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and the Pacific

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It has been stated that data on arms transfers are notoriously unreliable and open to manipulation (Brzoska 1982: 77). Most scholars have relied upon the United States Arms Control and Disarmament Agency (ACDA) figures, which in turn, derive from estimates made by agencies such as the CIA and DIA that people without a security clearance are not able to see. That these estimates are questionable has been shown by a report that ACDA underestimated French arms transfers by a substantial amount (Kolodziej 1979: 223). Much of the data used in this paper derives from the most reliable and unmanipulated source - the Stockholm International Peace Research Institute's (SIPRI) computerized data base for major weapons systems (aircraft, armoured vehicles, artillery, missiles and warships). This is based upon a continuous search of some 300 technical and military journals, 40 daily newspapers, the international defence literature and relevant special reports. It cannot claim to be totally correct or completely comprehensive as in the end we must admit that there are no totally reliable sources (Landgren 1989: 242). However, for transfers of Soviet weapon systems to Ethiopia, the trends of SIPRI data and the other major series - ACDA in the USA and the International Institute for Strategic Studies in London - tell the same story (at least until 1983).

It is largely for economic reasons that the Soviet Union has become the world's largest arms exporter. It has organized its relations with the Third World around large transfers of military technology (Luckham 1985: 104). Rather than acting primarily on the basis of ideology or on the need to expand its empire, it has acted in an opportunistic manner (Deger 1985: 173).

Decades of central planning and privileged treatment of the defense sector have led to the development of an industry which is the most efficient in the USSR and which can compete with the west. Enormous resources are devoted to military research and development (Luckham 1985: 103-4). It has been calculated that, from 1973-1981, nearly two-thirds of the USSR trade deficit in non defense goods and services was financed by hard currency sales of armaments. The very large size of the industry allows the production of enormous runs of weapons systems (Deger 1985: 167; 164). A high proportion are for export sale and the Soviets have built up a reputation for providing military assistance which is 50% cheaper, and deliveries which are 50% faster and significantly more simple, rugged and reliable than their competitors (Arlinghaus 1983: 223). During the 1976-1981 period, 10% of the Soviet Union's output of submarines was exported, 25% of helicopters, 40% combat aircraft, over 40%

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of tanks, armoured vehicles and artillery pieces and no less than 50% of production of surface naval craft (Deger 1985: 165; Luckham 1985: 104).

Ethiopia has been fighting to maintain its central government and the borders of its empire intact - the bulk of which was founded in the nineteenth century - since 1961 when the Eritrean nationalists began their long, fierce and still unfinished stuggle for self determination. Today, the Ethiopian Marxist government is fighting a host of enemies in most parts of the empire. Ethiopia's Force Adjusted Ratio - a measure of the intensity of national military preparedness - is such that it ranks 7th in the world, and the highest among African states (Payne 1987: 47-55). Ethiopia's defense budget is some 55% of the government's expenditure; the country has no hope of paying for arms imports from internally generated resources.

TABLE 1: Ethiopian Military Expenditure m. birr constant 1985 figures

1977	280	1981	(789)	1985	(990)
1978	519	1982	(811)		
1979	722	1983	(816)		
1980	744	1984	(915)		

(..) Provisional
(Source: SIPRI Year Books). 2 birr is approximately 1 US dollar.

From 1976 until 1980, Ethiopia accounted for 2.4% of the total imports of arms by Third World countries - $2,444m US at constant 1985 prices. This made it the 15th ranking third world country. For the period 1971-85 Ethiopia ranked 24th; arms imports amounted to $3,144m - some 1.1% of total Third World Imports (Brzoska and Ohlson 1987: 7).

Table 2: Ethiopian Arms Imports as a Percentage of Total Exports

1970	8.0	1974	3.7	1978	358.3
1971	7.6	1975	12.2	1979	54.0
1972	6.0	1976	17.7		
1973	4.1.	1977	132.3		

(Source Henze 1984: 651)

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(Source Henze 1984: 351)

TABLE 3: Value of Ethiopian Imports of Major Weapons in USm 1985 constant prices.

