Capital Movement through Trade Misinvoicing:  
The Case of Africa

by

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Abstract

Trade mis invoicing can be used as a tool to move capital in or out of a country in order to evade taxes and custom duties, to avoid quotas, for smuggling, to launder money, or as a means of capital flight. For whatever reason mis invoicing occurs, the economic development of the given country can be severely hindered. In the case of the African continent, the amount of annual capital outflows to the U.S. between 2000 and 2005 increased by more than 60%. This capital flow occurred mostly through low priced exports which can facilitate tax evasion, launder money, or just move money out of the country (capital flight). High priced imports are also used for capital flows and can be used to mask illegal commissions. Data was examined for deviations from average import and export prices as an indicator of capital flows. Four of the top thirty African countries to move capital to the U.S. are classified as Northern African countries. These four countries (Egypt, Algeria, Morocco and Tunisia) alone moved approximately $6,734 million through trade mis invoicing while the remaining 26 Sub–Saharan countries combined moved a total of $13,408 million. The country moving the most capital to the U.S. through trade mis invoicing was South Africa, a Sub-Saharan country.

Keywords: Trade mis invoicing, Africa, money laundering, capital movement, trade
Type of Paper: Research Paper
# Capital Movement through Trade Misinvoicing: The Case of Africa

## Structured Abstract

<table>
<thead>
<tr>
<th><strong>Purpose of this paper</strong></th>
<th>The purpose of this paper is to identify capital flows due to trade misinvoicing in 30 African nations.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design/methodology/ approach</strong></td>
<td>Data from 30 African nations was examined for deviations from average import and export prices as an indicator of capital flows. This paper uses U.S. customs data to document the amount of capital flows which may be hidden in commodity trade. We use deviations from average prices (price filter matrix) within these commodity classes to identify abnormal prices and to produce conservative estimates of the amount of capital movement from 30 countries in Africa to the United States.</td>
</tr>
<tr>
<td><strong>Findings</strong></td>
<td>The results of this study demonstrate that between 2000 and 2005, capital outflows from all 58 countries in Africa to the U.S. grew by more than 50%, both through low priced exports and high priced imports.</td>
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<tr>
<td><strong>Research limitations/implications (if applicable)</strong></td>
<td>A clear understanding as to the true purpose of the overall capital movement is not easy to determine from the data. Approximately half of the countries (16 out of 30) utilized low priced exports as a means to move more money into the U.S. while the other half (14 out of 30) used high priced exports to move the most money.</td>
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<tr>
<td><strong>Practical implications (if applicable)</strong></td>
<td>When trade misinvoicing is used as a tool to move capital in and out of a country or continent in order to evade taxes and/or custom duties, avoiding quotas, smuggling, and laundering illegally obtained money, or as a means of capital flight, the economic development of the given country is severely hindered. This movement of capital may be due to tax evasion, duty reduction, money laundering, capital flight, or other reasons beyond the scope of this paper.</td>
</tr>
<tr>
<td><strong>What is original/value of paper</strong></td>
<td>The technique of using a price filter matrix can be of value to researchers and governments to identify capital flows due to trade misinvoicing.</td>
</tr>
</tbody>
</table>

**Keywords:** Trade misinvoicing, Africa, money laundering, capital movement, trade

**Type of Paper:** Research Paper
I. **Trade Mis invoicing: Reasons and Consequences**

In November 2005, a set of golf clubs is imported into Nigeria for $4,976, while the U.S./World median price for the same set of clubs is only $82. During the same month, a gasoline generator is imported into Ghana from the U.S. at a price of $60,000 that could be purchased at the U.S./World median price of $63.03. During June of 2005, an electric hair dryer is imported into Nigeria at a price of $3,800 when the U.S./World median price is estimated to be $25. These transactions may be due to intentional mis invoicing of transactions, which commonly occurs in the African continent.

In February of 2002, U.S. customs data shows that Ghana exported diamonds to the U.S. through New York via air cargo a total of 37 times with a total undervalued amount of $311 million.1 When it comes to this country, the highest dollar amount ($328 million) of capital outflow through low priced exports was recorded in the year 2000 (Graph 1). The amount of capital outflows from Ghana to the U.S. through trade mis invoicing increased dramatically between 2003 and 2005.

