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Rough and polished

A case study of the diamond pricing and valuation system

Sarah Bracking and Khadija Sharife

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The Leverhulme Centre for the Study of Value

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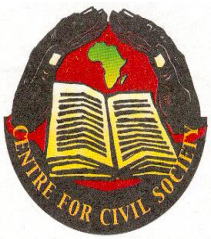

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Rough and polished: a case study of the diamond pricing and valuation system

Sarah Bracking and Khadija Sharife[1]

Abstract. This report investigates the contribution of mining, and in particular diamond mining, to the economic development of South Africa, in terms of its contribution to the fiscal resources of government. By necessity it is based on incomplete information, as while extensive efforts have been made to explore and account for the views of industry and government stakeholders, and all assistance is gratefully acknowledged, some parties remain reluctant to contribute data. Indeed, one conclusion of the paper is that more transparency is required in order to more fully make an assessment of the development value of diamond mining. However, based on the information that is available on taxes paid, import and export volumes and values there exists significant discrepancies indicative of possible transfer pricing manipulation of rough diamond values. This is due to the monopoly position of the De Beers Company and their consequent ability to designate price in various locations in the value chain and when moving diamonds across borders. Because of these discrepancies it can be plausibly suggested that the industry is not contributing the level of tax that could be reasonable expected by the citizens of South Africa.

Keywords. De Beers, diamond mining, trade pricing, tax justice, South Africa

[1] Contribution Statement: This report benefited from expert tax and financial consultancy and research from Len Verwey, and financial development expertise by Mark Curtis, as well as comments from Patrick Bond, Philip Woodhouse and Aurora Fredriksen. Also many thanks to a number of key industry and government sources who wish to remain anonymous. This is a shortened version of a longer report whose lead author is Khadija Sharife titled *Rough and Polished: The illicit role of transfer pricing, tax avoidance and other technically legal strategies used to 'profit-shift' resource revenues from SA's diamond industry*, which includes sections authored by Mark Curtis, Len Verwey among other authors (Sharife and Bracking, 2014). This report includes a chapter on diamond pricing and valuation contributed by both Khadija Sharife and Sarah Bracking which is a longer version of the material covered here. This longer report was completed with the financial assistance of Oxfam South Africa using a grant housed at the University of KwaZulu-Natal, Centre for Civil Society. Sarah Bracking is the current holder of the South African Research Chair in Applied Poverty Reduction Assessment at the University of KwaZulu-Natal, while Khadija Sharife is Research Director at African Network of Centres for Investigative Reporting and Forensics Researcher at Investigative Dashboard, and the authors gratefully acknowledge assistance from these organisations. We are also grateful to Aurora Fredriksen for copy editing this working paper.

Introduction

"*A Government Valuator does not value diamonds. He is like an auditor, he approves whether the assortment of the diamonds is correct, according to the standard assortment. That is all he does. The value really is the price which is in the Price Book[*]. So the government valuator has got no input into the value of a diamond.*"

- Bertie Lincoln, former De Beers' director, speaking under oath to a South African court.

* De Beers draw up the Price Book.

Mining has been at the centre of the South African economy, and its partial industrialisation, since the second half of the nineteenth century, and South Africa remains an important producer of a number of metals and minerals. South African mining can be understood as a 'mature industry', in the sense both that large-scale capital investment has occurred over an extended period of time, and that, for some minerals, economically viable reserves have become questionable for current prices and technology. Further, South Africa exhibits a number of the challenges associated with resource abundance: it is one of the most unequal countries in the world, both when measured against income and against broader measures of inequality; its manufacturing sector continues to struggle to diversify away from linkage-dependence upon the 'minerals-energy complex' and to become internationally competitive; and of course it has been the site of oppressive state policing and social order policies in mining areas and beyond, including an increased incidence of the migrant labour policies that had such destructive consequences for race, gender and ecology.

However, how far the development of South Africa has benefited from the minerals economy has been subject to question and is the theme of a longer report commissioned by Oxfam (Sharife and Bracking, 2014). Although the mining sector has a significant role to play as an employer, as an earner of export earnings, as well as in the localised empowerment of proximate communities, the Oxfam study adopted the stance presented by the Tax Justice Network and others that the primary developmental benefit of the extractive industries must lie in their contribution to the fiscus, that is in their transparent payment of a fair share of taxation, which the state must then utilise through the budget process to ensure development. It argued that fair tax is not paid.

However, this paper does not attempt to repeat the evidence or argument around the tax contribution of mining in relation to how far the diamond industry contributes to South African development. Instead, we aim here to outline a related argument, that the issue is not just one of whether the rate is too high or too low, or of whether the company has paid, avoided or evaded that rate, but that the amount of tax paid is a consequence of a valuation system. This paper explores how this valuation system works, who is involved, and how the outcomes of this system in terms of price determine the fiscal contribution eventually paid. Thus here we use the diamond market in South Africa as a case study in which to apply our Leverhulme Centre for the Study of Value (LCSV) research protocol as elaborated in LCSV working papers 1 and 2 (Bracking et al., 2014; Fredriksen et al., 2014). The paper argues that

the pricing system for diamonds, and the underlying valuation system which is used to uphold and justify prices at various points in the import and export chain, involves an *institutional assemblage* which privileges the influence of corporate stakeholders over public regulators. We also find a *calculative entity* in 'The Book', a document that records the value of a particular quality of diamond carat; and a *discursive framing*, in that diamonds have little intrinsic value but a value which is dependent on a cultural framing. This has implications for the way that the industry moves and stores the value it creates, choosing to make profit in low tax jurisdictions, rather than in the country of primary economic activity. Value is shifted by the opportunity for setting prices at various points, leading to 'mispricing'. Our data suggests that either or both of import overvaluation and export undervaluation is being practised in the South African diamond market, although we are not able to establish (because of lack of public data on domestic beneficiation) which, or in what proportion each (overvaluation of imports/undervaluation of exports) contributes to discrepancies that are in evidence, between the values of diamonds as they leave relative to when they are imported or mined.

Diamond mining in South Africa

Table 1 shows the domestic production, imports and exports of diamonds in South Africa from 2004 to 2012. It shows a pattern where domestic production is generally valued at a relatively low USD per carat, while imports are valued at considerably more, while export prices float marginally above production values but generally at much lower values than imports.

