266 (0.0163)	-0.0394*** (0.0137)	-0.0393*** (0.0137)	-0.0199** (0.00827)	-0.0191** (0.00818)	-0.0130** (0.00639)	-0.0131** (0.00567)			
Log(Sales)	-0.134*** (0.00756)	-0.0665*** (0.00585)	-0.0666*** (0.00588)	0.0196* (0.0111)		0.0168* (0.00941)	0.0175** (0.00811)	0.0158** (0.00763)		
Log(Wage bill)	0.196*** (0.0109)	0.119*** (0.00916)	0.120*** (0.00922)	-0.000227 (0.00656)		-0.00270 (0.00630)	-0.00169 (0.00560)	-0.00191 (0.00559)		
Fixed effects:										
Product	Yes									
Product#Year	Yes		Yes		Yes		Yes	Yes	Yes	
Firm	Yes									
Firm#Year					Yes					
Firm#Product							Yes	Yes	Yes	
Country#Year									Yes	Yes
Observations	2,419,462	2,419,462	2,419,462	2,419,462	2,419,462	2,419,462	1,876,532	1,876,487	3,242,606	
R-squared	0.080	0.475	0.480	0.337	0.360	0.852	0.799	0.802	0.825	

The table explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The dependent variable is the $\text{Log}(\text{Unit Value})$. The product is defined by HS8 codes. "Low tax partner" is a dummy variable indicating whether the trading partner (import origin) country's corporate tax rate is below the South African corporate tax rate of 28 percent. Related party is a dummy variable indicating an internal (controlled) trade between affiliates of the same MNE. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the country-year level.

Source: SARS, KPMG, WDI and author calculations

Table 4b: Basic results

Dependent variable: ln(unit price)			
	(1)	(2)	(3)
Related partner × low tax partner	0.0859*** (0.0159)		
Related partner × partner tax rate		-0.532*** (0.181)	
Related partner × log(1 - τ)			0.325** (0.136)
Related party	0.334** (0.150)	0.347** (0.172)	0.345* (0.177)
Related partner × country controls	x	x	x
Fixed effects			
Product#Year	x	x	x
Firm#Year	x	x	x
Firm#Product	x	x	x
Country#Year	x	x	x
Observations	3,242,606	3,195,872	3,195,872
R-squared	0.825	0.825	0.825

Note: This table explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The dependent variable is the *Log(Unit Value)*. The product is defined by HS8 codes. "Low tax partner" is a dummy variable indicating whether the trading partner (import origin) country's corporate tax rate is below the South African corporate tax rate of 28 percent. The "partner tax rate" is the trading partner (import origin) country's corporate tax rate. "log(1 - τ)" denotes the log of 1 minus the trading partner corporate tax rate. Related party is a dummy variable indicating an internal (controlled) trade between affiliates of the same MNE. All regressions include interactions with the related party dummy and the log of GDP, the log of population and the log of exchange rate. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the country-year level.

Source: SARS, KPMG, WDI and author calculations

Table 5: Drivers of transfer price manipulation

Dependent variable: ln(unit price)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Full sample	Low tax partner	Big firms	Profitable	Differentiated	High leverage
Related partner × partner tax rate	-0.532*** (0.181)	-1.325*** (0.314)	-0.548*** (0.183)	-0.676*** (0.217)	-0.751*** (0.217)	-0.548*** (0.208)
Related party	0.347** (0.172)	0.426** (0.215)	0.377** (0.170)	0.324 (0.210)	0.294 (0.211)	0.325* (0.190)
Related partner × country controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects						
Product#Year	Yes	Yes	Yes	Yes	Yes	Yes
Firm#Year	Yes	Yes	Yes	Yes	Yes	Yes
Firm#Product	Yes	Yes	Yes	Yes	Yes	Yes
Country#Year	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,195,872	1,640,259	2,626,407	2,471,994	1,675,410	2,623,536
R-squared	0.825	0.855	0.815	0.823	0.797	0.830

Note: This table explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The dependent variable is the $\text{Log}(\text{Unit Value})$. The product is defined by HS8 codes. The "partner tax rate" is the trading partner (import origin) country's corporate tax rate. All regressions include interactions with the related party dummy and the log of GDP, the log of population and the log of exchange rate. Column 1 uses the full sample. Column 2 restricts the sample to imports originating from countries with a corporate tax rate below 28 percent. Column 3 restricts the sample to firms with above median sales. Column 4 restricts the sample to profitable firms. Column 5 restricts the sample to differentiated imports defined using Bernard et al (2008) naïve classification. Column 6 restricts the sample to firms with above median sales.*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at

Source: SARS, KPMG, WDI and author calculations

Table 6: Other tax incentives for transfer price manipulation

Dependent variable: ln(unit price)			
	(1)	(2)	(3)
Related partner × haven partner	0.00765 (0.0504)	-0.546*** (0.183)	
Related partner × partner tax rate		-0.0249 (0.0517)	
Related partner × lossmaking			0.0280 (0.0218)
Related party	0.600*** (0.172)	0.347** (0.176)	0.608*** (0.169)
Related partner × country controls	Yes	Yes	Yes
Fixed effects			
Product#Year	Yes	Yes	Yes
Firm#Year	Yes	Yes	Yes
Firm#Product	Yes	Yes	Yes
Country#Year	Yes	Yes	Yes
Observations	3,242,222	3,195,595	2,972,600
R-squared	0.825	0.825	0.820

Note: This table explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The dependent variable is the $\text{Log}(\text{Unit Value})$. The product is defined by HS8 codes. The "partner tax rate" is the trading partner (import origin) country's corporate tax rate. All regressions include interactions with the related party dummy and the log of GDP, the log of population and the log of exchange rate. Column 1 uses the full sample. "haven partner" is a dummy variable taking the value 1 whenever the partner country is listed as a tax haven in Hines (2010). Lossmaking is a dummy taking the value one whenever the import firm is lossmaking. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the country-year level.