Year		Year		Year		Year	
1951	4	1960	47	1970	15	1980	237
1952	8	1961	27	1971	42	1981	71
1953	16	1962	4	1972	16	1982	191
1954	13	1963	4	1973	3	1983	19
1955	1	1964	1	1974	125	1984	133
1956	1	1965	17	1975	44	1985	181
1957	-	1966	69	1976	19	1986	197
1958	8	1967	17	1977	1,518	1987	76
1959	13	1968	26	1978	616	1988	157
		1969	9	1979	56		

(Brzoska and Ohlson 1987: 332-5; SIPRI: 1989). The figures do not include spare parts, ammunition or small arms.

SIPRI figures for 1984-86 show a very different trend from those in ACDA's series - quoted by the noted US expert on the Soviet Union and the Horn of Africa, Professor Remneck - and which I find difficult to believe. These are:

1984 US$1.2 billion
1985 ...774 million
1986 ...292 million (Indian Ocean Newsletter 1988: 347). Billion in US usage i.e. 1,000 million.

Pricing arms transfers is of course a difficult business:

> frequently, weapons prices do not reflect true production costs. Furthermore, much of the international arms trade involves offset or barter arrangements, multi year loans, discounted prices, third-party payments and partial debt forgiveness (ACDA 1987: 159).

In 1987 the estimates of Soviet arms transfers in value terms were reviewed extensively by ACDA - in light of a mass of documentation captured during the invasion of Grenada - and support materiel, particularly to countries engaged in hostilities, revised upwards by 40-50%. However, the discrepancies between SIPRI and ACDA are very striking. Having visited Eritrea in 1983, 1985 and 1987 and observing new Soviet weapons systems captured or destroyed by the Eritrean People's Liberation Front (EPLF) I would place most reliance on the SIPRI figures.

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Ethiopia has received very favourable treatment from the USSR with regard to arms sales, particularly since the 1978 treaty on defense cooperation. MiG-23 fighter/interceptors were delivered to Ethiopia before the other Warsaw Treaty Nations received them (Brzoska and Ohlson 1987: 40). During the five year period, 1977-81, Ethiopia accounted for 5.8% of Soviet exports of major weapons to the Third World - to the value of $2,425m (Brzoska and Ohlson 1987: 187). The initial arms supplies were delivered to Ethiopia in the largest air supply operation in the history of the USSR and involved some 15% of Soviet aircraft capacity (Albright 1983: 21-37).

There is considerable speculation over the terms of trade of these large transfers. According to Luckham, some arms were given to Ethiopia between 1976-1980 and the remainder supplied on generous credit terms, to be paid back over 10 years at 2% interest with repayments deferred to 1982-3 (Luckham 1985: 105). Smith notes that there is insufficient evidence to indicate that the USSR actually received payment in hard currency for much of the arms deliveries made in the 1970s; it accumulated credits to be paid in the future either in commodities or in hard currency (Smith 1985: 154). On the other hand, Albright estimates that 65% of Soviet arms deliveries to the Third World from 1976-1980 were for hard currency and Deger unequivocably says that Ethiopia had to pay in hard cash (Albright 1983: 28; Deger 1985: 161). Clearly this question needs some hard empirical research. Until 1980, Coffee was virtually Ethiopia's only export, and shipments to the USSR to pay for arms, meant that her ability to earn hard currency was limited; from 1981-1984 coffee exports to the USSR were suspended and only renewed on a limited basis in 1984 (Remneck 1988: 18).

Ethiopia has paid a price for such reliance; the Soviet Union has managed to exert a considerable leverage in the conduct of the war as well as in government, party and foreign policy. For example, major maintenance on MiGs, tanks and other expensive weapons systems is not carried out in Ethiopia; the damaged weapons are sent back to the Soviet Union. The USSR has turned the Dahlak islands into a naval support complex for the resupply and repair of Soviet warships and made them off limits to most Ethiopians. The TAG D seaplane - the replacement for the Il-38 May ASW reconnaissance planes - could also be based there (Remneck 1989: 51-2). Sometimes, the arms seem less than durable and vitally needed spare parts are unavailable. As a consequence of its alliance with the Soviet Bloc, and their support in the wars of the mid 1970s, some 13,000 Cuban troops were stationed in Ethiopia for a number of years; all local costs of the expeditionary force had to be met from the Ethiopian budget (Albright 1983a: 65). Moreover, defectors have complained that on several occasions when armed conflicts

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seemed to be going in Ethiopia's favour, Soviet advisers have deliberately given advice that adversely affected the outcome (Dawit Wolde Giorgis 1989: 47). Even though this is hard to credit, it must be admitted that the USSR - as the USA - in many instances finds it to its advantage to maintain the affairs of a client country in a state of perpetual crisis and shy away from moves towards political settlement. Chairman Mengistu stated in 1988 that Ethiopia's military debt to the USSR amounted to $US4 billion and that the USSR wanted to be paid back (Indian Ocean Newsletter 1988: 356).

