

A Study of the Information Technology Trade between United States and the Southern African Custom Union

Raquel Saenz

saenz98raquel@hotmail.com

Karina Flores

karinaflores@haciendaford.com

Kai S. Koong

koongk@utpa.edu

Lai C. Liu

liul@utpa.edu

College of Business Administration, University of Texas Pan American
Edinburg, Texas 78539, USA

ABSTRACT

This study examines the import and export of four major information technology products between the United States and nations in the South African Custom Union (SACU). The countries included in the SACU are Botswana, Lesotho, Namibia, South Africa, and Swaziland. The products examined are computer equipment (3341), communication equipment (3342), audio and video equipment (3343), and semiconductors and other electronic components (3344). Surprisingly, the United States imports more information technology products from nations in the South African Custom Union than it imports from these countries. The only product that it has a trade surplus is semiconductors and other electronic products. Such trends identified are indeed alarming. As a leader in the producing of leading high tech products, it is surprising that the United States is actually buying more information technology products from other nations, including nations in SACU.

Keywords: global information technology trade, import and export of IT components, Southern African Custom Union

1. INTRODUCTION

The United States is working together with the Southern African Custom Union (SACU) to provide a "freer trade in services" and precisely to enhance the economical growth between the exports and imports of these countries to the United States. The countries included in the SACU are Botswana, Lesotho, Namibia, South Africa, and Swazil-

and (Carim and Mashabela, 2008; SACU, 2004). Several agreements have been reformed to capture these particular details and to help improve South Africa's economical growth ratio (Corey, 2001; Mills and Reyes, 2003; Rens, Prabhala & Kawooya, 2006; Thompson-Fisher, 2002). "We are working with African governments in support of regional economic integration, freer trade in services, better agricultural standards,

and intellectual property protection. (Whitaker, 1999, p. 2) "The Africa Trade and Investment Policy program (ATRIP), which promotes training and technical support for African countries undertaking economic liberalization." (Whitaker, 1999, p. 2) "Africa will need billions of dollars in new private sector investment every year, beyond what traditional development assistance can provide, in order to address poverty and to raise living standards." (Whitaker, 1999, p. 1) To a certain extent, the United States is taking a risk on the agreements being made between these countries. The international trade between these countries has been interrupted with the lack of economical growth. "Lesotho remains one of the poorest economies in the world with a GDP per capita of less than \$500 in 2000." (Kirk & Stern, 2005, p. 172) Most of the economy is dominated by several factors which does not include economical growth in the technology trade. South Africa may not be a dependable country for exporting or importing products. "Mining and agriculture constitute a relatively small share of total GDP and exports are dominated by mineral, metal and agriculture products." (Kirk & Stern, 2005, p. 173)

The SACU is in its early stages of becoming an important part of our trading negotiations. The United States has agreed to pass several agreements to help increase their economical growth. For instance, the World Trade Organization and African Growth and Opportunity Act (AGOA) have been compromised between the United States and the preceding countries to help grow and integrate economical growth. These types of involvement may be critical for the turn out of the exports and import investments. But only a "few African nations have joined into the WTO's 21st century agreements on telecommunications, financial services, and information technology. This slows the growth of trade with Africa and slows Africa's economic development." (Whitaker, 1999, p. 2)

These targeted countries have growing rates in telecommunications, health care, and international trade with the United States. "Of the top five African destinations for U.S. products, exports to South Africa rose by 8% and to Nigeria by 42%." (Arnold, 2008, p. 1) Trade between the United States and Southern Africa has increased over the years. "South Africa's market size of 47 mil-

lion people, well-developed infrastructure, productive economy, and pro-business environment make it a logical choice for many U.S. companies seeking to conduct business of the African continent. The country's GDP reached \$587.5 billion last year, marking 5-percent growth." (Arnold, 2008, p. 2) The demand for new technology in several sectors has become a priority in the trading industry (Marshall, 2001) As the growth rates increase, the demand for U.S. imports becomes more important to the population in South Africa. "Botswana, for example, has a robust telecommunications environment. Mobile penetration has passed the 50% mark which is more than twice the African average, while the government-owned national operator BTC has seen a continued decline in the number of fixed-line connections despite the introduction of ADSL broadband services," according to Buddecom's 2007 Africa-Telecoms, Mobile and Broadband in Southern Region and Indian Ocean Islands Report. (Wright, 2008, p. 39)