Table 1: South African diamond production imports and exports

	Domestic Production			Imports			Exports		
	KP: Volume cts (mill)	KP: Value USD (mill)	KP USD per carat [A]	Volume cts (mill) [G]	Value USD (mill) [C]	USD per carat	Volume, cts (mill) [D]	Value USD (mill) [E]	USD/cts
2004	14.09	1,075.76	76.34	0.93	608.64	655.59	14.82	1,835.69	123.84
2005	15.56	1,319.09	84.78	1.10	728.56	664.75	20.39	2,148.29	105.37
2006	14.93	1,361.82	91.18	0.74	672.18	905.99	15.78	1,930.28	122.32
2007	15.21	1,417.33	93.18	1.24	2,113.89	1,705.67	13.89	1,867.33	134.44
2008	12.90	1,236.24	95.82	0.68	582.25	850.09	10.14	1,484.83	146.39
2009	6.14	885.54	144.23	0.66	357.20	544.73	9.55	1,018.67	106.67
2010	8.86	1,194.28	134.75	0.40	307.96	773.16	3.76	709.22	188.76
2011	7.04	1,388.68	197.13	1.35	460.17	339.79	6.65	1,370.45	205.94
2012	7.08	1,027.13	145.13	11.47	1,082.13	94.31	8.01	1,355.53	169.13

In South Africa, if production, import and export trends are analysed by *value* rather than volume, the years 2007 and 2012 stand out as ones in which large values of rough diamonds were imported to South Africa: USD2.1 billion was imported in 2007, and USD1.1 billion in

2012. In other words, import *values* are higher than import *volumes*, compared to export and production values and volumes. This, of course, is simply another way of saying that the value of rough diamonds imported, expressed in USD per Ct, is far higher than for production and exports. USD per Ct values for imports have significantly exceeded export and production values for all the years covered by the KP data, with the exception of 2012. Indeed, at times the difference is huge: in 2007, for example, the import value was USD1,705 per Ct, compared to USD93 and USD134 for production and export respectively. It is difficult not to regard this result as suspicious. Currency fluctuations would for the most part impact on both export and import values. Another explanation, namely that somehow the high USD per Ct values reflect imports from countries that produce high quality rough diamonds, such as Lesotho, can also be discounted. Firstly, even Lesotho values do not attain these peaks. This generates the first question that *why are South African diamonds apparently worth so much less than imported ones* (which mostly come from Namibia and Botswana)?

The parcel values for import and exports that feed into the KP data process are derived from the USD estimate of value that forms part of the actual 'certificate' assigned to an import or export. It is, in other words, the value assigned by the importer or exporter, which is then verified, in principle, by the Importing / Exporting Authority. In South Africa this is the South African Diamonds and Precious Metals Regulator, with the Government Diamond Valuator (GDV) being specifically tasked to ensure that both import and exports diamonds are traded at Fair Market Value (SADPMR 2012: 38.). It is not clear what processes might be available should there be a dispute between the GDV and a diamond-importing firm. Given the large volumes of imports of rough diamonds a second question emerges, since export prices are so low. *What happens to these high valued imports*? These two questions lead to an interesting analysis of the structural features of the institutional arrangements for the diamond market.

Corporate ownership

South African diamond mining continues to be dominated by two companies, De Beers and Petra Diamonds, which together account for more than 95% of production. In recent years De Beers sold a number of its more important South African mines to Petra Diamonds, including the Cullinan and Finsch mines. Though De Beers is correctly associated with South Africa, its own fortunes have not waned with that of South African diamond mining: it owns 50% of Debswana, the primary mining company in Botswana (the other 50% is owned by the Botswana government) and it also recently acquired new fields in Canada. On the other hand, it has proven impossible to maintain the cartel and global, non-DTC (Diamond Trading Company, the rough diamond sales and distribution arm of De Beers) production has increased, as a result of a number of factors which include: declining reserves in South Africa; the discovery of new diamond fields; former cartel members opting to sell outside the cartel; and the market entry of new players resistant to the De Beers monopoly. The latter category of new entrants includes both formal commercial companies and informal networks including

'blood diamond' sellers who share an independence from the De Beers/Kimberley Process (KP)[2] sphere of influence.

Local beneficiation

In terms of the polished diamond market, South Africa continues to struggle to develop a significant diamond cutting and polishing industry, but it does have companies initiated from the black economic empowerment (BEE) policy, which provides for a move to increasing local black equity ownership. There is a levy to encourage local beneficiation by taxing exports at 5% which a company can avoid by providing 40% of local production to the local polishing industry. Companies in South Africa, but principally De Beers, also conduct cross-border sales of quality gems, particularly with Namibia and Botswana, and to a much lesser degree with Zimbabwe. Demand for polished diamonds is determined, as with any other economic good, by changes in income and changes in preferences, and it should not come as a surprise that the global demand for *finished* diamonds has gone down in the muted economic period of the financial crisis and afterwards. Reduced consumer and thus seller demand for finished diamonds will of course also reduce the demand of cutters and polishers for rough diamonds, though the effect of this on the price of rough diamonds is complicated by the part-cartelisation of rough diamond supply through the De Beers DTCs and the general domination of the market by a few large countries and firms.

Though the days of the Central Selling Organisation are gone, a sizeable share of world rough diamond supply still goes through the De Beers DTCs, which means that the De Beers DTCs in South Africa comprise the primary buyers for imported diamonds from De Beers, who are the near monopoly importers. Parcels sold to DTC sightholders (companies authorised as bulk purchasers of rough diamonds) comprise mixed diamonds, and remain non-negotiable. The parcels can be rejected but sightholders thereafter will allegedly not be invited again. DTC sales are confidential, claimed De Beers, though some values (2007, 2008 and 2009) were disclosed in an annual report, disclosing significant discrepancies between diamonds apparently imported for local buyers, and the sales to those local buyers that actually take place.

Until 2008, De Beers controlled a minimum of 90% of domestic South African diamond production. The subsequent sale of mines diluted this dominance. In 2011, De Beers, which had begun selling mines from 2010, generated just 60% of domestic production by value (not volume), down from 92-95% from 2004-2009 as listed in the South African Department of Mineral Resources (DMR) report (DMR 2012). Another 37% from 2011 production was generated by Petra, such that the companies together generate a full 97% of domestic production by value. In 2011, De Beers still produced 77% of total domestic production by volume. However, Petra confirmed to the author that the company neither imports nor exports, and that while the company has acquired De Beers mines (thus the expansion of the former,

[2] The Kimberley Process (KP) is a joint governments, industry and civil society initiative designed to prevent 'conflict diamonds', or diamonds acquired by rebel movements, from entering world markets and funding insurgency against governments. See www.kimberleyprocess.com

and contraction of the latter in local market share): "Petra does not sell any diamonds to De Beers. We mine, sort and sell the entirety of our rough diamond production [locally]" (Email to author, 2014). Thus De Beers has an overwhelming market share of the cross border diamond trade. In other words, if Petra does not export, the 60% of domestic production by value contributed by De Beers must constitute at least 97% of South African production exported by value (adjusting for the 3%).

