

Apartheid, Political Instability, and Foreign Capital Variability in South Africa *An Answer to a Difficult Question!*

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The main objective of this article is to clarify the actual relationship between the apartheid, political instability, and international sanctions on South Africa and their impacts on the variability of the flow of foreign capital to South Africa from the other side in order to answer the question of the credibility of sanctions on South Africa.

The main variables in the study are *SANCTION*, *APARTHEID*, and *REALFB*, where *SANCTION* is a dummy variable that reflects periods of imposing international sanctions on South Africa. The Variable *SANCTION* takes on the value one during periods of imposing international sanctions and takes on the value zero otherwise and *APARTHEID* is another dummy variable that reflects degrees of observed human rights violations in South Africa. The degree of apartheid is measured by degrees of observed human rights violations that draw the attention of the international community. Also considered are periods of observed human rights violations were periods of political instability in South Africa. *APARTHEID* takes on the value one for the highest degree of observed human rights violations, the value two if there is a stable state of apartheid; human rights violations do not draw the attention of the international community, the value three if there is an internal political reform to reduce human rights violations –considered are any trials for political reform regarding the apartheid system - , and the value four after the end of the apartheid. While the variable *REALFB* is a quantitative variable that reflects the real net foreign borrowings to South Africa.

LOGIT analysis is used to address first the relationship between sanctions on South Africa *SANCTION* and periods of political instability that accompanied periods of observed human rights violations internationally *APARTHEID*. An intervention analysis is performed to address second the relationship between the variability of foreign borrowings to South Africa *REALFB* and the *APARTHEID* variable.

The result of the first analysis gave evidence that more degrees of human rights violations that draw the attention of the international community stimulates sanctions on South Africa and vice versa since higher values of the *APARTHEID* variable means less degrees of observed human rights violations or more political stability. The study also found that the significant relationship between the *APARTHEID* and the *SANCTION* still hold even after controlled for some other variables that might affect the analysis which could increase the robustness of the analysis. According to those results, the degree of observed human rights violations that draw the attention of the international community was a main element of imposing the international sanctions against South Africa. The results could also give evidence that the end of the apartheid was a main reason of lifting the international sanctions. Accordingly, the international sanction against South Africa was a credible weapon because of its significant correlation to the variable *APARTHEID*.

On the other hand, the result of the best-fit intervention model from applying an intervention analysis to study the impact of the *APARTHEID* as an intervention dummy variable on the time path of *REALFB* gave evidence of a significant relationship between the degree of observed human rights violations and net foreign borrowings to South Africa. Less observed human rights violations led to capital inflows. The contrary is also true; more observed human rights violations led to capital outflows – or a reduction in net foreign borrowings-. This result might contradict some previous writings in the same topic that claim that sanctions on South Africa was an illusion and had no place in practical reality. Their main arguments were that in reality the inflow of foreign capital increased in times of sanctions. In order to examine those arguments, the analysis was repeated after excluding the entire period of after the official

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termination of the apartheid system and after the lift of the international sanctions. The relationship between high degrees of human rights violations and real net foreign borrowings to South Africa is positive at probability 9%. The plausible interpretation of this result is that net foreign borrowings increased in times of high degrees of human rights violations which might confirm the arguments of those studies. However, after including the period of after the official termination of the apartheid system and the sanctions, the relationship between the *ARAPRTHEID* variable and the *REALFB* variable was turned to be significantly negative at probability 0% which means that net foreign borrowings increased in times of stability because higher degrees of the variable *APARTHEID* means more stability and less degrees of human rights violations. Thus, adding a longer data span that includes the post apartheid system period and the post international sanctions periods could clarify the actual relationship between degrees of human rights violations and sanctions from one side and periods of political unrest and net foreign borrowings from the other side and therefore could confirm the reliability of international sanctions as a credible weapon in eliminating the apartheid system in South Africa.

