

ACDIS
*Occasional
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The Military Balance: 1985–1994

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Research of the Program in Arms Control,
Disarmament, and International Security
University of Illinois at Urbana–Champaign
March 1997

This publication is supported by funding from the University of Illinois and is produced by the Program in Arms Control, Disarmament, and International Security at the University of Illinois at Urbana-Champaign.

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ACDIS Publication Series: *ACDIS Swords and Ploughshares* is the quarterly bulletin of ACDIS and publishes scholarly articles for a general audience. The *ACDIS Occasional Paper* series is the principle publication to circulate the research and analytical results of faculty and students associated with ACDIS. The *ACDIS Research Reports* series publishes the results of grant and contract research. Publications of ACDIS are available upon request. For a additional information consult the ACDIS home page on the World Wide Web at <<http://acdisweb.acdis.uiuc.edu/>>.

Published 1997 by ACDIS//ACDIS SINA:1.1997
University of Illinois at Urbana-Champaign
359 Armory Building, 505 E. Armory Ave.
Champaign, IL 61820-6237

India & Pakistan

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Arun Singh was a Parliamentary Secretary to former Prime Minister of India, Rajiv Gandhi, and was Minister of State for Defense under Gandhi. Probably one of the more expert Indian civilians on security and defense matters, Singh spent 1996 at the Program in Arms Control, Disarmament, and International Security as a *Rockefeller Fellow* under the auspices of the Rockefeller Foundation. During this period he assisted with several ACDIS research projects, including compiling data for the South Asia Military Balance project. The results of that research are presented here.

I

INTRODUCTION

The potential for military conflict among two or more states is probably a function of a range of political, social, economic, religious, historical, ethnic and racial differences between them. Nonetheless, while these factors may provide the underlying foci for conflict, they do not provide the economic and military potential necessary for the successful prosecution of war.

An analysis of the likelihood of potential armed conflict within a given time frame, therefore, needs to look at the more immediate capability for war independent of the underlying causative factors for such a conflict. This examination would involve the analysis of a large number and variety of inputs that are vital to the conduct of military conflict. Such an analysis is what this author terms a “Net Assessment” which is aimed at identifying specific strengths and weaknesses. The various areas that would need to be analyzed to develop such an assessment for the states involved could include:

- National Goals¹
- Command Structure²
- Basic Resources³
- Applied Resources⁴
- Conventional Military Capabilities (land, air, and sea)⁵
- Order of Battle (Orbat)
- The Strategic Balance⁶

Net Assessments are usually done in four phases (Compile, Certify, Combine, and Compare) using a variety of data sources. Academic and scholarly assessments necessarily have to rely on published data ignoring any possibility of errors therein. Government assessments would be based on more detailed and accurate information of at least one’s own capabilities; and data collected through intelligence agencies for other states--which may not necessarily be more accurate than published information.⁷

¹ Including such national security interests as survival, stability, international credibility, history, role playing, political objectives, military aims.

² Including: Higher Command, C³I in peace and war, intelligence gathering, political structures, military organization, headquarters, field forces.

³ Including: population and demographics, the economy , industry, agriculture, trade and commerce, natural resources, raw materials, petroleum products, science & technological capabilities.

⁴ Including: terrain, main geographical features, likely axes of attack, man made obstacles, national logistics, road network, rail network, air links, merchant marine and ports, civil communication links, defense-related industry, defense related R & D.

⁵ Including: weapons platforms and systems, military manpower (quantitative and qualitative) and reserves, fire power, mobility, command, control, communications, computers, and intelligence (c⁴i).

⁶ Including: fissile materials, nuclear capable delivery systems, other WMD, command & control, civil defense.

⁷ On the whole, data sources from the International Institute for Strategic Studies is considered internationally to be reliable enough to provide the base for a reasonably accurate assessment of conventional military capabilities.

An exercise of this type, regularly updated, could provide a viable gauge for measuring changes in military linked potential which, when accompanied by other warning signs, could indicate an increase in the likelihood of armed conflict.