De Beers also exported diamonds for valuation in London by its valuation hub there, which moved to Botswana in 2013. The precise data cannot be determined as De Beers claimed that value, volume, percentage of imports and exports, as well as local and export sales, comprised proprietary information. The Department of Mineral Resources, via deputy head statistician, Martin Kohler, confirmed to the author that De Beers did not authorise disclosure of any information save for production value. This position is protected by law, he further stated, until dominance is diminished below 75%. According to our estimates, De Beers controlled 77% in 2011, and in 2012 this figure had fallen to 62.6%. At that point, according to the government definition, they no longer 'controlled' the industry, and thus South African Mining Industry (SAMI) should have been able to produce more specific information on volumes and values.

When the authors asked De Beers and the Government Diamond Valuator, as well as the Department of Mineral Resources, for total sales value from a) sightholders (De Beers preferred buyers) concerning imports, b) pre-export to local industry, and c) total local sales data, the figures were not provided, on the grounds of commercial confidentiality. However, in their report entitled 'Report to Society', De Beers (2011; 2012) do note that

> About 50% of De Beers' total production by value in South Africa is sold to the domestic cutting industry via DTC South Africa and the State Diamond Trader. In 2009, sales of rough diamonds to South African Sight holders and their Black Economic Empowerment (BEE) partners amounted to US$264 million (2008: US$573 million, 2007: US$670 million).

DTC sales before and after this period were not provided. This quote is suggesting that half of De Beers' total South African production by value is equivalent to USD264 million in the year 2009. This leaves their total production for that year to be valued at USD528 million. However, according to SAMI figures, 885 million Ct were produced in 2009, with De Beers accounting for 85%, or 725 million Ct, of which USD376 million constitutes half by value, a difference of USD197 million (SAMI, 2010). The 2009 figure was also less than half the amount sold on to the local industry in 2008 (USD573 million) or in 2007 (USD670 million), according to the De Beers source. Thus, the 'Report to Society' report shows a discrepancy with the values of domestic production of diamonds recorded in SAMI, so these must be treated with some suspicion.

It is important to note that the KP data considers only rough diamonds, not polished or finished diamonds which have been subject to beneficiation, so KP certificates do not tell us about beneficiation. However, there is good reason to believe that in South Africa the local beneficiation industry is small, with just 300 polishers, reduced from 3000 in 2008 (Parliamentary Report, 2014) such that we can safely assume in our method (below) that the

vast majority of imported diamonds are re-exported. The government also confirms that most imported diamonds are exported in rough form, including when purchased by De Beer's preferred buyers in South Africa, the DTC sightholders.

Also according to UN Comtrade data South Africa imports almost as many polished diamonds as are exported, although it is not possible from this dataset to find out how much of the expensive rough gem imports are domestically beneficiated because the trade data includes polished imported diamonds that are being re-exported (sometimes only after a value consultation rather than sale) as well as locally produced polished gems and imported rough gems that have been subject to beneficiation, without a means to disaggregate between the three groups. Arriving at an estimate of how much of the polished exports appearing in the UN Comtrade data are actually polished locally is thus impossible. However, we suggest that the level of domestic beneficiation of imported expensive gems must be low given that the government South African Diamond and Precious Metals Regulator (SADPMR) report states, "The majority of the polished diamonds exported were diamonds imported into South Africa for expert opinion." (SADPMR, 2011, 29; 2012, 36; 2013, 26). Also not all sales to local sight-holders in the Diamond Trading Companies are actually polished: most are then simply re-exported by these companies, many of which are part of the De Beers corporate grouping.

Moreover, we do have some data on the volume of locally beneficiated diamonds which indicate that volumes are very small: 150,175 carats (2012); 167,482 carats (2011); and 129,417 carats (2010)[3] (SADPMR, of equivalent years). Unfortunately no data is available prior to 2010. These figures represent 32.25%, 12.41% and 1.31% of the imported volumes of rough gems in the respective years of 2010, 2011 and 2012, and the volumes polished locally would also include domestically mined gems. Also, there is reason to think that the data on exported polished gems is larger than actual beneficiation given the role of consultation as a service industry. For example, in SADPMR (2013, 26), in reference to polished exports, the *Annual Report* claims that "[A]n approximate of 46,548 carats (30.99%) of these exports were consignments which were imported for consultation and being returned to the owners". This means that only 103,627 carats (not 150,175 carats) were domestically polished output in 2012, which represents only 0.9% of the imported rough high value gems in that year. In other words, we cannot exactly determine what proportion of imports are beneficiated, and thus removed from the KP valuation system (which doesn't include polished diamonds) when subsequently re-exported. However, we can suggest that it is low, which is supported by interview data and other related sources.

For example, the DMR's *South Africa Mineral Industry Report* (SAMI) does not list local sales, export sales or total sales from 2004-2010 for diamonds, perhaps because of the same restrictions derivative of De Beer's near monopoly position, until recently when the company began to sell mines to Petra. Diamonds were the only commodity lacking data. But in a report dated 2011, DMR listed local sales and export sales data for 2010 and 2011 for diamonds. Somewhat strangely given De Beers' written response to the authors on local beneficiation, the

[3] In 2010, 129,417 carats were locally polished but in that same year, 161,235 carats were polished exports. The difference was re-exported polished imports. So the correct figure for 2010 is 129,417 carats.

report shows that most diamonds sold in South Africa are cut and polished abroad, a point also made in "Downstream Value Addition". According to this 2012 Annual Report of the South African Diamond and Precious Metals Regulator (SADPMR), only 230,000 carats (12.7 percent) of the 1,805,758 carats that were sold in South Africa in 2011 were cut and polished domestically. This implies that domestic consumers buy quality stones processed elsewhere in the main, while quality stones mined in South Africa as well as those imported from neighbouring countries, are generally both exported. Also, the SADPMR (2012) report states that over 85% of stones originating in South Africa, of whatever quality, are sold directly from the mines and exported unprocessed.