TABLE 4: Soviet Arms Exports to Ethiopia $USm constant 1985 prices.

Years	% from Soviet Union	Value all Exports
1951-5	-	41
1956-60	-	69
1961-65	30	53
1966-70	-	136
1971-75	-	230
1976-80	97	2,447
1981-85	88	488

(Brzoska and Ohlson 1987: 342).

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The Soviets have exported to Ethiopia some of their most capabale and modern weapons; the following table lists them.

TABLE 5: Major Soviet Weapons Systems used in Ethiopia

Weapon Systems	Year Delivered	Number
AIRCRAFT		
MiG-17 F fighter	1977/8	17
MiG-21 MF fighter	1977	50
.....	1982	12
MiG-23 fighter/ interceptor	1977	20
.....	1986	6
Su Fitter-C ground attack fighter	1982	6 @
YAK-40 CODLING transport	1984	1
An-12 CUB-A	1977	2
.....	1982	10
An-26 CURL light plane	1977	6
Mi-6 Hook Helicopter	1978	10
Mi-8 Helicopter	1978	15
.....	1980	10 *
.....	1982	12
Mi-14 Haze	1984	2
Mi-24 Hind-D Helicopter	1980	10
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attack fighter	1982	6 @
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An-12 CUB-A	1977	2
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light plane		
Mi-6 Hook Helicopter	1978	10
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Mi-14 Haze	1984	2
Mi-24 Hind-D		
Helicopter	1980	10
.....	1982	12
.....	1983	12

ARMOUR

T-34 Medium Tank	1977	35 #
.....	1978	65
T-54 Main Battle Tank	1977-9	300
T-55	1977-82	320
.....	1984	90 #
T-62	1977	20 @
.....	1980	50 *
T-72.....	1978	40
.....	1985	50
M-47 PATTON tank	1977	30
PT-76 light tank	1977	80
BTR-40 Armoured Personnel Carrier	1979	40
BTR-60P.....	1977	100 *
.....	1981	100
.....	1988	80
BTR-152 ...	1978	60
BMP-1 Mechanised Infantry Combat Vehicle	1977	100
BRDM-1 Scout cars	1977	40 #
.....	1988	40
BRDM-2.....	1977	50
BM-21 Multiple Rocket system 122mm	1979	25
.....	1988	18
BMD-20 200mm.....	1978	20
D-20 152mm Towed Howitzer	1977	10
D-30 122mm.....	1977	150
.....	1988	36
JSU-122 Self Propelled Gun	1979	10
M-1955 100mm Self Propelled Howitzer	1977	96
M-46 130mm Towed Gun	1977	18
.....	1988	18
S-23 180mm.....	1977	100
ZSU-23-4 SHILKA Anti Aircraft Vehicle	1978	20
ZSU-57-2.....	1978	10

T-34 Medium Tank	1977	35
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T-54 Main Battle Tank	1977	300
T-55	1977-64	320
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D-20 152mm Towed Howitzer	1977	10
D-30 122mm.....	1977	150
.....	1978	35
2SU-122 Self Propelled Gun	1979	10
M-1935 120mm Self Propelled Howitzer	1977	95
M-46 130mm Towed Gun	1977	18
.....	1980	18
S-23 180mm.....	1977	100
2SU-23-4 SHILKA Anti Aircraft Vehicle	1978	70
2SU-57-2.....	1978	10

MISSILES

AT-3 Sagger Anti Tank	1978	1,000
SA-3 Goa land mobile Surface to Air	1978	200
SA-7 Grail portable surfaceto air	1978	1,500
SA-3 mobile Surface to Air	1978	10