II

BACKGROUND

In the mid 1990s a significant number of American and other scholars, including much of the non-proliferation community, seemed to believe that tensions between India and Pakistan, over Kashmir in particular, had reached the point where war seemed inevitable and nuclear war a distinct possibility in the near future. Was there any empirical evidence, based on an examination of significant economic and military factors in both countries as they had evolved over the period 1985 to 1995 to support this view? Hence the need for a Net Assessment for India and Pakistan.

With this end in view, the publicly available literature was examined to see what work had been done on this subject. It was surprising to find that no such comprehensive analysis of the South Asian military environment, comparable to the kind of outstanding analytical work done in the context of the United States–USSR, the Israel–Arab Forces, the Koreas, or China–Taiwan was available. Some analysis of some aspects of the Indo–Pak military relationship are done periodically but nothing that compares with these other ‘hot spot’ assessments and nothing adequate in the current circumstances. The question of attempting a “Net Assessment” *ab initio* was, therefore, well beyond the capability and scope of this project.

As a starting point we have assembled a preliminary but comprehensive data base for the two countries relying entirely on published sources. With this step we have initiated an analysis of the military balance on the “bean count” model. At this stage it would be useful to point out that this is the most simplistic way of assessing the balance—totting up and comparing the numbers of such weapons as tanks, aircraft, capital ships etc. with no attempt to compare their relative effectiveness. Far more sophisticated mathematical tools for analysis ranging from “Lanchester Square Equations, Weapons Effectivity Indices, Weighted Unit Values,” and “Armored Division Equivalence” to the currently classified U.S. Army method of comparing “Division Equivalent Firepower,” are available and need to be employed in attempting any comprehensive analyses—certainly an analysis that would guide policy makers. These analytical tools can be examined in the contexts of concepts involving “force to force” and “force to space” ratios for given axes of potential attack and a fairly accurate picture of both the likelihood of and the outcome of conflict can be generated.

This paper looks at the results of the relatively simplistic “bean count,” both in terms of general but key economic indicators and in terms of conventional weapons systems, and it attempts to draw some inferences about developments over the last decade and possible changes in the next few years. Some implications in terms of nuclear deterrence will emerge but this subject needs more detailed examination.

Section Three of this paper summarizes and provides a preliminary analysis of key economic data presented more fully in Appendix One. Section Four looks at key military data, and offers a preliminary judgment of the relative fighting capabilities (conventional) of the two countries.

Ideally, the data on India should also be correlated with relevant information about Chinese capabilities insofar as they impact on South Asia. Such an analysis has not been done in the present paper in part because of complex methodological and data collection problems.

III

Key Economic Indicators

A variety of sources have been examined to collect data about five key economic indicators, including gross national product (GNP), percentage of economy devoted to defense, debt, and reserves (critical in terms of purchasing weapons and spares on the international market). Additional indicators are presented in Appendix One.

Gross National Product/Gross Domestic Product

	1985	1994	% change
India			
GNP: ACDA (\$ bill @ 94 prices)	185.7	287.1	154.6
IMF (Rs bill @ current)	2608.1	9310.2	357.0
GNP: IMF (Rs bill @ 90 prices)	3937.5	6252.2	156.8
IDSA(Rs bill @ current)	2622.4	9097.3	346.9
Pakistan			
GNP: ACDA (\$ bill @ 94 prices)	34.9	51.4	147.3
IMF (Pak Rs billion @ current)	510.5	1356.9	265.8
GDP: IMF (Pak Rs bill @ 90 prices)	645.9	1032.1	159.8
IDSA(Pak Rs bill @ current)	545.9	1677.0	307.2

Sources: *World Military Expenditures; International Financial Statistics Yearbook; Asian Strategic Review.*

Analysis. There is very little to choose between the two economies in terms of ‘real’ growth, and inflation plays an important role in both. The Indian economy continues to be approximately 5.5 times the size of Pakistan’s over the decade in terms of U.S. dollars.