The Mining Tax regime and Corporate Income Tax

The South African Mining Tax regime encompasses the Corporate Income Tax (CIT), the newly enacted Mining and Petroleum Resource Royalty Act, and the Diamond Export Levy. The CIT is a tax on profit, currently at 28% after a number of downward adjustments. The Resource Royalty imposes a charge on gross sales value of mining companies, adjusted for profitability, and is intended as a compensation, to 'society' through the state, for the permanent loss of natural resources. The aim of the Diamond Export levy has been to develop a local diamond cutting and polishing industry, and a state diamond company, by imposing a charge on exports. In the case of applying the CIT to mining companies a number of additional concessions are made, specifically as regards capital allowances and accelerated capital depreciation allowances. In addition, in the case of gold mining companies, a formula is applied to determine the tax rate at which profit is to be taxed, which in essence has the purpose of exempting a gold mining company from tax at low profit margins (currently 5% or lower) and with the tax *rate* increasing as profit increases.

The Resource Royalty Tax, as set out in the Mineral and Petroleum Resources Royalty Act, and the Mineral and Petroleum Resources Development Act (MPRDA), establishes an *ad valorem* (value rather than volume) tax on mineral and petroleum resources to compensate the state as custodian for the permanent loss of natural resources. The Royalty Rate is imposed on gross sales and varies for refined and unrefined minerals and ranges between 0.5% and 5% for refined minerals and 0.5% and 7% for unrefined minerals: the rate varies within these parameters with company profitability, determined by considering company earnings. Since the royalty is a compensation for the permanent loss of resources, a mining company would be required to pay the royalty regardless of the profitability of its operations: put bluntly, the resource is gone whether the company makes a profit in extracting it or not.

The Resource Royalty is recent and has only been in effect since 1 March 2010, with 2011/12 the first full fiscal year in which it was in application. Diamonds currently make a mid-range contribution to the Resource Royalty, contributing ZAR290 million in 2012, a rate of 3.1% on sales of ZAR9.4 billion, and ZAR175 million in 2013. In total, royalties have contributed ZAR575 million or USD57.5 million. However it is a tax on the value of sales, and thus the pricing system which sets the value of the sales predetermines the rate of tax paid. Meanwhile,

export taxes - at a rate of 5%, has generated a total of ZAR225 million from 2009-2013, or USD22.5 million (National Treasury and South African Revenue Service, 2014: 15, 27).

Production, imports, exports and sales of diamonds

We are still exploring the question of why imports seem to be much more valuable than domestic production and exports. In order to do this it would be interesting to account for domestic sales, albeit that these are often to companies connected to the De Beers group in any case. However, it is not possible to systematically correlate domestic sales volumes with import and export volumes until 2013 because of the dominant position of De Beers in the market, as this requires access to local and export sales information. As was explained by the DMR:

> Unfortunately we are not in a position to provide data relating to individual mines or companies, as all statistical information submitted to us is strictly confidential in accordance with sections 14 and 17 of the Statistics Act (Act 6 of 1999) and section 30 of the Mineral and Petroleum Resources Development Act (Act 22 of 2002). This restriction also applies to aggregated totals where one company has more than 75% market share, or where there are less than three producers of a mineral, unless all such producers have granted permission to publish the data.
>
> De Beers, who had a predominant share of the diamond market in the past, authorised us to publish the aggregated production data only (but not sales data). Due to the ongoing disposals of De Beers mines to other owners (Cullinan, Koffiefontein, Namaqualand, Finsch), the predominant position of De Beers has been diluted, and we are able to publish sales data with effect from January 2013 (but not before that date). (E-mail, letter to first author)

However, in a letter to the author the Government Diamond Valuator (GDV), the regulator, did give a structural explanation for high import and relatively lower export prices: The letter from the regulator, point 2, says that imports are mainly gem quality (thus high priced) while exports are run of mine (low price) which explains the difference in import and export price. The industry also gives this explanation, that the value difference is simply determined by quality difference. But this then makes our second research question more intriguing: if (as we established above) local beneficiation can probably account for less than 10 per cent (and even this may be way too high) of the high priced imported rough diamonds by volume, and the export volumes must include most of them (as domestic production on its own is not enough to generate these export volumes) why is the export price so low, since it must include (by volume) a vast majority of these imported high value gems?

The industry and government explanation only makes sense if the high quality imports (which the regulator says can be cut and polished cheaply locally) were sold domestically, and thus not exported at the same price or (if processed) a higher one. Or, to work as an explanation, the amount processed in this way would have to be volumetrically much smaller than the run of mine exports so that their higher price doesn't push up the aggregate total value of exports. In the next section we test the explanation that the valuation regime reflects only quality.

(Mis)pricing of rough export diamonds controlling for import (volume and value), 2005-2012

According to the government's South African Mineral Industry (SAMI) report: "South Africa's exports of rough diamonds have tended to exceed domestic production, due to the fact that significant amounts of imported diamonds (supplied ... to sight holders and imported by dealers and cutters) are re-exported by these dealers and cutters in the rough form" (SAMI 2005/2006, 26). Inventory, where mentioned in SAMI reports, is absent or marginal. This presents one plausible method of ascertaining potential mispricing of diamonds for export. The purpose of this method is not to prove the exact extent of transfer pricing and possible mispricing, although estimates are provided, but instead to indicate that the figures that are currently available for diamond volumes and values suggest anomalies, extremities and discrepancies, in the absence of other explanations or figures.

The Kimberley Process Certification Scheme (KPCS) requires that all importing and exporting companies place on each certificate of diamonds moved a value and volume, which enables us to establish an average price per carat. The KP data are available from 2004 to 2012 and cover production, import and export figures, subdivided into categories of volume, value and price per carat (in USD). This data are largely generated by the firms, and importing and exporting entities enter figures they know will be randomly checked on a light audit basis by the Government Diamond Valuator. Indeed, despite De Beers having originally contributed this accessible data, the integrity of the values was placed in question by a representative of the company during the course of this research: "The primary purpose of the KP process (or the issuing of the certificates at least) is for Governments to certify the origin of diamonds, not to keep track of the volume and value of diamonds imported or exported", (De Beers Head of Media Relations, Lynette Gould, to author). However, in addition to regulating against conflict diamonds, the avowed intent of the Kimberley Process was to increase transparency in the industry, so it would be most unfortunate if De Beers was not adhering to this objective, in a process in which it has been so influential. Here we assume that the avowed intent of the Kimberley Process and De Beers is to provide accurate data, and thus we assume figures to be accurate.