Trade mis invoicing may be done for the purposes of evading custom duties and restrictions, avoiding paying taxes and fees, avoiding quotas, smuggling, to launder illegally obtained money, or for other unknown reasons. When trade mis invoicing is used as a tool to achieve any of these illicit objectives, economic development can be severely hindered.

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1 The total weight of the diamonds (except industrial, unworked or simply sawn, cleaved or brut (HS 10 code: 7102310000) equaled 664,680 carat or 132.94kg with a total value of $10,723,165. Given the total value of the diamonds and its shipping weight, the price would be worked out to be $16.13/carat. The U.S./World lower quartile price in 2000 for the same item was $485.14/ct, that is, an undervalued amount of $311 million. Please note that 1 ct=0.2 gram; $16.13/carat = $10,723,165/ 664,680 ct and $311 million = (485.14 – 16.13)*664680.
Misinvoicing of imports by overpricing can be used to conceal illegal commissions and to transfer monies that are hidden in the inflated prices. Under invoiced imports use misinvoicing to: (1) avoid or reduce import duties and restrictions, (2) dump foreign produced goods at below market prices in order to drive out domestic competition and, (3) smuggle goods into a country in order to avoid paying taxes and fees. In the case of South Africa, Rustomjee (1991) points out that, given the country’s exchange control, “importers are only likely to under invoice imports to reduce tariffs or circumvent quantitative restrictions if they have other means of access to foreign exchange, perhaps through under invoicing exports or through dividend repatriation.”

Companies could over invoice their exports as a response to their governments’ attempts to reward those companies or industries that increase their export revenues, or simply to hide illegal commissions that can be concealed within the inflated prices. In either case, over invoicing of exports causes the amount of export subsidies offered by some developing countries to increase. On the other hand, under invoiced export transactions may be used to avoid or reduce export surcharges in countries where these exist or as a technique of evading income taxes, launder money and/or facilitating capital flight.

In his study, Rustomjee (1991) points out that between 1970 and 1988, the percentage of under invoiced exports from South Africa was, on average, twenty percent. The author also estimated that the amount of under invoiced exports to the U.S. amounted to over $720 million. Under invoiced items included, but were not limited to, high value item such as precious and semi-precious stones, silver and platinum, chemicals and allied products, works of art, and mineral products.

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Under/over invoicing of imports and exports may occur for many reasons. However, one can ascertain that trade mis invoicing reduces foreign exchange reserves which may, in turn, increase the amount of external borrowing needed to finance development expenditures. In order to deal with this problem, countries may be faced with having to devalue their currency, which in turn may cause a reduction of domestic savings required for financing domestic investment and hence reducing future growth potential. In summary, trade mis invoicing represents a potential loss of economic growth and development, can account for persistent balance of payments deficits, and erodes the domestic tax base, affecting income redistribution as well.

The purpose of this paper is to estimate the amount of capital movement through merchandise trade mis invoicing between 58 countries in the African continent and the United States, with special emphasis on the top 30 capital movers, for the years 2000 through 2005. Our study will present a unique method, which avoids some of the shortcomings found in prior literature, to estimate the level of capital movement through trade mis invoicing.

II. Prior Literature

The literature on capital flight presents two schools of thought regarding the significance of trade mis invoicing. The first school of research argues that trade mis invoicing is an integral component in the determination of capital flight and adjust their models accordingly. Claessens and Naudé (1993) use the amount of trade mis invoicing as a measure of capital flight while, Ajayi (1992, 1997), Ndikumana and Boyce (1998), Patnaik and Vasudevan (2000), Almounsor (2005), Salisu (2005), Beja Jr., Junvith and Rasusett (2005), and Zhu, Li and Epstein (2005),

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3 The 30 countries under study are: South Africa, Egypt, Algeria, Nigeria, Morocco, Kenya, Angola, Ghana, Equatorial Guinea, Tunisia, Gabon, Botswana, Lesotho, Chad, Ethiopia, Madagascar, Swaziland, Ivory Coast, Cameroon, Namibia, Congo (Brazzaville), Mauritius, Senegal, Tanzania, Malawi, Congo (Kinshasa), Guinea, Zimbabwe, Liberia and Uganda.
among others, adjust the models they use to estimate capital flight by including trade misinvoicing.