The study adds to many previous studies by expanding data span that could clarify the actual relationship between the variability of observed human rights violations, periods of political unrest, and the variability of foreign capital flows to South Africa. In fact, eliminating the apartheid system in South Africa increased the political stability and made the business environment in South Africa more foreseen and hence more attractive to foreign investors. The question then should not be only about the relationship between the flow of foreign capital and degrees of observed human rights violations and periods of political unrest yet it should be what would happen if there were no political violations led to multilateral sanctions. Adding the period after eliminating the apartheid system gave the right answer and clarified the relationship between international sanctions and foreign capital flows because the significant increase of foreign capital inflows after the end of the apartheid system and after the lift of sanctions proved the lost opportunities of having more capital inflows if there were neither apartheid nor sanctions in and on South Africa.

Appendix:

Table 1: The results of the LOGIT analysis:
The dependent variable is: *SANCTION*.
Number of observations: 177 (1960, 1 – 2004, 1)

The dependent variable	<i>SANCTION1</i>	<i>SANCTION2</i>	<i>SANCTION3</i>
C_0	-0.283190 (-0.392294) (0.6948)	0.199119 (0.321393) (0.7479)	1.244805 (1.813078) (0.0698)
<i>APARTHEID</i>	-0.701304 (-2.124906) (0.0336)	-0.707900 (-2.542827) (0.0110)	-1.104747 (-3.399431) (0.0007)
McFadden R-squared	0.041089	0.046670	(0.094169)
Log Likelihood	-67.36178	-83.90626	-86.54003
Probability (LR stat)	0.016275	0.004154	2.22E-05
Andrews statistic - Prob. Chi-Sq(10)	0.0000	0.000	0.000

Numbers between first parentheses are z-statistics.
Numbers between second parentheses are *P*-Values.

Notes on Table 1:

The variable (*SANCTION*) takes on the value 1 during the period of imposing the embargo and takes on the value 0 otherwise. I considered 3 different measures of *SANCTION*:

SANCTION1: takes on the value 1 during the period of imposing the multilateral financial embargo from 1986 to 1991 and takes on the value 0 otherwise.

SANCTION2: takes on the value 1 during the periods of imposing any type of financial sanctions on South Africa and takes on the value 0 otherwise.

SANCTION3: takes on the value 1 during the periods of imposing any type of comprehensive sanctions on South Africa and takes 0 otherwise.

Incorporating these three different measures for *SANCTION* is to comprise data received from various sources. In both the second measure and the third measure of the sanction, the data set was extended with a longer sanction period in order to confirm the argument toward the relationship between sanctions periods and periods of political instability accompanied observed periods for human rights violations as measured in the text.

In order to control for the stability of the relationship between *APARTHEID* and *SANCTION*, regressed was performed on the first model (the dependent variable is *SANCTION1*) by including two more variables that should have an impact on the dependent variable. These two variables are the internal circumvention, *REACTION* and the degree of the openness of the country which is represented by trade share in GDP, *TRADESHARE*, where *REACTION* is the internal economic circumvention to the international actions against the government of South Africa. *REACTION* is another dummy variable which takes on the following values: The value (1) if there is any trial for financial circumventions, the value (2) if there is any trial for other economic circumventions, and the value (3) if there is no internal economic circumvention.

TRADESHARE is a quantitative variable that measures the ratio of trade to the GDP of South Africa as a measure of the degree of the openness of South Africa.

All results are significant. However, those new two variables may raise the question of the causality because both variables *REACTION* and *TRADESHARE* themselves partly may be affected by *SANCTION*, rather than the other way round, which may artificially reduce the significance of *APARTHEID* as an explanatory factor. Yet, the result is still significant with these variables excluded. In both the second and the third models (the dependent variable is *SANCTION2* and *SANCTION3* consecutively), The only variable, *TRADESHARE*, was added to the regression. Adding the other dummy variable *REACTION* is not valid for technical reasons. Software used here is EVIEWS version 4.3

Table 2: the results of the best-fit intervention model that has the lowest AIC and SC, with 165 observations (1961:1 2002:1)

The dependent variable	<i>REALFB_t</i>
C_0	-1656.113 (-2.816464) (0.0049)
<i>REALFB_{t-2}</i>	0.188730 (6.219174) (0.000)
<i>APARTHEID_t</i>	930.1701 (5.493221) (0.000)

Numbers between first parentheses are z-statistics.
Numbers between second parentheses are P-Values.