To identify potentially undervalued exports for each year from 2005-2011, we used the following methodology, relying on the KP data set, by comparing the values and volumes of diamonds as they enter South Africa, as they are produced at mines, and as they exit South Africa as exports (Table 2, columns 2- 12). This gives us a measure of how much less diamonds are apparently worth as they exit the country than they are recorded as being worth as they are imported or mined. Because we cannot follow diamonds in the total global market we don't have a measure of transfer pricing for diamonds imported, that is, how much more or less they are worth when they cross a border from when they are mined. Instead, in order to arrive at a figure of transfer pricing of South Africa's domestic production, we make the initial assumption that the values recorded for imported diamonds reflect an arms-length market price that De Beers are able to report correctly. We then assume that, whatever else happens in transit, they would be exported out of South Africa at least with the same price or more. We

also assume that 100 % of imports are re-exported, although this does potentially create a margin of error. However, as we saw above only a small fraction of imports appear to be locally finished or polished, and estimated by the proportion of imports known to be beneficiated (Table 2, column 6) this suggests an inflation error to the 'lost value' of South African production of anywhere between a single figure to 30% magnitude, although corroborating evidence (above) would suggest it is at the lower end of this range.

Thus in order to test for mispricing of South African production, we look at how the value of exports compares to the declared KP value of domestic production after allowing for imports. The method is illustrated in Table 2, as each step generates a new column moving progressively towards the right. This means we take the view that import prices are accurate and, (since the industry regulators and De Beers told us as much), that imports of diamonds are mostly re-exported. We assume that their value on import is at least as much as they would export for. We then simply take that volume, at that price, away from the export revenues, find out how much volumetrically is left of exports and assume that this must come from domestic production. We then find the per carat value of this volume and generate an adjusted price that the domestic production was exported at (once the imports at the declared value have been removed from the total) (Table 2, columns 13-16). Then we find the difference between the per carat price of domestic production when exported and the KP declared price, then multiply this by how much was exported. This gives a figure for mispricing given in red on the far right of Table 2. The last year is an anomaly since exports were less than domestic production, such that we cannot say that they were exported in that year, although the difference in value of exports and production must still relate to production in store. This generates quite significant under-pricing of exports, which from 2005 to 2011 sums to USD2,564.78 million, or USD3,340.34 million if the year 2012 is added. While there may be some error related to time lag, such that the production recorded in one year may not be exported until the next, this error reduces in that we are looking at a numbers of years. Finally in Table 2, columns 18 and 19 we estimate how much of this under-pricing of exports can be attributed to De Beers by weighting the overall figure by their market share, which generates a figure of USD2,825.26 for the years 2004 to 2012. However, sales to DTC sightholders that are re-exported where the DTC is related to the De Beers group of companies could inflate this figure if included.

Table 2: Variance in recorded diamond values: point of mine, import and export

	Domestic Production					Imports			Exports									
	KP: Volume cts (mill)	KP: Value USD (mill)	KP USD per carat [A]	Local beneficiation volume cts (mill)	Local beneficiation as % imports (by vol)	Volume cts (mill) [G]	Value USD (mill) [C]	USD per carat	Volume, cts (mill) [D]	Value USD (mill) [E]	USD/cts	E-C Value of dom. Prod. USD (mill) [M]	D – G Vol of dom. Exports	Prod (adjusted for import) [M/I], [H]	Difference actual export price and KP listed price USD (mill) [H –A], [I]	Value of mispricing USD (mill) [I x J], [K]	Estimated De Beers % (per cent)of exports by value [F]	Value of mispricing attributable to De Beers USD (mill) [FK]
2004	14.09	1,075.76	76.34			0.93	608.64	655.59	14.82	1,835.69	123.84	1227.05	13.89	88.34	12.00	166.68	95	158.346
2005	15.56	1,319.09	84.78			1.10	728.56	664.75	20.39	2,148.29	105.37	1419.73	19.29	73.60	-11.18	-215.66	96	207.03
2006	14.93	1,361.82	91.18			0.74	672.18	905.99	15.78	1,930.28	122.32	1258.1	15.04	83.65	-7.53	-113.25	96	108.72
2007	15.21	1,417.33	93.18			1.24	2,113.89	1,705.67	13.89	1,867.33	134.44	-246.56	12.65	-19.49	-112.67	-1425.28	97	1,382.52
2008	12.90	1,236.24	95.82			0.68	582.25	850.09	10.14	1,484.83	146.39	902.58	9.46	95.41	- 0.41	-3.88	93	3.61
2009	6.14	885.54	144.23			0.66	357.20	544.73	9.55	1,018.67	106.67	661.47	8.89	74.41	-69.82	- 620.70	85	527.60
2010	8.86	1,194.28	134.75	0.129	32.25	0.40	307.96	773.16	3.76	709.22	188.76	401.26	3.36	119.42	-15.33	- 51.51	70	36.06
2011	#7.04	1,388.68	197.13	0.167	12.41	1.35	460.17	339.79	6.65	1,370.45	205.94	910.28	5.3	171.75	-25.38	-134.51	#99.	133.16
2012	7.08	1,027.13	145.13	0.150	1.31	11.47	1,082.13	94.31	8.01	1,355.53	169.13	273.4	-3.46	-79.02	-224.15	-775.56	55	426.56
Total																**3,340.34**		**2,825.26**

Note: This table combines data from Kimberley Process records submitted by De Beers and Department of Minerals Annual report data on average value per carat and volume of domestic production.
The bracketed letters in the headings give a label for the column and are used to track the calculations being made.

*Value of USD1,799 in SAMI, gives USD per carat of USD202.97 (2010: 29). SAMI state average rough diamond price USD202.13 (2010: 31). But from SAMI (2011: 6) "Diamonds produced in South Africa were valued at an average of $247.14/ct in 2011, an increase of 22.3 percent over the 2010 figure". Gives figure of 192.03 for 2010
This is calculated by volume
b) From SAMI 2011 report. Figure for 2008 earlier appeared as 12.90

In 2007, import price manipulation appears evident: over 1.2 million Ct were imported at over USD1700 per Ct or more than USD2.1 billion in import value. Former De Beers insiders and government diamond valuators claimed the price was highly improbable. Total export sales for the 2007 period, including imports, were USD1.86 billion for 13.8 million Ct. If controlled for import data (volume and value) and using the analogy of mispricing, 12.6 million Ct of rough diamonds produced for export in 2007 had a sales/transfer value of USD0, with a negative of -USD25.9 per Ct. Using the KP production price (USD93.1/Ct) multiplied by the actual-hypothetical export volume (less import volume), generates a potential loss in value of USD1.1 billion of the total diamonds being exported by De Beers, against their respective KP prices on entry to South Africa (remembering that the control assumes imports are exported at the recorded value on entry).