The second school of thought argues that trade misinvoicing is not done to facilitate capital flight, but rather as a tool to evade taxes. Gibson and Tsakalotos (1993) argue that trade misinvoicing “may be unrelated to the phenomenon of capital flight”. Hermès et al. (2002) support this school of thought by pointing out that misinvoicing could occur due to trade taxes; and as such over and under invoicing would be unrelated to capital flight. Chang and Cumby (1991) report that “the systemic underreporting of trade figures in both directions to avoid trade barriers . . . seems to overwhelm any discernible capital flight through misinvoicing.” Cerra et al. (2005) do not adjust for misinvoicing and found in preliminary regressions that trade misinvoicing, “as a mechanism of capital flight, appears to behave differently from other components of flight.”

The literature has shown that there is not a universal definition of capital flight, nor an agreed upon formula or model to measure the amount of capital flight to or from a given country. Schneider (2003) argues that capital flight estimates are actually estimates of resident capital flows that include both capital flight due to economic and political instability and other items not related to capital flight. Therefore, our intent is not to study the idea of capital flight per se, but rather to show that trade misinvoicing can be used as a tool to move capital in and/or out of a country or continent, in this case Africa. As previously mentioned, this movement of capital may be due to tax evasion, duty reduction, money laundering, capital flight, or other reasons. For the purposes of our paper we will not to make distinctions as to the underlying reasons for

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4 Gibson and Tsakalotos (1993, pg. 150).
the capital flows, but instead will attempt to measure capital flow using reliable and valid statistics from the U.S. government.

III. Trade Misinvoicing in Africa: Prior Calculations and Results

Trade misinvoicing has been shown to be an important factor in calculating capital flight. In the case of Africa, Rustomjee (1991), Wood and Moll (1994), Boyce and Ndikumana (2001), Mohamed and Finnoff (2004), and Almounsor (2005), among others, estimate and include trade misinvoicing in their calculations of capital flight. However, the conclusions drawn when it comes to trade misinvoicing differ.

In his estimation of trade misinvoicing, Rustomjee (1991) calculates the difference between the amount of world trade as reported by South Africa and the amount of trade as reported by South Africa’s trading partners in the IMF’s Direction of Trade Statistics Yearbooks. His results show that between 1970 and 1988, South Africa under invoiced its exports by an average of twenty percent and its imports by an average of four percent.

Rustomjee asserts that his results are consistent with those of other studies performed on developing countries. However, Wood and Moll (1994), in their examination of the claim that trade misinvoicing was used as a form of capital flight from South Africa, conclude that the amount of export under invoicing stated in prior studies has been greatly overestimated.

Boyce and Ndikumana (2001) found that for most of the twenty five low-income Sub-Saharan African countries in their sample, there exists evidence of substantial export under

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8 One problem with this estimation is that South Africa only reports trade under the specified destination. For more on this please see Rustomjee (1991, pg. 92).
9 The authors compare both the IMF’s Direction of Trade Statistics, as well as data from the OECD, in order to determine the amount of export under invoicing that took place between South Africa and her trading partners.
The authors determine that the country with the largest amount of export under invoicing, and import over invoicing, is Nigeria, with more than $16 billion in export under invoicing alone. The authors also conclude that, overall, imports tend to be under invoiced, meaning that a large amount of smuggling takes place in the region as a whole. Boyce and Ndikumana also utilized data from the IMF’s Direction of Trade Statistics Yearbook to estimate the amount of trade misinvoicing. Their estimation of misinvoicing is derived by comparing a country’s export and import data to import and export data from its trading partners. Any discrepancies with data from their African trading partners are considered by the authors to be evidence of misinvoicing.

Mohamed and Finnoff (2004) also calculate South Africa’s trade misinvoicing as the difference between their trade data, as reported in the IMF’s Direction of Trade Statistics Yearbook, to their trading partners’ data. Results show that trade misinvoicing in the South African region, mostly through the under invoicing of exports, peaked between 1981 and 1982, fell in 1983 and rebounded again in 1985, 1988 and 1989. A reversal was seen during the period of 1990 and 1994, after the introduction of General Export Incentive Scheme (GEIS) in 1990, when more exports and imports were over invoiced, rather than under invoiced. But after GEIS was phased out in 1994, an increase in the amount of export under invoicing, and import over invoicing, was once again observed.