Notes on table 2:

Source of raw data of *REALFB*: International financial statistics (2005), IMF's website.

Method of regression: ARCH method because of the presence of autoregressive conditional heteroskedasticity (*ARCH*) effects in the series of *REALFB* that was found by using the Correlogram test. However, by using the Phillips Peron unit root test, there was no any evidence of unit root in the series of *REALFB*.

The rest of the observations were excluded from 2003, 1 to 2004, 1 because of the observed variability in those quarters that might affect the result. Observations were also excluded from 1960, 1 to 1961, 1 in order to have enough lags. All possible ARMA models were tested for *REALFB* until ARMA (5, 5).

Plot showing the behaviour of the variable *REALFB* over time:

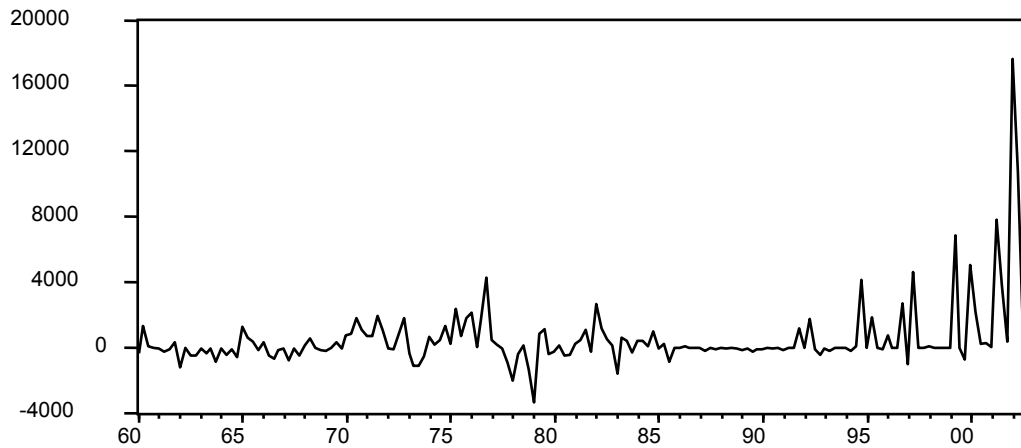


Table 3: Constructing dummy variables in question:

<i>Time</i>	<i>PINST</i>	<i>REACTION</i>	<i>TARGET</i>	<i>APARTHEID</i>	<i>SANCTION1</i>	<i>SANCTION2</i>	<i>SANCTION3</i>
1960:1	1	3	3	1	0	0	0
1960:2	1	3	3	1	0	0	0
1960:3	1	3	3	1	0	0	0
1960:4	1	3	3	1	0	0	0
1961:1	1	3	3	2	0	0	0
1961:2	1	3	3	2	0	0	0
1961:3	1	3	3	2	0	0	0
1961:4	1	3	3	2	0	0	0
1962:1	1	3	3	2	0	0	0
1962:2	1	3	3	2	0	0	0
1962:3	1	3	3	2	0	0	0
1962:4	1	3	3	2	0	0	0
1963:1	1	3	3	2	0	0	0
1963:2	1	3	3	2	0	0	0
1963:3	1	3	2	2	0	0	1
1963:4	1	3	2	2	0	0	1
1964:1	1	3	2	2	0	0	1
1964:2	1	3	2	2	0	0	1
1964:3	1	3	2	2	0	0	1
1964:4	1	3	2	2	0	0	1
1965:1	1	3	3	2	0	0	0
1965:2	1	3	3	2	0	0	0
1965:3	1	3	3	2	0	0	0
1965:4	1	3	3	2	0	0	0
1966:1	1	3	3	2	0	0	0
1966:2	1	3	3	2	0	0	0
1966:3	1	3	3	2	0	0	0
1966:4	1	3	3	2	0	0	0
1967:1	2	3	3	2	0	0	0
1967:2	2	3	3	2	0	0	0
1967:3	2	3	3	2	0	0	0
1967:4	2	3	3	2	0	0	0
1968:1	2	3	3	2	0	0	0
1968:2	2	3	3	2	0	0	0
1968:3	2	3	3	2	0	0	0
1968:4	2	3	3	2	0	0	0
1969:1	2	3	3	2	0	0	0
1969:2	2	3	3	2	0	0	0
1969:3	2	3	3	2	0	0	0
1969:4	2	3	3	2	0	0	0
1970:1	2	3	3	2	0	0	0
1970:2	2	3	3	2	0	0	0
1970:3	2	3	3	2	0	0	0
1970:4	2	3	3	2	0	0	0