Source: SARS, KPMG, WDI and author calculations

Table 7: Evaluation of reform in 1 April 2012

Dependent variable: ln(unit price)					
Year	(1) 2011	(2) 2012	(3) 2013	(4) 2014	(5) 2015
Related partner × partner tax rate	-0.736*** (0.215)	-0.482 (0.377)	-0.320 (0.445)	-0.394 (0.394)	-0.850*** (0.259)
Related party	0.781* (0.429)	0.00935 (0.362)	-0.0788 (0.381)	0.595** (0.298)	0.475 (0.377)
Related partner × country controls	Yes	Yes	Yes	Yes	Yes
Fixed effects					
Product#Year	Yes	Yes	Yes	Yes	Yes
Firm#Year	Yes	Yes	Yes	Yes	Yes
Firm#Product	Yes	Yes	Yes	Yes	Yes
Country#Year	Yes	Yes	Yes	Yes	Yes
Observations	478,068	523,733	179,225	549,556	295,955
R-squared	0.810	0.805	0.811	0.798	0.811

Note: This table explores the effect of the trading partner (import origin country's) corporate tax rate on the import price in related trades (between affiliates) relative to the effect on domestic and unaffiliated firms. The sample period is 2011-2015. A unit of observation is a firm-relation-origin-product-time quintuple. The dependent variable is the $\text{Log}(\text{Unit Value})$. The product is defined by HS8 codes. The "partner tax rate" is the trading partner (import origin) country's corporate tax rate. All regressions include interactions with the related party dummy and the log of GDP, the log of population and the log of exchange rate. Year indicates the sample year. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Standard errors clustered at the country-year level.

Source: SARS, KPMG, WDI and author calculations

Appendix Table A1: Imports by country

Country	Related imports		Unrelated imports	
	Corp. tax rate	Freq.	Country	Corp. tax rate Freq.
Germany	0,30	16795	China	0,25 1054653
China	0,25	11274	United States	0,40 551591
United States	0,40	9138	Germany	0,30 487778
France	0,33	6457	United Kingdom	0,23 308830
United Kingdom	0,23	5942	Italy	0,31 248051
Japan	0,36	5725	India	0,33 169529
Italy	0,31	5275	Taiwan	0,17 161703
India	0,34	4903	France	0,33 145291
Korea Rep.	0,24	3749	Japan	0,37 142708
Spain	0,29	3454	Netherlands	0,25 97658
Thailand	0,21	3013	Thailand	0,23 77554
Sweden	0,24	2701	Spain	0,30 73837
Czech Republic	0,19	2698	Hong Kong SAR China	0,17 72342
Poland	0,19	2347	Korea Rep.	0,24 72071
Austria	0,25	2313	Switzerland	0,18 66111
Brazil	0,34	2167	Turkey	0,20 62949
Turkey	0,20	2117	Belgium	0,34 62172
Taiwan	0,17	2017	Australia	0,30 53087
Switzerland	0,18	1768	Sweden	0,24 50868
Mexico	0,30	1718	Canada	0,27 48484
Netherlands	0,25	1713	Austria	0,25 47200
Hungary	0,19	1687	Namibia	0,33 47138
Belgium	0,34	1594	Botswana	0,22 43945
Australia	0,30	1529	Czech Republic	0,19 41414
Finland	0,21	1235	Mexico	0,30 41313
Romania	0,16	1235	Brazil	0,34 40388
Canada	0,27	1206	Malaysia	0,25 39115
Indonesia	0,25	1129	Denmark	0,25 36996
Portugal	0,23	1085	Poland	0,19 36934
Denmark	0,24	1048	Singapore	0,17 29200
Slovakia	0,21	1036	United Arab Emirates	0,55 28870
Malaysia	0,25	1035	Indonesia	0,25 27217
Vietnam	0,23	685	Hungary	0,19 24405
Singapore	0,17	619	Israel	0,25 22478
Ireland	0,13	518	Pakistan	0,34 21834
United Arab Emirates	0,55	401	Portugal	0,24 21390
Israel	0,26	393	Vietnam	0,23 20983
Philippines	0,30	385	Finland	0,23 20786
Hong Kong SAR China	0,17	339	Ireland	0,13 18943
Slovenia	0,17	335	Romania	0,16 15854

The table shows the distribution of South African imports of goods by origin countries for the years 2011-2015. Related denotes a transaction that is intra-firm (controlled), i.e. trade between affiliates of the same MNE. Corp. tax rate denotes the average statutory corporate tax rate.

Source: SARS, KPMG, WDI and author calculations