The major weakness of previous studies is the quality of data used in the models. Countries may misreport data intentionally or may simply have poor data collection methods for trade. For example, Mohamed and Finnoff (2004) point out that Wood and Moll (1994) questioned the quality of trade data from South Africa prior to 1994 since, prior to this year, it

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10 GEIS was introduced as a subsidy to promote manufactured exports. The levels of subsidy were higher for goods with higher levels of value-added.
was illegal to record statistics of goods officially classified as strategic.\footnote{An example of a strategic good is oil.} In addition, prior to 1998, data for South Africa was lumped together with data from Botswana, Lesotho, Namibia and Swaziland, while after 1998 the data for South Africa was reported separately. The question of data quality has lead authors such as Boyce and Ndikumana (2001) and Zhu, Li and Epstein (2005) to only calculate trade misinvoicing between the countries in question and developed countries. They assume developed countries have more reliable, accurate, and valid data collection standards. Even when calculating the levels of trade misinvoicing between a given developed country and a developing country, these authors assume that this level is the same as if the developing country is a developed or industrialized country. Mohamed and Finnoff (2004) assume that there is no trade misinvoicing to and from developing countries.

A different problem that arises when studying trade data reported by Africa is that South Africa reports data under three categories as reported by Rustomjee (1991). The first set of data reported under “specified destination” includes those items invoiced under the Standard Trade Contract (STC) or another appropriate standard to/from a specified trading partner. Data recorded under the “unspecified destination” category does not include the source and/or the country of destination, possible to avoid international sanctions. Included under the third category, known as “special category” which accounts for approximately thirty five percent of South African trade, are strategic assets, as well as balance of payments adjustments. It is easy to see why the most common source of trade data, the IMF Direction of Trade Statistics (DOTS), only includes data from the “specified destination” category.

In this study, we attempt to avoid problems with data found in prior studies, by examining U.S. customs data, as reported by the government itself, at its most disaggregate level. Our assumption is that trade data collected by the U.S. is the most reliable and valid data
available. With this regard we hope to add to the existing literature by using U.S. Customs data to estimate the level of trade misinvoicing through a matrix methodology that identifies deviations from U.S. import/export prices.

IV. Methodology

This paper uses a systematic investigation of U.S. customs data at its most disaggregate level to document the amount of capital flows which may be hidden in commodity trade. Our study uses the international standard Harmonized Commodity Description and Coding System with over 15,000 categories of imports and over 8,000 categories of exports. We use deviations from average prices within these commodity classes to identify abnormal prices and to produce conservative estimates of the amount of capital movement from 58 countries in Africa to the United States.

We base our analysis on the U.S. Export (and Import) of Merchandise statistics, the legally required and most detailed statistics compiled by the U.S. Census Bureau from Shipper’s Export Declarations and Customs Service Entry Summary forms. All transactions with a value of more than $2,500 (US) for exports and $1,250 (US) for imports are recorded by law. This trade database uses a 10 digit commodity code (HTS code), country code, U.S. Customs District code, and date codes. For each commodity, the quantity and the dollar amount are available for all trade between the U.S. and all countries in the world. From the data set, we calculated three measures of price statistics, median, upper quartile and lower quartile, for trade between the U.S. and the 58 African countries studied in this paper.

Our metric for the estimate of the amount of capital outflow is to examine imports at prices higher than the upper quartile prices and exports at prices lower than the lower quartile
prices. The amount of capital inflow is estimated by examining imports at prices lower than the lower quartile prices and exports at prices higher than the upper quartile prices. This gives an estimate of hidden capital movements by detecting substantial deviations from median prices.\textsuperscript{12}

Works by Zdanowicz, Pak and Sullivan (1999), Pak, Zanakis and Zdanowicz (2003), and de Boyrie, Pak and Zdanowicz (2005(a,b)) have used the same methodology to analyze and estimate the economic impact of under/over-invoicing exports/imports on different economies. Similar methodologies were used by Zdanowicz et al. (1999), Pak et al. (2003) and de Boyrie et al. (2005 a,b), to analyze data for Brazil, Greece, Russia and Switzerland. Their results showed that this methodology is a simple and straightforward method to estimate the amount of income shifted due to abnormal pricing.