1971:1	2	3	3	2	0	0	0
1971:2	2	3	3	2	0	0	0
1971:3	2	3	3	2	0	0	0
1971:4	2	3	3	2	0	0	0
1972:1	2	3	3	2	0	0	0
1972:2	2	3	3	2	0	0	0
1972:3	2	3	3	2	0	0	0
1972:4	2	3	3	2	0	0	0
1973:1	1	3	2	3	0	0	1
1973:2	1	3	3	3	0	0	0
1973:3	3	3	3	3	0	0	0
1973:4	3	3	2	3	0	0	1
1974:1	2	3	2	2	0	0	1
1974:2	2	3	2	2	0	0	1
1974:3	2	3	2	2	0	0	1
1974:4	2	3	2	2	0	0	1
1975:1	2	3	2	2	0	0	1
1975:2	2	3	2	2	0	0	1
1975:3	2	3	2	2	0	0	1
1975:4	2	3	2	2	0	0	1
1976:1	2	3	2	2	0	1	1
1976:2	1	3	2	1	0	1	1
1976:3	1	3	2	1	0	1	1
1976:4	1	3	2	1	0	1	1
1977:1	1	3	2	1	0	1	1
1977:2	1	3	2	1	0	1	1
1977:3	1	3	2	1	0	1	1
1977:4	1	3	2	1	0	1	1
1978:1	2	3	2	2	0	1	1
1978:2	2	3	2	2	0	1	1
1978:3	2	3	2	2	0	1	1
1978:4	2	3	2	2	0	1	1
1979:1	2	3	2	2	0	1	1
1979:2	2	3	2	2	0	1	1
1979:3	2	3	2	2	0	1	1
1979:4	2	3	2	2	0	1	1
1980:1	2	3	3	2	0	1	0
1980:2	2	3	2	2	0	1	1
1980:3	2	3	3	2	0	1	0
1980:4	2	3	3	2	0	1	0
1981:1	2	3	3	2	0	0	0
1981:2	2	3	3	2	0	0	0
1981:3	2	3	3	2	0	0	0
1981:4	2	3	3	2	0	0	0
1982:1	2	3	3	2	0	0	0
1982:2	2	3	3	2	0	0	0
1982:3	2	3	3	2	0	0	0
1982:4	2	3	3	2	0	0	0
1983:1	2	3	3	2	0	0	0
1983:2	2	3	3	2	0	0	0
1983:3	2	3	3	2	0	1	0
1983:4	2	3	3	2	0	1	0
1984:1	1	3	3	1	0	1	0
1984:2	2	3	3	2	0	1	0
1984:3	2	3	3	2	0	1	0
1984:4	2	3	3	2	0	1	0
1985:1	2	3	3	2	0	1	0
1985:2	2	3	1	2	0	1	1
1985:3	1	1	1	3	0	1	1
1985:4	2	1	1	2	0	1	1
1986:1	2	1	1	2	1	1	1
1986:2	1	1	1	3	1	1	1
1986:3	1	3	1	2	1	1	1
1986:4	2	2	1	2	1	1	1
1987:1	2	2	2	2	1	1	1
1987:2	2	2	2	2	1	1	1
1987:3	2	2	1	2	1	1	1
1987:4	2	2	2	2	1	1	1
1988:1	1	2	2	1	1	1	1
1988:2	2	2	2	2	1	1	1