Defense Expenditure⁸

	1985	1994	% change
India			
ACDA (\$ bill at 94 prices)	6.58	8.23	125.0
IDSA (Rs bill at current prices)	79.87	230.00	288.0
Pakistan			
ACDA (\$ bill at 94 prices)	2.17	3.07	141.5
IDSA (Pak Rs bill at current prices)	34.76	101.85	293.0

Sources: *World Military Expenditure; Asian Strategic Review.*

Analysis. Pakistani expenditures are growing slightly faster than India’s but the difference is not significant.

⁸ There is a degree of controversy in both India and Pakistan about accounting practices for defense expenditure. Needless to say, there may be military-related expenditures in both countries which do not appear under this heading. However, while there may be significant variations in the reliability of the data, over time the figures are reasonably accurate and comparable over time.

Defense Expenditure as % of GDP/GNP

	1985	1994
India		
ACDA (at constant 94 \$ prices)	3.54	2.87
IDSA (at current Rs prices)	3.04	2.53
Pakistan		
ACDA (at constant 94 \$ prices)	6.22	5.97
IDSA (at current parks. prices)	6.37	6.07

Sources: *World Military Expenditure; Asian Strategic Review.*

Analysis. Contrary to widespread belief, there has been a *drop* in both Indian and Pakistani expenditures relative to GDP/GNP.

Indebtedness

	1985	1994	% change
India			
Domestic debt (IMF Rs bill)	1083.6	4003.6	369.5
as % of GNP (IMF Rs)	41.5	50.9	
Foreign debt (IMF Rs bill)	181.5	458.9	252.8
as % of GNP (IMF Rs)	7.0	5.8	
Pakistan			
Domestic debt (IMF Pak Rs bill)	143.9	612.6	425.7
as % of GNP (IMF Pak Rs)	28.2	45.1	
Foreign debt (IMF Pak Rs bill)	140.2	446.0	318.1
as % of GNP (IMF Pak Rs)	27.5	32.9	

Source: *International Financial Statistics Yearbook.*

Analysis. Both countries are facing debt problems, and the Pakistan economy has become significantly more debt dependent than India's over the decade. Indian domestic debt, as a percentage of GNP, has grown significantly but the foreign debt ratio has declined.

International Reserves (excluding gold)

	1985	1993	% change
India			
IBR&D (\$ bill Free Foreign Exchange)	6.66	10.2	153.1
as % of Imports (IBR&D \$)	42.00	44.7	
Pakistan			
(IBR&D)	0.81	1.2	148.1
as % of imports (IBR&D \$)	29.60	12.6	

Source: *World Tables 1995.*

Analysis. Pakistan is facing a severe Free Foreign Exchange (FFE) crunch while India seems to have bounced back from the extreme vulnerability visible in 1990–91. Neither State is placed in a position to spend considerably enhanced sums on weapons acquisitions without such a decision severely impacting on the rest of the economy.

Summary

Even this cursory examination of a few salient economic indicators suggests that there is no evidence of any dramatic increase in defense related expenditures, rather, both governments have significantly cut back on military spending as a proportion of their respective GNPs/GDPs.

IV

The Balance of 'Conventional' Military Strength

All data in this section is derived from recent issues of *The Military Balance* published by the International Institute of Strategic Studies, London. While there may be differences between IISS data and other publicly available sources, such differences tend to be relatively inconsequential.

Ground Forces

Manpower: (in thousands)**India**

	1988–89	1995–96
Army manpower		
Army active	1200	980
Territorial Army	40	160
First line reserves	200	300
TOTAL	1440	1440
Para-military manpower		
Army-type units—Ladakh Scouts	5	merged
—Rashtriya Rifles	—	30
—Special Frontier Force	8	10
Border Guards—Bdr. Sec For (BSF)	90	185 ^a
—Assam Rifles	40	52
—Indo-Tibet Border Police (ITBP)	14	35
Anti Terrorist Special Forces—NSG	3	8
TOTAL	160	320

^a extensively used-IS

Analysis. IISS estimates show a significant drop in “active” Indian army manpower over the decade. However this has been offset in terms of numbers by large increases in reserves and in “paramilitary” manpower reflecting the increasing emphasis on internal security problems. IISS started assessing para-military manpower in 1988–89 so those figures are being used for comparative purposes.