2. STATEMENT OF THE PROBLEM

The Southern African Customs Union is the "world's oldest customs union and an important market for U.S. machinery, vehicles, aircraft, medical instruments, plastics, chemicals, cereals, pharmaceuticals, wood and paper products." (Zoellick, 2003, p. 2) The United States is working together with the members of the SACU in order to help maximize and promote "economic development in Africa through trade." (Hume, 2008, p. 1) The AGOA is a requirement established by the US in order to be eligible for exporting products to the United States. "These nations-Botswana, Lesotho, Namibia, South Africa and Swaziland comprise the largest U.S. export market in Sub-Saharan Africa, with \$2.5 billion in U.S. exports in 2002." (Zoellick, 2003, p. 1)

The AGOA is a strategy that the United States hopes to gain growth and new opportunities between the trading system of the United States and SACU. However, there is not sufficient interaction from the exporting side of the United States. The AGOA has encouraged "U.S. merchandise exports to Sub-Saharan Africa are up about 25%." (Zoellick, 2003, p. 2) The advantage of these agreements will help increase the "international economic commerce" (Hume,

2008, p. 4) and increase the probability of exporting from the U.S. "We want to improve the climate for trade in goods and services, intellectual property rights, e-commerce and investment, and to expand U.S. access to SACU markets." (Hume, 2008, p. 5) The opportunities for a better and stronger Southern Africa have been made and "there is no region in the world that has a greater interest in establishing its stake in the global trade organization process than does Africa, because Africa has been the one region that has fallen behind." (Zoellick, 2003, p. 1) This is the time that Southern Africa is ready to grow and expand and to commit its importing trade with the United States.

Based on the 2007 Comprehensive Report on the United States Trade and Investment prepared by the Office of the United States Trade Representative, the annual average rate of 5.5% has been constant for the past three years. From the information provided in the government report, it seemed to show that the AGOA (Africa Growth and Opportunity Act) has been a great contributor to the increase of the United States' two-way trade with Sub-Saharan Africa. In 2006, the United States was able to increase its exports to Sub-Saharan Africa by 17% than in 2005, to 12.1 billion. (U.S. Trade Representative, Comprehensive Report, 2007, p. 5).

Over the years the U.S. has decreased the amount of computer equipment it exports to the South African Custom Union. In the past couple of years, it has also started to decrease its imports of the same product. The trade between the U.S. and the SACU for computer equipment shows that the U.S. is in a slight deficit even though the U.S. has recently increased the amount of communications equipment it exports to the South African Custom Union. The SACU has also started to increase the amount of communications equipment it exports to the United States.

The U.S. exports the most communication equipment to Swaziland. Swaziland, on the other hand, exports the most communication, audio, and video equipment to the U.S. out of all the South African Custom Union countries. A lot of audio and video equipment exported to the SACU is exported into Swaziland. The U.S. also exports about \$86,000 worth of its computer equipment

into Swaziland. Swaziland is the most significant trading partner of the SACU. Most of the trade done between the U.S. and the SACU goes through Swaziland.

3. STATEMENT OF THE OBJECTIVE

The objective of this research is to examine the trade between the United States (U.S.) and the South African Custom Union (SACU), in particular, the information technology trade of computer equipment (3341), communication equipment (3342), audio and video equipment (3343), and semiconductors and other electronic components (3344) between the years of 1998 and 2007. The selected products are being used to examine the deficit of the United States because of its information technology trade.

4. METHODOLOGY

The ten-year data on the imports and exports for the four products between the SACU and the US were collected from the International Trade Administration of the Department of Commerce website. For each product, the 10-year totals on import and on export are first computed for each country, and each country is ranked based on the computed total. Then the total rate of change (the slope) for each product over the ten-year period was also computed.