MISSILES

AI-2 Sapper Anti Tank	1973	1,000
SA-2 Sea land mobile surface to Air	1973	200
SA-7 Brazil portable surface to air	1974	1,500
SA-5 mobile Surface to Air	1978	10

SHIPS

MOL Fast Attack Craft	1978	2
OSA-2.....	1981	4
PETYA-2 Frigate	1983	1
.....	1984	1
POLNOCNY Landing Craft	1981	1
.....	1983	1
TURYA hydrofoil fast attack	1985	1

These are for all Wepons Systems delivered from WTO nations and Libya, not just those manufactured in the USSR.
@ Unconfirmed
* Designation unknown
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(Brzoska and Ohlson 1987: 173-5; SIPRI: 1989).

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One of the most striking features of the war that has been underway in Eritrea and the north of Ethiopia since 1961 is the very high level of losses of men and materiel. By the middle of 1987 it was estimated by the EPLF that 107 Ethiopian Aircraft, 460 tanks and armoured vehicles and 2,000 trucks had been destroyed (Adulis 1987: 3). Moreover, the TPLF and other groups fighting the Ethiopian central government have also destroyed scores of major weapons systems. Since 1977, the EPLF have also captured over 140 tanks and armoured vehicles, 70 large pieces of artillery - including the Stalin Organ - and several hundred military vehicles from the Ethiopians, all of which they have turned on the enemy. As far as can be ascertained from EPLF sources, the details are as follows:

TABLE 6: Eritrean Claims

Year	System	Destroyed	Captured
1978	Tanks	33	5
1979	T-54/55 Tanks	15	16
	76mm and 122mm		30
1980	T-54 Tanks		17
	Tanks and armour	11	
1981	T-54/55 Tanks	7	
	Military Vehicles	35	
	MiG-21	1	
	MiG-23	1	
1982			
1983	Tanks and armoured cars	36	
	MiG-23	2	
	M-24 Helicopter	2	
1984	Planes	26 MiG-21/23	
	M-24 Helicopter	6	
	Antonov	2	
	Tanks	57	19
	Armoured cars	18	8
	Artillery pieces		28
1985	Planes	3	
	Tanks	57	18
	Artillery pieces		12
1986	Planes	44	
1987			
1988	Planes & helicopters	20	
	Tanks & armoured cars	76	55(tanks)
	Military vehicles	200	200
1989	MiG-23	3	
	Army Aircraft	9	

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	MiG-21	1	
	MiG-23	1	
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1983	Tanks and armoured cars	36	
	MiG-23	2	
	M-24 Helicopter	2	
1984	Planes	26	MiG-21/23
	M-24 Helicopter	6	
	Antonov	2	
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Tanks	7	12

Sources

1979: Eritrea Information 1979 Nov.
1981 Eritrea Information 1981: 9, 10; Liberation 1981: Aug-Sep.
1984 - Adulis 1985: 3; Indian Ocean Newsletter 1984: 133.
1985 - Adulis 1986: 3; 4; 5.
1986 - EPLF Press Release 1986: Jan 16.
1988 - Adulis 1988: 2; 1989: 1; 2-3.

Future Developments

There is little disputing the assertion that the Soviet Union has ensured the survival of the Ethiopian military dictatorship - and reinforced the centralization of the regime (Luckham 1985: 89-113). There is now a great deal of comment that the Soviet Union - having realised at last that no matter what arms it provides the Ethiopians, they cannot win the war against Eritrea - is putting pressure on Ethiopa to enter into negotiations with the EPLF. However, the USSR - together with Czechoslovakia - seems to have resupplied the Ethiopian Army and Airforce with all of the arms it lost in 1988 and early 1989; even giving the SCUD missile for the first time. The latter was used in Afghanistan as a counter insurgency weapon. There are also reports of sightings of the new smaller attack, Mi-28 Hockum Helicopter (African Defence Journal 1989: 104). Increasing numbers of Ethiopian officers were sent to the USSR for training; 150 in 1984 jumped to 480 in 1986 and 1987. On the other hand, Ethiopian oil imports from the USSR (virtually the sole supplier) were valued at 139 million rubles in 1984 but dropped steadily to 68 million rubles in 1987 - constraining Ethiopia's ability to wage war in the north (Remneck 1989: 35-6).