In short, in 2007, if the KP import certificates are correct, the South African production of diamonds would have been exported at a loss! In this instance, including imports (re-exported) in the data for total exports, serves to generate the impression that domestic production is being exported at a fair price, that is above the price recorded by SAMI at the mines. It is probable, however, that mispricing is spread over a number of years by including high value imported diamonds (imported not for the purpose of sale but on a round-tripping basis) to generate the impression that the arms-length price assigned to domestic exports is fair, even though when controlling for imports, it turns out to be less than the value of production recorded at the mines. This has the potential effect of externalising profits, as higher sales value (related to the intrinsic real market value of South African diamonds) is recouped further up the value chain in processed and retail prices.

Similarly, profits can be externalised by over inflating import values and transferring money between De Beers entities attached to these sales, but this method does not test for that. Instead we are highlighting differences in values recorded for domestic diamonds at the point of production, controlling for imports, and then suggesting that domestic real value is not accurately represented in the export values recorded. That being said, there is also some suggestion in the figures that import overpricing is present. For example, although DTC data was classified as confidential, De Beers *Report to Society* lists sales to the Diamond Trading Companies (preferred invited buyers) as worth only USD670 million, generating a discrepancy of more than USD1.3 billion in 'unsold' diamonds imported in that year with the apparent and singular purpose of re-export, plausibly back to De Beers' head office in Botswana.

In 2012, import volume manipulation seems likely, with volumes increased by an average 10.5 million Ct in comparison to the preceding eight years. From 2011 to 2012, there was a 747% increase in import volume - in excess of 11 million Ct. This imported volume (11.47 million Ct) is indicative of large quantities of low quality boart (poorly crystallised diamonds), mixed in with higher value imports. The value of imported diamonds per carat was USD94.31, differing significantly from previous average values per carat of USD400-900 per Ct. Import volumes far exceed export volumes too. It is unlikely that the 'inventory' of millions in low quality diamonds is designated for export in one single year. As with 2007, and given De Beers

contraction in equity ownership in South Africa as a consequence of first the *Diamonds Amendment Act 2006*, and in the second instance the more assertive BEE equity share proportions provided for by the extension to BEE legislation in 2012, the *Broad-Based Black Economic Empowerment Amendment Act,* 2013, it is possible that the company has an incentive to frame the mines and the production from them as less valuable than they might in fact be in order to reduce the value of the ownership share that they must divest. This would be serviced by the slow re-export of boart mixed with home production.

From 2009-2011, undervaluing of exports estimated with this methodology appears to have generated USD806 million in 'lost' value for diamond exports as compared to KP registered values. From 2005-2009, excluding the years 2007 and 2012, this increases to USD1.143 billion in lost value, value which if it had appeared on the balance sheet would have been subject to tax and royalties. Therefore, both 2007 and 2012 appear to represent circumstances of trade mispricing, where diamonds were moved for re-export and inventory in volumes and at values that could enable round-tripping, profit externalisation and tax avoidance. In the longer research paper for Oxfam (Sharife and Bracking, 2014) the volumes and values of the actual KP certificates were used to create a database of prices and values across the import and export chain. Using the average prices per carat recorded in the aggregate KP recorded values generates data on prices recorded in Table 2 (above) and generates slightly lower figures for 'lost' values in exports. Table 2 recorded rounded figures.

Lost value

There is no ready explanation available for the value apparently 'lost' in the South African jurisdiction related to import value not being reflected in export value. The discrepancies in the table above suggest that either or both of two things are occurring: import parcel values (as required on a parcel for KP certification purposes) are being inflated and/or export values deflated. This would have the result of increasing the value of import credits and/or reducing income recorded in South Africa, and thus would reduce the tax burden of importing and exporting mine companies. Since in most instances it can be assumed that these transactions occur between entities under common control, it is correct to refer here to likely transfer pricing abuse. It would also appear as though the regulator (the GDV) has struggled to date, with the possible exception of 2012, to address this. In 2012, the GDV noted an import *volume* of 8.5 times larger than any previous year's import volume, which seems to have warranted further scrutiny given its particularly anomalous scale. It may be that, as a consequence of prior mispricing, increased scrutiny of USD per Ct rates by the valuator occasioned a shift to inflating the import volume, with the same tax objective. Or it could be that this particular year is more accurate in recording either volume or corresponding price. But without further explanation this remains unclear, and the discrepancy between high import values in relation to low export value remains a mystery. Typically for South Africa the import price has tended to

be more than five times the export price for rough diamonds going through the KP, as all rough diamonds are required to.

What then can one conclude about the 'valuation' difference, for South Africa, for these selected years, and the tax revenue implications of this? In other words, what is the difference between the intra-firm value assigned to export and import parcels and their fair, or arm's length, market value? It is not clear what a benchmark 'fair market value' might be, since it is not clear which prices might be entirely immune from deflation or inflation, or indeed from the market setting qualities of the market oligopoly. Accordingly, a conservative approach is followed here where the 'lost value' is attributed to the difference between import value as given on the KP certificate, and import value as the computed figure of import volume multiplied by the higher of the production and export price for that year. In other words, the higher of the export and production price in each year is taken as the 'fair market value', and a kind of reverse logic used in which the overvaluation gap between the value assigned to imports in relation to home production is estimated using import values and either the production value or sales value of home production. The method is conservative in the sense that we are assuming that the higher figure given on the certificates is the 'true' one for home production. If the lower value is 'real' then the overvaluation of imports would be even higher. However, we are also assuming that there is no underlying quality difference between gems of overseas and South African origin, which the industry would refute. Table 3 (below) provides these results for each year from 2004 to 2012. Obviously, this is an estimate only.

Using this approach, the estimated inflation of import value over the period 2004-2012 is nominally USD3,935,638,201, or USD3.9 billion. At a conservative exchange rate of ZAR7 to USD1, then, this amounts to ZAR27.2 billion. However, as has been noted, 2012 was an anomalous year, characterised by a huge *volume* of imports (8.5 times more than the next-biggest volume of imports, 2011), at what seems an oddly low price, USD94.31 per Ct, which is not only lower than all export prices but also lower than all production prices since 2008. As a result, the 2012 score reduces the estimates of inflated value considerably. For the years 2004-2011, then, the estimated inflated value of imports is USD4,794,104,875, or roughly a nominal USD4.8 billion / ZAR33.6 billion.