V. Results

The results of this study demonstrate that between 2000 and 2005, capital outflows from all 58 countries in Africa to the U.S. grew by more than 50 percent, both through low priced exports and high priced imports. As seen in Table 1, as well as Graph 2, the total amount of capital outflows from Africa to the U.S. in those six years surpassed $20 billion. During this period, the yearly amount of capital outflow ranged between $3,073 million in 2000 and $4,903 million in 2005. The biggest increase in capital outflow occurred in 2004, when capital outflow grew from $2,914 million in 2003 to $3,852 (a 32.19 percent increase). The only year to show a decrease in capital outflow to the U.S. was 2002 with an 18.42% decrease. These changes could have been caused by any number or political and/or economic events in either the African Continent or the U.S.

\textsuperscript{12} For more detailed explanation on how the amount of capital inflow/outflow was estimated, please refer to de Boyrie, Pak and Zdanowicz (2004).
Table 1 shows that total capital outflow to the U.S. from all countries in the African Continent through trade as a percentage of total trade volume with the U.S. ranges from 6.1% in 2005 to 8.5 percent in 2001, with an average of 7.3 percent for the period studied. During this period, capital outflows through low priced exports as a fraction of total export value to the U.S. is much smaller than the capital outflows through high priced imports as a fraction of the import value to the U.S. On average, the capital outflow through low priced exports as a percentage of total export value was 5.4 percent vs. 13.0 percent for the amount of capital outflow through high priced imports as a percentage of total import values from the U.S. for the period studied. Capital outflow from Africa to the U.S. through high priced imports as a percentage of total import value was the largest in 2005 at 15.7 percent through high priced imports.

The top African country to move money to the U.S. through trade in the 2000-2005 period was South Africa followed Egypt, Algeria, Nigeria and Morocco. In the case of South Africa alone, Graph 3 demonstrates that the outflow of capital through trade mis invoicing from this country to the U.S. grew by almost 50 percent from 2000 to 2005 and that most of the capital movement was done through low priced exports rather than through high priced imports. This last finding is supported by Rustomjee (1991) and Mohamed and Finnoff (2004).

Boyce and Ndikumana (2001) concluded that most of the capital movement from Nigeria was from the under invoicing of exports. Contrary to their results, our study finds that high priced imports are the source of capital movement in Nigeria. Between 2000 and 2005, Table 3 and Graph 4 demonstrate that capital outflows from Nigeria to the U.S. increased by 115 percent and that this movement of capital through merchandise trade has been primarily through high priced imports.
Total capital outflows from the top 30 African countries to the U.S. for the 2000 – 2005 period can be seen in Table 2. The total amount of capital movement from all countries in Africa to the U.S. during the 2000-2005 period is nearly $20,600 million, while that for the top thirty countries is slightly over $20,142 million. The bottom 28 out of the 58 African countries account for only $457 million of capital outflow.

Charts 1 - 3 show the total dollar amount of capital outflow as well as the amount of dollars moved out of the 30 African countries through over invoiced imports and under invoiced exports. Of the top 20 countries to move capital to the U.S. through trade misinvoicing, only seven moved most of their capital out of the continent through high priced imports, all others moved more capital through low priced exports. We cannot say why these capital flows occurred. We do not know if they are related to some exporters trying to evade income taxes, launder money, move money out of the country (capital flight), or other more legitimate reasons.

These results are in contrast to next top ten countries (21 – 30 on our list). In this group of countries, only three moved more money into the U.S. using low priced exports. From this, we can infer that some exporters from countries such as Uganda, Liberia, Zimbabwe, Guinea, Congo (Kinshasa), Tanzania and Senegal are more interested in using high priced imports to possibly conceal illegal commissions or to export capital through associates in the U.S.

A clear understanding as to the true purpose of the overall capital movement is not easy to determine from the data. Approximately half of the countries (16 out of 30) utilized low priced exports as a means to move more money into the U.S. while the remaining countries (14 out of 30) used high priced exports to move the most money.

African countries are classified as either Northern Africa or Sub-Saharan and Table 2 shows that of the top 30 African countries that moved capital to the U.S. only four are classified
as North African countries, the remaining 26 are classified as Sub-Saharan countries. One interesting point to note is that the four Northern Africa countries (Egypt, Algeria, Morocco and Tunisia) to move capital to the U.S. through trade misinvoicing moved a total of over $6,734 million while the 26 Sub-Saharan countries moved a total of $13,408 million. The Northern African countries moved an average of $1,683 million per country, while the remaining 26 countries from the Sub-Saharan region moved an average $515 million per country. Most of the capital movement through trade misinvoicing from Egypt and Algeria was done through high priced imports while capital from Morocco and Tunisia was moved through low priced exports.  