Pakistan

	1988–89	1995–96
Army manpower		
Army active	450	520
First line reserves	500	500
TOTAL	950	1020
Para-military manpower		
Army-type units—National Guard	75	185
Border Guards—Frontier Corps	65	35
—Rangers	15	35
TOTAL	155	255

Analysis. There have been some increases both in ‘active’ army manpower and in ‘paramilitary’ forces.

Formations

India

3 x Armored Divisions
4 x RAPID (reorganized Infantry Divisions)
15 x Infantry Divisions
2 x Mountain Divisions
TOTAL 24 Divisions

Analysis. The present balance based on the IISS Military Balance estimates for 1995–96 indicate India has a total of thirty-four divisions. Of these, seven mountain and one infantry divisions are deployed in the Eastern Command on the Tibet–Burma–Bangladesh borders; at least one Mountain Division is deployed on the Tibet border in the Central Command; and at least one Infantry Division on the Tibet border in the Northern Command.

Thus, a total of twenty-four Divisions are available for deployment against Pakistan without stripping the other borders.

3 x Indep Armored Brigades
6 x Indep Infantry Brigades
3 x Indep Artillery Brigade
1 x Special Forces Brigade equivalent.
13 x Indep Brigades approximately = 4 Division equivalents

Analysis. India is assessed to have seventeen Independent Brigades. IISS has not indicated any deployment pattern for these, but assuming that two Armored, one Infantry and one Mountain are reserved for deployment in Eastern and Central Commands, the remainder are deployable against Pakistan. Thus, in total, India is assessed at having twenty-eight divisions deployable against Pakistan with, perhaps, two more available at reasonably short notice by thinning out Eastern Command.

Pakistan

Potential deployments against India will be as follows:

2 x Armored Divisions
19 x Infantry Divisions
21 Divisions

Analysis. Pakistan is estimated to have a total of twenty-two divisions. No assessments as to deployment are made by IISS, but, based on past patterns, at least one Infantry Division will be deployed on the Afghanistan border compared to two during the Afghanistan crisis.

7 x Indep Armored Brigades
8 x Indep Infantry Brigades
1 x Special Forces equivalent
16 x Indep Brigades approximately = 5 Division equivalents

In addition, Pakistan is estimated to have eighteen Independent Brigades. Assuming that one Independent Armored and one Independent Infantry are deployed on the Afghanistan border, the

remainder are deployable against India. Thus, in total, Pakistan is assessed at having twenty-six Divisions deployable against India with, perhaps, one more available at short notice.

In terms of fighting formations, taking note of India's borders with Tibet, Burma and Bangladesh, *prima facie*, India would be able to deploy at most twenty-nine divisions and four equivalents to Pakistan's twenty-one and five equivalents on their common borders. It is also worth noting that India would have three Armored Divisions and one Armored Division equivalent available to Pakistan's two Armored Divisions and two Armored Division equivalents.

Contrasting these figures with the situation in 1986–87, the comparative tables are as follows;

	1986/87	1995/96
I. Total number of Divisions		
India	32	34
Pakistan	19	22
Deployed on Other Borders		
India	10	10
Pakistan	2	1
Additional Division on Afghan Border	1	
Deployable against Each Other		
India	22	24
Pakistan	17	21
II. Total Independent Brigades		
India	23	17
Pakistan	15	18
Deployed on Other Borders		
India	4	4
Pakistan	4	2
Brigades Positioned in Saudi Arabia	2	
Deployable against Each Other		
India	19	13
Pakistan	11	16
Division Equivalents ^a		
India	6	4
Pakistan	3	5
Total Division and Division Equivalents ^a		
India	$27 + 6 = 33$	$29 + 4 = 33$
Pakistan	$18 + 3 = 21$	$21 + 5 = 26$

^a Division Equivalents are three independent brigades taken together

India appears to have rationalized command structures converting Independent Brigades to Divisions.