It should be possible to generate a very general, ballpark estimate of what these inflated import values might mean for the fiscus in terms of foregone CIT revenue, had these values been subsequently carried through to exports and sales revenues, or if, hypothetically, they better reflect the value of South African production once eventually sold globally (and are being used to profit shift). What, for example, would the foregone tax revenue be, on average, per annum in 2012 ZAR? For the eight years 2004-2011, the average inflated value was close to USD600 million, or roughly ZAR4.2 billion, nominally. Even using the ZAR7 to USD1 exchange rate, deflating at a low rate of 4% and assigning a tax rate of 20%, the *annual* average loss to the fiscus, in constant 2012 ZAR, would be ZAR1.03 billion.

Table 3: Estimate of Rough Diamond Import Inflation, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Import Volume (Cts)	928,391	1,095,985	741,928	1,239,334	684,928	655,733	398,312	1,354,285	11 474 008
Value (USD)	608,642,098	728,558,421	672,180,375	2,113,894,527	582,253,021	357,197,746	307,958,913	460,174,157	1,082,132,299
Export or Production price USD / Ct (b)#	123.84	105.37	122. 32	134.44	146.39	144.23	188.76	205.94	169.13
Import volume at (b)	114,971,941	115,483,939	90,752,633	166,616,063	100,266,610	94,576,371	75,185,373	278,901,453	1,940,598,973
Inflated Value (USD)	493,670,157	613,074,482	581,427,742	1,947,278,464	481,986,411	262,621,375	232,773,540	181,272,704	- 858,466,674

In this method we choose the higher of the KP price for either sales or production as a proxy for a fair market or arms-length price

Diamond pricing and valuation

The discrepancies in the value of diamonds reported can be interpreted in relation to the nature of the market, the good and the valuation system in place. First, we need to find out how price is actually determined, given both the nature of diamonds as a good, and the nature of the oligopolistic markets that they trade in. A distinction needs to be drawn between the rough and the finished diamond market. Though the rough diamond market has always been oligopolistic, if not monopolistic, and continues to be so, the market for finished diamonds is characterised by a greater degree of competition:

> The polished diamond market is a free, competitive market with multiple sellers and buyers. Economic factors such as economic growth rates in consuming nations, employment, disposable income and foreign currency rates have a much greater influence on polished diamond prices than does the DTC. The major difference between rough and polished diamond prices is that the latter are more dependent on supply and demand. If the demand is high and supply is limited, buyers will be forced to purchase rough diamonds to generate new supplies of polished stones. (Department of Mineral Resources 2012: 27).

Since the focus here is on South African diamond mining, this paper has focused on rough diamonds sold on from the mines into the global market. De Beers is also the near monopoly market player in importing quality rough gems from Namibia and Botswana. These are apparently priced at a premium to any other countries' as yet unpolished quality gems. But they are then apparently counted in the 'local beneficiation' commitments of De Beers when sold to South African finishers. The latter, De Beers told us, prefer foreign stones to South African ones which tend to be of a lower quality. This occurs after beneficiation, for as noted, South

African export diamond prices are much lower than import diamond prices, and the re-exported diamonds would constitute a significant volume of the exports in some years. Instead, the export data records very few 'quality' or high priced diamonds.

Given that it would be illogical to merely store them, these re-exported quality stones are apparently now worth less than when they entered the country. In other words, it looks probable that the initial price paid to the De Beers Company in Namibia or Botswana was more than the price registered as the diamond left again. This difference would represent a non-taxable rent that is being externalized to another De Beers subsidiary in a different tax jurisdiction, which in the case of Botswana would be an extremely low tax jurisdiction.

The ability of price to be determined by extra-market factors is due to both the nature of the product, and to De Beer's dominant market position. Starting with the product, the determination of the price of rough diamonds is complex. Indeed, the mining and selling of gemstone quality diamonds has been defined by a basic paradox since 1867 when large deposits were discovered outside Kimberley whereby the 'specialness' of diamonds has been constructed by associating the stone, by means of its rarity, indestructibility, and perceived beauty, with particular lifestyles of opulence, romance, consumption and privilege. The discovery of large reserves in South Africa promised great wealth to those who mined and sold it, *if* supply could be controlled in a long-term revenue maximising manner, and *if* demand could be increased by making diamonds appealing and semi-affordable for the middle, as well as, upper classes. Getting both components right has been the spectacularly successful strategy of De Beers, which until recently produced a large share of the world's rough diamonds, exercised control over virtually all the rest through its Central Selling Organisation (CSO), and played the leading role in shaping consumer attitudes towards the stone.

In effect, through clever marketing to entrench the association of diamonds with glamour, romance and marriage, this 'rarest' of stones has become commonly owned by middle and upper class women in Europe and North America, and significant inroads have been made in other, especially Chinese and Japanese, markets. A second component of the limitation of supply has been preventing a secondary or re-sale market for diamonds from developing: after all, given the large-scale mining of diamonds for over a century, a vibrant secondary market would risk swamping the volume of annual new production and push prices down. The undermining of secondary markets emanates seamlessly from the 'A diamond is forever' concept; selling your stones on, then, would be 'tacky'. On the other hand, diamonds are consistently marketed as a good 'investment', implying capital gains at some point should the owner indeed want to sell. Though the investment value of exclusive high-end diamond jewellery may indeed be positive (though unlikely to be spectacular) there is little doubt that most diamonds owned by most men and women would struggle to be sold, given the absence of a secondary market, and would not achieve even close to the purchase price.

Within this discursive framing of diamonds as 'priceless' and forever, there is then no single diamond price, since for rough and finished diamonds an array of prices will exist depending

on quality. Second, price determination is dependent on a range of conventional economic factors (competitive supply and demand) but also more strategic variables associated with market power enjoyed by larger diamond companies who supply to cutting and polishing firms, jewellery firms and the retail market more generally. And finally, a third level of complexity exists when it comes to diamond valuation in that the value to be assigned to a particular rough diamond or parcel of rough diamonds can vary considerably depending on variations in the 'four Cs' - clarity, colour, carats and 'cuttability' - which are usually used as a means of rough diamond valuation. The vast majority of South Africa's domestic production generates diamonds in the low-value gem, 'rough' diamond market, where this somewhat imprecise pricing system prevails. Here, price is varied by the role of the expert valuator and his or her authority, necessarily involving differing judgments, in assessing the four Cs, none of which have a clear scientific calibration.