VI. Conclusion

When trade misinvoicing is used as a tool to move capital in and out of a country or continent in order to evade taxes and/or custom duties, avoiding quotas, smuggling, and laundering illegally obtained money, or as a means of capital flight, the economic development of the given country is severely hindered.

 Tightening financial regulations alone is not sufficient to reducing capital outflow. Minimizing capital outflow through import/export mispricing requires systematic inspections and audits of items being exported and/or imported. This study suggests that a simple and valid way to do so in an efficient manner is through a price filter matrix. The price of any trade item, the standard deviation, upper- and lower quartile prices are determined and compared to that of

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13 The four Northern African countries are Egypt, Algeria, Morocco and Tunisia.
14 It is worthwhile to remind that reader that over invoiced import prices are used as a means to conceal illegal commissions that are hidden in the inflated prices while under invoiced export transactions may be used to avoid or reduce export surcharges in countries where these exist or as a technique of evading income taxes, launder money and/or facilitating capital flight.
the world (or a combination of all countries that trade with the U.S.).\textsuperscript{15} Those items that are mispriced can be then subject to further scrutiny.

The advantages of using a price filter matrix over other methods are that it can be used to estimate the amount of over- and under-invoicing in export/import transactions, can be built for each Harmonizes System (HS) code and country combination, may be highly effective in auditing suspicious individual importers and exporters, and can be used for real-time inspection of cargo.

In the case of Africa, and through the use of the price matrix methodology, our findings are somewhat unanticipated. The amount of annual capital outflows from the African continent to the U.S. between 2000 and 2005 increased by 60 percent from $3,073 to $4,903 million with slightly more of the movement done through low priced exports. Low priced exports are associated with trying to evade income taxes, launder money and/or just to move money out of the country (capital flight) and while high priced imports can be used to mask illegal commissions.\textsuperscript{16} However, when looking at percentages of capital a different picture emerges. Capital outflows through low priced export as a fraction of the export value (4 percent) was shown to be much smaller than the capital outflows through high priced import as a fraction of the import value (approximately 16 percent).

Country specific data from our study show that between 2000 and 2005: the annual capital outflows from Nigeria grew by 116 percent between 2000 and 2005 and were primarily due to high priced imports. The annual capital outflows from South Africa more than doubled between 2000 and 2005 and were mostly through low priced exports. Four of the top thirty African countries to move capital to the U.S. are classified as Northern African countries. These

\textsuperscript{15} For more on this method please refer to de Boyrie, Pak and Zdanowicz (2004).
\textsuperscript{16} Between 1996 and 2005 the annual capital outflows from Africa to the U.S. more than doubled from $1,910 million to $4,903 million. Results from 1996 – 2005 are available from the authors upon request.
four countries alone moved approximately $6,734 million through trade misinvoicing while the remaining 26 countries from the Sub-Saharan region moved a total of $13,408 million.

Our methodology resulted in a simple to calculate measure of capital flows using deviations from U.S. collected trade data. This technique identified both under and over invoicing in African countries.
### Table 1
Capital Outflows from All Countries in Africa to the U.S., 2000-2005

<table>
<thead>
<tr>
<th>year</th>
<th>Capital Outflow from Africa to the U.S ($ million)</th>
<th>Capital Outflow from Africa to the U.S (% of trade value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Through high priced imports from the U.S.</td>
<td>Through low priced exports to the U.S.</td>
</tr>
<tr>
<td>2000</td>
<td>$1,228</td>
<td>$1,845</td>
</tr>
<tr>
<td>2001</td>
<td>$1,722</td>
<td>$1,504</td>
</tr>
<tr>
<td>2002</td>
<td>$1,238</td>
<td>$1,394</td>
</tr>
<tr>
<td>2003</td>
<td>$1,246</td>
<td>$1,667</td>
</tr>
<tr>
<td>2004</td>
<td>$1,913</td>
<td>$1,939</td>
</tr>
<tr>
<td>2005</td>
<td>$2,432</td>
<td>$2,471</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$9,779</td>
<td>$10,821</td>
</tr>
</tbody>
</table>
Table 2
Capital Outflows from Top 30 African Countries to the U.S. through Trade, 2000-2005