Pakistan appears to have added to deployable forces through redeployments from the Afghanistan border and Saudi Arabia. It appears, therefore, that the balance of formations has altered slightly in Pakistan's favor over the ten-year span.

Major Platforms and Weapon Systems

Main Battle Tanks

India. IISS estimates India has 2400 main battle tanks deployed in its Armored and Infantry formations. The bulk of the fleet is made up of T72/ M-1 tanks being manufactured locally under license. These are gradually replacing the earlier T-55s and Vijayanta tanks some of which are being upgraded. There is a marginal reduction in total numbers but not in fighting attributes over the last decade and the figures are as follows:

	1986/87	1995/96
Vijayanta	1250	800
T-55	1040	500
T72/M-1	350	1100
PT-76 (light tank)	150	—
TOTAL	2790	2400 ^a

^a excludes reserves

Pakistan. IISS estimates the Pakistan fleet at 2050 + main battle tanks. The bulk of the fleet continues to consist of the Chinese Type 59 (a modified version of the T-55), but these are being upgraded in fighting attributes. Newer Chinese tanks are being inducted gradually. There has been a significant shift in the ratio of Pakistan to India main battle tanks in favor of Pakistan over the last decade as follows:

	1986/87	1995/96
M47 / M48 A 5	450	400
T 54 / T 55	50	50
Type 59	1100	1200 ^a
Type 69	—	200
Type 85	—	> 200 ^b
TOTAL	1600	> 2050 ^b

^a possibly being upgraded

^b exact numbers not indicated

Infantry Combat Vehicles and Armored Personnel Carriers

India. India is estimated to be fielding 1057 infantry combat vehicles most of which are BMP 1/2, the latter being manufactured locally under license. No quantification of BRDM recce vehicles has been made by IISS. Overall numbers show a decline over the decade but the BMP-2s are a far more efficient fighting machine than earlier models of armored personnel carriers.

	1986/87	1995/96
BTR 60	360	—
OT 62/64	400	157
BMP 1/2	600	900
BRDM	?	?
TOTAL	1360	1057

Pakistan. Pakistan is still reliant upon the M-113 which is locally produced under license. No infantry combat vehicles have been procured.

	1986/87	1995/96
UR 416	45	—
M 113	600	850
BTR 70	—	169 ^a
TOTAL	645	850 (+169)

^a UNPROFOR

Self-Propelled Artillery

India. India has made no significant acquisitions of self-propelled systems in the decade.

	1986/87	1995/96
105 mm Abbot	60	80
130 mm M46 (mod)	100	100
TOTAL	160	180

Pakistan. Pakistan has added significantly to its holdings of self-propelled artillery and has a distinct edge over India both quantitatively and qualitatively.

	1986/87	1995/96
105 mm M-7	12	50
155mm M109A2	100	150
203 mm M110 A2	40	40
TOTAL	152	240

Tube Artillery

India. Although numbers have not altered significantly over the decade, there has been a marked improvement in terms of modernization. The old workhorses (25 pounder, 5.5 inch, and 100 mm) have been replaced by 105s, 122 mm, 130 mm, and 155mm. India continues to have a significant edge in tube artillery capability.