1988:3	2	2	2	2	1	1	1
1988:4	2	2	2	2	1	1	1
1989:1	2	2	2	2	1	1	1
1989:2	2	2	2	2	1	1	1
1989:3	2	2	2	2	1	1	1
1989:4	2	2	2	2	1	1	1
1990:1	2	3	1	3	1	0	1
1990:2	2	3	2	2	1	0	1
1990:3	2	3	2	2	1	0	1
1990:4	2	3	2	2	1	0	1
1991:1	2	3	1	2	1	0	1
1991:2	2	3	2	2	1	0	1
1991:3	2	3	2	2	1	0	1
1991:4	2	3	2	2	1	0	1
1992:1	2	3	3	2	0	0	0
1992:2	2	3	3	2	0	0	0
1992:3	2	3	3	2	0	0	0
1992:4	2	3	3	2	0	0	0
1993:1	2	3	3	2	0	0	0
1993:2	2	3	3	2	0	0	0
1993:3	2	3	3	2	0	0	0
1993:4	2	3	3	2	0	0	0
1994:1	2	3	3	2	0	0	0
1994:2	3	3	3	4	0	0	0
1994:3	3	3	3	4	0	0	0
1994:4	3	3	3	4	0	0	0
1995:1	3	3	3	4	0	0	0
1995:2	3	3	3	4	0	0	0
1995:3	3	3	3	4	0	0	0
1995:4	3	3	3	4	0	0	0
1996:1	3	3	3	4	0	0	0
1996:2	3	3	3	4	0	0	0
1996:3	3	3	3	4	0	0	0
1996:4	3	3	3	4	0	0	0
1997:1	3	3	3	4	0	0	0
1997:2	3	3	3	4	0	0	0
1997:3	3	3	3	4	0	0	0
1997:4	3	3	3	4	0	0	0
1998:1	3	3	3	4	0	0	0
1998:2	3	3	3	4	0	0	0
1998:3	3	3	3	4	0	0	0
1998:4	3	3	3	4	0	0	0
1999:1	3	3	3	4	0	0	0
1999:2	3	3	3	4	0	0	0
1999:3	3	3	3	4	0	0	0
1999:4	3	3	3	4	0	0	0
2000:1	3	3	3	4	0	0	0
2000:2	3	3	3	4	0	0	0
2000:3	3	3	3	4	0	0	0
2000:4	3	3	3	4	0	0	0
2001:1	3	3	3	4	0	0	0
2001:2	3	3	3	4	0	0	0
2001:3	3	3	3	4	0	0	0
2001:4	3	3	3	4	0	0	0
2002:1	3	3	3	4	0	0	0
2002:2	3	3	3	4	0	0	0
2002:3	3	3	3	4	0	0	0
2002:4	3	3	3	4	0	0	0
2003:1	3	3	3	4	0	0	0
2003:2	3	3	3	4	0	0	0
2003:3	3	3	3	4	0	0	0
2003:4	3	3	3	4	0	0	0
2004:1	3	3	3	4	0	0	0
2004:2	3	3	3	4	0	0	0
2004:3	3	3	3	4	0	0	0
2004:4	3	3	3	4	0	0	0

Sources: Levy (1999), p.p. , Trade Policy Review, South Africa, GATT, Vol.1, September 1993, P.P. 21-23, on net sources; i.e. <http://africanhistory.about.com>, <http://www.sahistory.org.za>, and others.

- The degrees given to each event depend on judgment according to readings on various political and economic sources about South Africa.