The Soviet agreement with Ethiopia to supply weapons expires in 1990 and it is doubtful if the Soviet Union will continue to supply arms at the rate of the past 12 years. However, even if the USSR curtailed its arms exports to Ethiopia there are plenty of other countries in the market. The next most important WTO supplier has been Czechoslovakia:

TABLE 7: Exports of Major Weapons Systems from Czechoslovakia to Ethiopia 1985 constant prices $US million

1977	123	1980	20	1983	..	1986	16
1978	65	1981	20	1984	44	1987	16
1979	41	1982	8	1985	8	1988	57

Since the 1974 revolution the following countries have made major sales to Ethiopia: USA, Canada, France, West Germany, Italy, Czechoslovakia, Romania, Yugoslavia, Ireland, India

Sources

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Future Developments

There is little disputing the assertion that the Soviet Union has ensured the survival of the Ethiopian military dictatorship - and reinforced the centralization of the regime (Luckham 1985: 89-113). There is now a great deal of comment that the Soviet Union - having realised at last that no matter what arms it provides the Ethiopians, they cannot win the war against Eritrea - is putting pressure on Ethiopa to enter into negotiations with the EPLF. However, the USSR - together with Czechoslovakia - seems to have resupplied the Ethiopian Army and Airforce with all of the arms it lost in 1988 and early 1989; even giving the SCUD missile for the first time. The latter was used in Afghanistan as a counter insurgency weapon. There are also reports of sightings of the new smaller attack, MI-28 Hockum Helicopter (African Defence Journal 1989: 104). Increasing numbers of Ethiopian officers were sent to the USSR for training; 150 in 1984 jumped to 480 in 1986 and 1987. On the other hand, Ethiopian oil imports from the USSR (virtually the sole supplier) were valued at 139 million rubles in 1984 but dropped steadily to 60 million rubles in 1987 - constraining Ethiopia's ability to wage war in the north (Remneck 1989: 35-6).

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and Libya. In 1988, the United States resumed arms sales to Ethiopia - after a ten year hiatus - supplying it with major weapon systems worth $US 38 m to Ethiopia. This represents two, Lockheed C130H Hercules transport planes - ostensibly for civilian use. Also in 1988, the United Kingdom removed a ban on arms sales to Ethiopia. North Korean arms weapons reached Ethiopia via India in late 1988. Moreover, Israel has supplied spare parts and small arms. Ethiopia is one of the world's poorest countries - it may even be the poorest with respect to GNP per head. Howver, payment for arms could be made through arrangements such as Ethiopia's sale of at least 10 - and possibly 20 more F-5A/Bs to Iran in 1984-5 (Brzoska and Ohlsson 1985: 188; Indian Ocean Newsletter 1985: Oct 12). Ethiopia under Mengistu is an ever increasing drain on the Soviet Union's resources - not only with respect to weapons, advisers, training and oil, but also famine relief and assistance in remedying the errors of collectivisation, villigisation and resettlement. However, there are now markedly reduced expectations in the USSR of Ethiopia's revolutionary potential and an apparent willingness to recognise the need for a change in the regime's approach to Eritrea and the other conflicts. Elsewhere, I have discussed the reasons why peace will be hard to attain and maintain in the Horn of Africa (Pateman: 1989). If one examines the growth in the effectiveness and fire power in the EPLF - and in the Tigray People's Liberation Front (TPLF), Oromo Liberation Front (OLF), Afar Liberation Front (ALF) and other armed liberation forces - and considers the precipitious drop in morale and ability of the Ethiopian forces, it is not too rash to predict the defeat of the Ethiopian Army and the end of the Mengistu regime. This will be followed by a marked and lengthy period of instability that will probably lead in the long run to the restructuring of Ethiopia on a democratic federal basis - to which the EPLF will make a distinctive contribution. The defeat of the Ethiopians will have been indirectly attributable to the USSR. If they and their allies had not supplied the Ethiopians with such enormous quantities of arms - which were lost to the Eritreans and used against the Ethiopians and their Soviet advisers with such devastating success - but had instead opted for a peaceful resolution of the Eritrean grievances, the Ethiopian empire could have endured for a longer period. The attempt to defeat the Eritreans has led to the defeat of 'socialism' in Ethiopia; this is contributing to the sea change that is now taking place in the Soviet Union.

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