<table>
<thead>
<tr>
<th></th>
<th>Through high priced imports from the U.S.</th>
<th>Through low priced exports to the U.S.</th>
<th>Total</th>
<th>Outflow through high priced import as % of African import value</th>
<th>Outflow through low priced export as % of African export value</th>
<th>Total Outflow through trade as % of African trade volume (import &amp; export)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL for All African Countries (2000-5)</td>
<td>$9,778,518,053</td>
<td>$10,821,348,848</td>
<td>$20,599,800,454</td>
<td>13.3%</td>
<td>5.0%</td>
<td>7.1%</td>
</tr>
<tr>
<td>TOTAL for Top 30 African Countries (2000-5)</td>
<td>$9,399,492,538</td>
<td>$10,743,227,649</td>
<td>$20,142,720,187</td>
<td>13.4%</td>
<td>5.0%</td>
<td>7.1%</td>
</tr>
<tr>
<td>South Africa</td>
<td>$2,788,366,139</td>
<td>$4,211,092,515</td>
<td>$6,999,458,654</td>
<td>15.1%</td>
<td>14.5%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Egypt *</td>
<td>$2,318,648,934</td>
<td>$1,254,390,482</td>
<td>$3,573,039,416</td>
<td>12.3%</td>
<td>16.3%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Algeria *</td>
<td>$910,811,102</td>
<td>$813,147,163</td>
<td>$1,723,958,266</td>
<td>16.5%</td>
<td>2.7%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>$812,066,366</td>
<td>$439,654,186</td>
<td>$1,251,720,551</td>
<td>11.7%</td>
<td>0.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Morocco *</td>
<td>$253,793,063</td>
<td>$925,469,582</td>
<td>$1,179,262,645</td>
<td>8.8%</td>
<td>35.4%</td>
<td>21.4%</td>
</tr>
<tr>
<td>Kenya</td>
<td>$548,475,282</td>
<td>$198,721,316</td>
<td>$747,196,598</td>
<td>23.7%</td>
<td>14.4%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Angola</td>
<td>$270,048,750</td>
<td>$365,753,800</td>
<td>$635,802,550</td>
<td>9.3%</td>
<td>1.4%</td>
<td>2.1%</td>
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<tr>
<td>Ghana</td>
<td>$150,007,720</td>
<td>$481,331,421</td>
<td>$631,339,141</td>
<td>10.4%</td>
<td>53.9%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Equatorial Guinea</td>
<td>$217,558,614</td>
<td>$264,048,076</td>
<td>$481,606,690</td>
<td>20.1%</td>
<td>5.6%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Tunisia *</td>
<td>$120,969,670</td>
<td>$137,212,938</td>
<td>$258,182,608</td>
<td>8.3%</td>
<td>16.2%</td>
<td>11.2%</td>
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<tr>
<td>Gabon</td>
<td>$49,640,819</td>
<td>$201,578,721</td>
<td>$251,219,540</td>
<td>10.8%</td>
<td>1.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Botswana</td>
<td>$27,285,368</td>
<td>$195,864,855</td>
<td>$223,150,223</td>
<td>10.8%</td>
<td>55.0%</td>
<td>36.6%</td>
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<tr>
<td>Lesotho</td>
<td>$3,716,159</td>
<td>$216,882,035</td>
<td>$220,598,194</td>
<td>20.3%</td>
<td>11.2%</td>
<td>11.3%</td>
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<tr>
<td>Chad</td>
<td>$105,972,150</td>
<td>$97,204,886</td>
<td>$203,177,035</td>
<td>24.4%</td>
<td>4.2%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>$165,392,709</td>
<td>$13,547,409</td>
<td>$178,940,118</td>
<td>9.9%</td>
<td>6.2%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Madagascar</td>
<td>$20,899,595</td>
<td>$154,801,882</td>
<td>$175,701,477</td>
<td>12.9%</td>
<td>8.5%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>$20,890,580</td>
<td>$144,670,318</td>
<td>$165,560,898</td>
<td>17.0%</td>
<td>18.3%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>$75,000,449</td>
<td>$83,947,936</td>
<td>$158,948,385</td>
<td>12.2%</td>
<td>2.4%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Cameroon</td>
<td>$83,122,812</td>
<td>$52,174,004</td>
<td>$135,296,816</td>
<td>11.8%</td>
<td>4.7%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Namibia</td>
<td>$21,770,352</td>
<td>$104,909,543</td>
<td>$126,679,895</td>
<td>3.6%</td>
<td>16.7%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Congo (Brazzaville)</td>
<td>$62,226,912</td>
<td>$61,889,101</td>
<td>$124,116,014</td>
<td>13.2%</td>
<td>1.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Mauritius</td>
<td>$36,885,844</td>
<td>$80,235,251</td>
<td>$117,120,105</td>
<td>21.4%</td>
<td>4.9%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Senegal</td>
<td>$101,943,750</td>
<td>$11,760,197</td>
<td>$113,703,947</td>
<td>17.3%</td>
<td>9.6%</td>
<td>15.9%</td>
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<tr>
<td>Tanzania</td>
<td>$56,408,478</td>
<td>$45,844,788</td>
<td>$102,253,266</td>
<td>12.2%</td>
<td>27.2%</td>
<td>16.2%</td>
</tr>
<tr>
<td>Malawi</td>
<td>$12,441,238</td>
<td>$60,342,795</td>
<td>$72,784,033</td>
<td>10.0%</td>
<td>13.2%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Congo (Kinshasa)</td>
<td>$23,498,197</td>
<td>$46,846,543</td>
<td>$70,344,741</td>
<td>10.7%</td>
<td>4.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Guinea</td>
<td>$55,416,383</td>
<td>$10,172,587</td>
<td>$65,588,970</td>
<td>12.9%</td>
<td>2.2%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>$29,418,663</td>
<td>$27,825,299</td>
<td>$57,243,962</td>
<td>11.0%</td>
<td>5.2%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Liberia</td>
<td>$25,460,004</td>
<td>$24,824,971</td>
<td>$50,284,976</td>
<td>9.2%</td>
<td>6.7%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Uganda</td>
<td>$31,356,437</td>
<td>$17,083,047</td>
<td>$48,439,484</td>
<td>12.5%</td>
<td>11.5%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>
Table 3