Notes on table 3:

APARTHEID & PINST:

1960, 1: Sharpeville Massacre.

I consider the whole period of 1960s a period of political instability.

I give it (1) for *PINST* until 1966. Then, I give it (2) for *PINST* until 1969. While I consider the year of 1960 is (1) for the *APARTHEID* and (2) during the whole period from 1961 to 1969 because I consider periods of *APARTHEID* are periods of observed human rights violations cause worldwide outcry.

1973, 1 & 2: The Durban strikes, the first major labour unrest of the apartheid period. ((1) is considered to be in *PINST*). However, 1973, 2 & 3 & 4: In 1973, in response to the resulting labour shortages, blacks were allowed to work at skilled jobs in white areas. ((3) for *APARTHEID*), 1973,3 & 4. ((3) for *PINST*).

1976, 2 (June 16th), 1976, 3, 1976, 4, 1977, 1, 1977, 2, 1977, 3, 1977, 4: The Soweto uprising began June 16. More fundamentally, the uprising went on for approximately a year and a half. (1)

Another opinion – “and so it continued for the rest of 1976.” So I consider here *PINST* = *APARTHEID* both are (1) during the period 1976, 2 (June 16th), 1976, 3, 1976, 4, 1977, 1, 1977, 2, 1977, 3, 1977, 4 which includes also the instable period of Biko’s death.

1977, 3: “September 1977, the brutal circumstances of Biko’s death caused a worldwide outcry and became a martyr and symbol of black resistance to the oppressive apartheid regime. The United Nations Security Council responded by finally imposing an arm embargo against South Africa.” *PINST*: (1) & *APARTHEID*: (1).

1984,1: In 1984 the South African government adopted a new constitution that gave Indians and coloureds some right to participate but continued to exclude blacks.

APARTHEID (1), *PINST* (1)

1985, 3: The first state of emergency. *APARTHEID* (3), *PINST* (1)

1986, 2: The second state of emergency. *APARTHEID* (3), *PINST* (1)

1986, 3: The tenth anniversary of the Soweto uprising. (1) (To be considered in *PINST* not in *APARTHEID*)

1988, 1: The government banned all major non white opposition groups and prohibited political activity by trade unions.

PINST = *APARTHEID* = 1.

1990, 1: February, 1990, Nelson Mandela was released from prison. *APARTHEID* (3), *PINST* (2)

1994, 2: In April 1994, Mandela won the first all-race election to become president. ((3) for *PINST*) & ((4)for *APARTHEID*)

APARTHEID = *PINST* = (2), otherwise.

See for example: <http://africanhistory.about.com/library/weekly/aa-sharpevilleMassacre-a.htm>,

<http://www.sahistory.org.za/pages/specialprojects/labour-history/73-strikes.htm>,

<http://africanhistory.about.com/library/weekly/aa060801b.htm>, <http://africanhistory.about.com/library/weekly/aa030402a.htm>, etc.

REACTION:

1985, 3: The government of South Africa suspended interest payment on foreign debt and introduced a dual-exchange-rate regime to discourage disinvestment. (1)

1985, 4: Freezing debt repayments. (1)

1986, 1: Freezing debt repayment. (1)

1986, 2: “February 1986, the government of South Africa has reached an interim agreement with creditors.” (1)

1986, 4 until 1989, 4: “South Africa developed extensive measures to circumvent the sanctions. South Africa also was able to tranship through countries that were not participating in the embargoes.” (2)

See Levy (1999), P.417-418

TARGET

1963, 3 1963, 4: August, 1963: “United Nations # 181: Non-compulsory embargoes on weapons sales to South Africa.” (2)

1964, 1 to 1964, 4: 1964: Comprehensive trade embargo from India and Investment embargo from Japan. (2)

1973, 1: Oil embargo by OPEC nations. (2)

1973, 4 – 1979: November 1973: “Oil Embargo to South Africa up till the fall of Shah in 1979, however, Iran continued to supply South Africa with oil.” (2)