5. FINDINGS

This study found that the SACU exported more than 50% of what they imported from the United States. During the ten-year period, Swaziland ranked first among the SACU countries in importing and exporting of computer equipment. Swaziland's rate of return proved to continue being the leading country and ranking in first place once again. Botswana and Lesotho incredibly outperformed the other countries by importing zero computer equipment from the United States. Namibia was close to Botswana and Lesotho, but was able to average a total of \$51 throughout the 10-year period for computer equipment. Swaziland is the country that is more involved in modern technology as to computer equipment than the other countries in the union. South Africa ranked second after Swaziland in exporting and im-

porting of computer equipment. For the total imports and exports of computer equipment, the slope continues to decrease as each year get closer and closer to 2007, with the strongest year being during 1998.

The second product 3342 is pertaining to Communication Equipment. Table 2 shows this product's total imports and exports of the SACU throughout the ten-year period. For this particular product the United States exports less than 50% of the total communication equipment that it imports from the SACU. South Africa was able to overcome Swaziland by ranking number one in the total overall average for exports and falls in second place for the total average of imports. Botswana, Lesotho, and Namibia continue to maintain a stable average for both imports and exports and ranking third, fourth, and fifth. SACU exports had a consecutive decrease starting in 1998 -2002. In 2002, it was its greatest decline in exports, by 2003 it had increased from \$95,509 to \$110,121 and the years that followed the SACU continued to increase their total exports reaching for a total of \$267,141 in 2007. Botswana and Lesotho continued to import zero number of Communication Equipment and Namibia only averaging \$4, which places them in the last three places. As for the imports for Communication Equipment Swaziland and South Africa continued to rank in the first two places and the total growth for the SACU decreased and increased at a very minimal level throughout the ten year grace period.

The United States continues to import more than what it actually exports for product 3343. The Audio and Video Equipment seems not to be very popular for both ends because the highest average for exports was \$12,839 rather than \$92,346 or \$243,167, which were for the first two products (3341 & 3342). The total amount of imports and exports are mainly from South Africa and Swaziland. The exports from Botswana, Lesotho and Namibia ranged from the lowest of \$0 to the highest of \$2,151. Swaziland and South Africa are basically competing among each other and where one can rank first for both import and export or one is ranked first for export and the other ranked number one for imports. In 1999, there was a major decline reaching at a negative balance of (\$1,968) and by 2000 it was able to increase to a total of \$16,665 and continue

with a positive slope. In 2002, it experienced a minor decrease, but was able to overcome the shrinkage and continue to boost an increasing slope throughout the remaining of the five years.

For the last three products, the United States had been importing more than what it was actually exporting, which is one of the main causes of the U.S. deficit. For product 3344, the Semiconductors and Other Electronic Components, the United States was able to export more and import less. The total amount of exports from SACU had a high of \$1,411,073, but its total import was \$2,723,662 by Swaziland. Botswana, Lesotho and Namibia continued to maintain a low profile on importing products and there was a slight increase in exports but it was still ranked last. South Africa and Swaziland still remained strong and ranked in the first two places. Nine out of ten years, 90% of the total imports of Semiconductors and Other Electronic Components over the amount of exporting caused the total balances to decline due to not exporting enough products, which caused negative balances from 1999 to 2007. Based on the column graph we can conclude that a negative slope continued to decrease more and more throughout 7 of the 10 years, that is 70% until it reached its maximum decline in 2005 and the SACU started to work out the problem and the slope continued to have a negative balance but began to decrease its total amounts from (\$171,963) in 2005 and at the end of the ten years it was at (\$88,141).