One would expect price to vary marginally among qualified experts, but this possibility of flexible pricing potentially allows diamond companies to assign values to diamonds using additional criteria, such as for tax planning purposes, or the requirements of managing profit flows within the global interests of the conglomerate. This arbitrary price can be maintained up to eventual sale with the overall value being realised once a final 'arms' length' purchaser, such as a retail customer is persuaded that the price is fair. The alteration of value while the diamond is moved from mine to purchaser is derivative of global strategy, while there is a sense in which even the final price is 'performed', given the lack of an intrinsic value for stones. The independent verification of the value of a diamond assigned by a diamond company in any particular place in this market structure is then obscured further by the complex valuation of the four Cs. This paper argues that tax justice would be aided by the regulation of an industry pricing standard of rough diamonds in this respect, in order to prevent qualitative judgements of worth at the domestic source being used to facilitate trade mispricing and the siphoning of profits to tax havens, once the diamonds enter the 'retail' markets.

Apart from the nature of the product, there are also structural features of the market that make it a challenge to test the fairness of prices and thus of taxes paid on sales. What is a fair market value? Assessing the integrity of price is made near impossible by the confidentiality enjoyed by De Beers in valuing the quality of imports and exports, given that no arms' length sale actually takes place. This process is even a secret from the Government Diamond Valuator, which is nonetheless expected to independently analyse all import and exports parcels, totalling millions annually, in more than 12,000 different categories, without access to the De Beers valuation criteria. Clearly opportunities for price manipulation exist in the absence of transparent, open and competitive markets where arms' length transactions could establish price. There continues to be unreasonable market dominance as regards the inflow and outflow of diamonds (until 2009, a monopoly that extended to production, where in some years, De Beers recorded over 97%); where most transactions are intra-firm and where particularly weaknesses in market regulation might be expected in the absence of a strong regulator.

Conclusion

The market for diamonds in South Africa can be viewed as a particular institutional assemblage in which De Beers are the dominant actant and in which they are able to influence the behaviour of buyers, sellers and, critically, the regulator. This power is contributed to by the particular nature of diamonds as a commodity with little intrinsic value, bought by the eventual consumer in relation to a discursive framing of romance – 'foreverness' – at a price meant to signify a luxury good. Because diamonds are then rarely bought or sold again in a secondary market there is a weak sense of an arms-length price. Instead, arbitrariness and non-materiality contribute to the pricing system through the discursive way in which diamonds are culturally embedded as valuable. De Beers is also assigned a powerful position from which to determine diamond values by its control of the calculative entity in the diamond market, 'The Book', in which the prices of carats are recorded, which acts as a black box in that the expertise of the corporate producer is left as a technical and unquestioned expertism. In sum, and in the conceptual language of the LCSV research protocol (see Bracking et al 2014), we have a valuation system in which the institutional arrangements are heavily balanced toward the interests of the producer and corporate sector; where the calculative entity framing price are also largely under their influence, centrally contained in the 'Price Book', and where the cultural framing of the luxury good deters questioning of the pricing system in the countries of primary production.

These empirical observations lead to both 'real world' consequences and to an interesting theoretical conundrum. Empirically the findings are significant in relation to 'real world' effects because they contribute to the evidence of tax and economic injustice in the way mining is organised and pursued. There has been much written about the 'resource curse' globally, and about how resource abundance does not necessarily lead to growth or good development outcomes in poorer countries. In response campaigners have argued that those countries using resources to fund development should require that the fiscal contribution of mining be significant, in the absence of other growth multipliers and in the context of the permanent loss to the sovereign natural capital base. However this paper shows a deeper problem for those wanting to establish a 'fair' price and a related 'fair' level of tax contribution: in this valuation system an ontologically fixed definition and measurement of value cannot be established because it is largely performed by the valuation system in place, a valuation system which privileges the power of the De Beers corporation.

The implications of this are that fairness in tax is compounded by an *a priori* arbitrariness in the determination of value. This in turns leads to 'real world' effects in terms of values assigned which have consequences for the distribution of reward and profit to various stakeholders. Thus the figures above suggest significant discrepancies in USD per Ct rates for imports and exports, discrepancies which suggest a possible (mis)valuation of rough diamond parcels which serves to inflate import credits for tax purposes and devalue domestic production for export. If this is the case, then the current capacity and commitment of the GDV needs to be reconsidered, the behaviour of responsible companies changed, and a retrospective accounting

process undertaken to reclaim missing revenues which, in the absence of quite arbitrary pricing practices, would have been due to the South African Revenue Service (SARS) and the people of South Africa.

Thus using the LCSV research protocol (Bracking et al 2014) we can identify that an actant's power over a particular configuration of the three elements – institutional assemblage, discursive framing and calculative entity – in this case leads to a marketization process wherein value is largely performed, or has been historically, by the key power-holder, De Beers. In this oligopolistic market it is hard to ascertain how much value is being passed through any particular jurisdiction, or indeed how much the price of a natural resource that is exported has an assigned 'fair' price in relation to any empirical or materially independent measurement of value.

But it is here where we meet the theoretical conundrum over how to understand the real in relation to the performed, in that the implications of our argument for the notion of 'mis' pricing require further theorization. Given the analysis above it should be clear that 'mis' cannot be understood as a 'wrong' price in relation to a 'correct' price that actually exists somewhere, which would conform to a positivist epistemology, even though the tax justice discourse relies on this being a possibility. The tax justice case, and the underlying evidence of arbitrary pricing suggested here which can be used to evidence it, relies on the idea that there is an 'arms-length' price which exists and which is different from an arbitrarily assigned wrong or 'mis' price. In our methodology we use the proxies that the industry itself provides: KP listed prices to connote value in the measurement of possible import overvaluation and/or export undervaluation, and the higher of the sales or production price, again from KP, as a proxy of 'real' price in order to estimate 'lost' externalised value (and profits, and therefore tax) which we believe are a consequence of import overvaluation. However, none of these proxies of value can be privileged ontologically as 'real' value; instead 'mis' valuation can only be understood in relative terms in relation to the economic injustice that the price consequentially delivers in relation to the economic rewards distributed to the parties involved: to the workers, the peoples of South Africa, the consumers, and the shareholders and workers of the De Beers company. This reminds us that our research protocol is in essence a means to explore empirical realities, but does not foundationally explain the relative power of different actants and classes in capitalism as a social order, and how these influence the configuration of valuation systems from the outside and from within.

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Quantec provides various databases which were used for this study. These can be accessed, by subscription, at www.quantec.co.za

General information on the construction and significance of the Tax Justice Network Financial Secrecy Index is obtainable at: www.financialsecrecyindex.com