1976, 2: Arms embargo by the United Nations as a result of Soweto uprising. (2)

1977, 1 – 1977, 4: 1977: United Nations: Weapon embargoes and continuing oil embargo. (2)

1979, 1-1979, 4: 1979: Oil exports embargo from UK and Investment embargo from Sweden. (2)

1980, 2: Mid-1980, s sanctions. (2)

1985, 2 – 1985, 4: 1985: June, “Fruit and vegetables import embargo and pure oil embargo from Norway, cancellation of Air traffic agreement from Denmark, Norway, and Sweden. July: Investment embargo, Krugerrands embargo, cultural and support boycott, financial embargo, termination of Nuclear energy contracts. October: oil embargo, nuclear energy embargo, trade embargo on weapons equipments from the commonwealth. November: Trade embargo on coal imports from South Africa by France. December: Navy control by Norway. 1985, 3: Financial embargo from Canada and financial embargo from UK.” (1)

1985, 3: Financial embargo from Canada and financial embargo from UK. (2)

1986, 1 – 1986, 4: “1986 January: Trade embargo on Agricultural products by Sweden. March: Trade embargo on Fruits and vegetables by Ireland. May: Trade boycott from Denmark, June: An announcement of trade embargo on coal by Denmark. July: Oil embargo from Norway. August: Trade embargo on Agricultural products, coal, iron, and Uranium by New Zealand. September: Trade embargo on cool except Ferro-alloys, trade embargo on Kugerrands, and investment embargo by EU.

Trade embargo on iron includes Ferro-alloys by Japan and Australia. October: trade embargo on the imports of Kruggerrands, weapons, Uranium, Iron, texture, agricultural products and food, trade embargo on computers exports and pure oil and its products by USA. November: Closing all Canadian tourism offices in South Africa by Canada.” (1)

1987, 1 & 1987, 2: Undetermined but considered to be a period of sanctions. (2)

1987, 3: August: Investment embargo, financial embargo, Trade embargo on some products and extending sanctions for one more year by USA. (1)

1987, 4 to 1989, 4: 1987, 3 & 4: August, financial embargo by USA. The rest of the period is undetermined but considered to be a period of sanctions. (2)

1990, 1: March, the lift of the investment embargo from UK. (1)

1990, 2 – 1990, 4: Undetermined but considered to be a sanction period. (2)

1991, 1: February, re-imposing an investment embargo by EU. (1)

1991, 2: Undetermined but considered to be a sanction period. (2)

1991, 3 & 4: July, The lift of the embargo by USA except from some states. October, The lift of the sanction program against South Africa by Japan and USA only. (2)

1992, 1 & 2: 1992: January, returning the diplomatic relationship and the lift of the trade embargo on Iron and Kruggerands by Japan and EU. April, The lift of the trade embargo on oil, the lift of the cultural and scientific embargo by EU. (3)

1992, 3: Undetermined. (3)

1992, 4: October, the lift of the oil embargo by Italy. (3)

1993, 1: The end of sanctions by Norway. (3)

See: Trade Policy Review, South Africa, GATT, Vol.1, September 1993, P.P. 21-23

SANCTION

SANCTION1 takes the value one during the multilateral sanction from 1986 to 1991 and zero otherwise.

SANCTION2 takes the value one during two main periods. The first period is from 1976 to 1980 which is considered the capital outflows period as a response to Soweto uprising and observed human rights violations. The second period is from 1983, 3 to 1990, 1. During this second period, Canada, UK, and USA imposed financial embargo on South Africa. **SANCTION2** takes the value zero otherwise.

SANCTION3 takes the value one for any type of economic sanctions stated in **TARGET** (where **TARGET** is a dummy variable takes on the following values: The value one if there are comprehensive international sanctions rather than a financial embargo, the value two if there are no comprehensive economic sanctions, and the value three if there are no any types of sanctions imposed on South Africa. and takes the value zero otherwise.

See: Levy (1999) and Trade Policy Review (September 1993).