The major outcome of the finding is that the United States imported more IT products than what it exported to the SACU. The United States exported only 1 of 4 of the products more than its total imports, meaning that the SACU was not importing as much U.S. products, but was making sure it exported more than what they imported into their country. From the four products researched, Communication Equipment (3342) is the product that ranks in with the highest demand for imports and least imported product is Computer Equipment (3341) for the SACU. Based on the data collected, it can be concluded that there was not a stable increasing slope for the products that were being imported into SACU. If the United States focused more on SACU's needs of Information Technology and produced more of the highly demand products, it would cer-

tainly help the United States experience a decrease in the nation's deficit.

6. LIMITATIONS, CONCLUSIONS, AND IMPLICATIONS

Swaziland is the country that exported and imported the most IT products in the last ten years, implying that it was the one country that stands higher economically and technologically. South Africa comes in second after Swaziland. As for Botswana and Lesotho, these two countries have very little resources to produce and maintain Information Technology products because they had an overall rate of change of zero. The third ranked Namibia is able to stay at a minimal and stable rate. It is a country with little technology, but maintains a normal distribution of products it produces and it is able to utilize within its country. The product with the highest total dollar and the product most imported overall was the computer equipment (product 3341).

The United States has been able to decrease its deficit to \$901 million from \$3.6 billion in 2004. If research is done on more products and with more countries, we would have a more precise picture of the United States' deficit. This is a possible area of expansion of this research. The United States needs to look for different markets to sell their products. The U.S. might also consider about producing products that other countries need and are interested in purchasing.

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Appendix

Table 1 Import and Export of Computer Equipment (3341) between USA and SACU

Country	Total	Ranking	Slope	Ranking
Botswana	\$41,373	3	2.7077	2
Lesotho	\$416	5	6.5833	1
Namibia	\$29,770	4	0.1966	5
South Africa	\$1,311,306	2	0.5542	3
Swaziland	\$2,431,674	1	0.2901	4
Total Exports	\$3,814,539			
Botswana	\$0	4	0	4
Lesotho	\$0	4	0	4
Namibia	\$510	3	0.0859	3
South Africa	\$22,284	2	0.8076	2
Swaziland	\$861,086	1	1.1163	1
Total Imports	\$883,880			

Table 2 Import and Export of Communication Equipment(3342) between USA and SACU

Country	Total	Ranking	Slope	Ranking
Botswana	\$75,105	3	2.5198	2
Lesotho	\$2,059	5	0	5
Namibia	\$6,069	4	4.9651	1
South Africa	\$923,457	1	1.15850	4
Swaziland	\$569,197	2	1.5338	3
Total Exports	\$1,575,887			
Botswana	\$0	4	0	4
Lesotho	\$0	4	0	4
Namibia	\$43	3	0.6666	3
South Africa	\$87,603	2	5.1676	1
Swaziland	\$183,975	1	2.6061	2
Total Imports	\$271,621			

Table 3 Import and Export of Audio and Video Equipment (3343) between USA and SACU

Country	Total	Ranking	Slope	Ranking
Botswana	\$964	4	0.8026	3
Lesotho	\$0	5	0	4
Namibia	\$2,151	3	0	4
South Africa	\$108,672	2	1.1413	2
Swaziland	\$128,391	1	1.2905	1
Total Exports	\$240,178			
Botswana	\$10	4	0	3
Lesotho	\$0	5	0	3
Namibia	\$236	3	0	3
South Africa	\$24,780	2	0.0708	2
Swaziland	\$49,435	1	0.9806	1
Total Imports	\$74,461			

Table 4 Import and Export of Semiconductors Equipment (3344) between USA and SACU

Country	Total	Ranking	Slope	Ranking
Botswana	\$11,948	3	0.7021	5
Lesotho	\$284	5	4.8095	2
Namibia	\$2,887	4	7.4583	1
South Africa	\$468,963	2	1.3663	3
Swaziland	\$1,411,073	1	1.2108	4
Total Exports	\$1,895,155			
Botswana	\$111	4	0	3
Lesotho	\$13	5	0	3
Namibia	\$217	3	0	3
South Africa	\$43,169	2	2.0881	1
Swaziland	\$2,723,662	1	1.7634	2
Total Imports	\$2,767,172			