<table>
<thead>
<tr>
<th>Year</th>
<th>Import from the U.S.</th>
<th>Export to U.S.</th>
<th>Overvalued Import (deviation from Upper Quartile Prices)</th>
<th>Undervalued Export (Deviation from Lower Quartile Prices)</th>
<th>Capital Outflow ($ million)</th>
<th>% of Trade Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$718</td>
<td>$10,549</td>
<td>$101</td>
<td>$34</td>
<td>$135</td>
<td>1.2%</td>
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<tr>
<td>2001</td>
<td>$957</td>
<td>$8,786</td>
<td>$131</td>
<td>$78</td>
<td>$208</td>
<td>2.1%</td>
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<tr>
<td>2002</td>
<td>$1,057</td>
<td>$5,964</td>
<td>$97</td>
<td>$59</td>
<td>$156</td>
<td>2.2%</td>
</tr>
<tr>
<td>2003</td>
<td>$1,029</td>
<td>$10,394</td>
<td>$131</td>
<td>$44</td>
<td>$175</td>
<td>1.5%</td>
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<tr>
<td>2004</td>
<td>$1,552</td>
<td>$16,246</td>
<td>$196</td>
<td>$90</td>
<td>$286</td>
<td>1.6%</td>
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<tr>
<td>2005</td>
<td>$1,615</td>
<td>$24,188</td>
<td>$156</td>
<td>$135</td>
<td>$291</td>
<td>1.1%</td>
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<tr>
<td>Total</td>
<td>$6,929</td>
<td>$76,127</td>
<td>$812</td>
<td>$440</td>
<td>$1,252</td>
<td>1.5%</td>
</tr>
</tbody>
</table>
Graph 1
Capital Outflows Through Trade from Ghana to the U.S. 2000 - 2005

Graph 2
Capital Movement ($) From Africa to the U.S. through High Import and Low Export Prices - 2000 to 2005
Graph 3
Capital Outflows Through Trade from South Africa to the U.S. 1996 - 2005

Graph 4
Capital Outflows Through Trade from Nigeria to the U.S. 2000 - 2005
Chart 3
The Top 21-30 African Countries in Capital Outflow to the U.S.: 2000 -2005
References