	1986/87	1995/96
75 /24 mtn gun	850	900
76 M-48 (Yug)	200	215
25 pounder	800	—
100 mm (1944)	185	—
105 M-56	800	50
105 Ind Fld Gun I/II	280	1200
122 mm D-30	—	550
130 mm M-46	400	750
5.5 inch	140	—
155 mm FH 77 B	—	410
TOTAL	3655	4075

Pakistan. A similar situation obtains with reference to Pakistan's holdings; no major change in numbers but meaningful modernization again replacing 25 pounders and 5.5 inch with more

modern systems chiefly of Chinese origin. IISS data for Pakistan was less specific in earlier assessments as follows:

	1986/87	1995/96
85 mm	180	200
25 pounder	1000	—
100 mm	some	—
105 M-101	—	300
105 M56 pack	—	50
122 mm T 60	—	200
122 mm T 54	—	400
130 mm T59-1	100	200
155 mm M59	—	30
155 mm M 114	40	60
155 mm M198	75	100
203 mm M 115	—	26
5.5 inch	some	—
TOTAL	1395 +	1566

Other Artillery Systems

India. India has a significant lead in heavy mortar and MLRS capabilities. IISS reporting on MLRS has significant discrepancies as to quality relative to “Jane’s” assessments. Jane’s concludes that India has improved upon the Soviet MLRS (BM-21) originally purchased and has also developed its own longer range system indigenously. These developments do not feature in IISS data which show a drop in India’s MLRS holdings:

	1986/87	1995/96
120 mm mortars	500	1000
160 mm mortars	50	200
122 mm BM – 21 MLRS	120	80

Pakistan. A similar comment applies to IISS assessments of Pakistan’s holdings and capability in terms of modernization. IISS estimates are:

	1986/87	1995/96
120 mm AM – 50 /M61	—	225
122 mm BM – 11 MLRS	some	45

Surface to Surface Ballistic Missiles

India. IISS estimates that India has deployed some three to five launchers but have not commented on the numbers of missiles available. Earlier they had estimated a total of fifteen missiles. These missiles, the Prithvi, have been developed indigenously. They are short range (150–200 km) and are capable of carrying a 1-ton payload.

Pakistan. IISS estimate that Pakistan has deployed some eighteen Hatf-1 and ‘some’ Hatf-2 missiles. These are said to be indigenous developments of meteorological sounding rockets. No assessments of possible acquisition or deployment of Chinese made M-11 missiles have been made.

Anti-Tank Guided Weapons

Indian holdings include the Milan and the AT3, AT4 and AT5 of Soviet origin. Pakistan holdings include the Cobra and TOW from the United States and the Chinese 'Red Arrow.'

Army Surface to Air Missiles

India carries approximately 1500 missiles of Soviet origin including SAM 6, 7, 8A/B, 9, 13 and 16. Some of these are vehicle mounted and others are shoulder fired. Pakistan holds some 350 Redeye / Stinger / RBS-70 and 500 Chinese Anza 1/2 missiles.

Summary—Ground Forces

There is evidence to show both India and Pakistan are gradually modernizing their major weapon platforms and systems. Progress is slow and dependence on old technologies is still at a high level. Neither side has made any very significant acquisitions in quantitative terms during the last decade and the "numbers ratios" have moved marginally in favor of Pakistan. The sole exception to this broad analysis are surface to surface ballistic missiles. These "dual capable" systems did not exist on the sub-continent a decade ago and are obviously being treated as high priority development objectives by both countries. They are also seen as high visibility deployments capable of altering the "correlation of forces" in potentially nuclear terms and therefore to be treated differently to, say, main battle tanks. Missiles of this genre, being "dual capable," also attract the attention of the international nonproliferation community and consequently are of significant global interest.

Air Forces

Major Platforms/Weapon Systems

Ground Attack Aircraft

India. IISS estimates suggest India has improved her ground attack fleet considerably, both quantitatively and qualitatively. Some old aircraft types have been deleted from the inventory and replaced by more modern and effective platforms such as the MiG-27 being built indigenously under license. This aircraft will become the mainstay of the Indian fleet in the years ahead as it gradually replaces the MiG-21s in service. India appears to have a significant and increasing edge over Pakistan in this category. Comparative figures are as follows:

	1986/87	1995/96
Ajeet	72	—
BaE Canberra	23	—
HAL Marut	18	—
MiG-21 MF/PFMA	some (59)	144
Jaguar 1 S	68	97
MiG-23 BN/	72	54
MiG-27	24	148
TOTAL	337 ?	443

Pakistan. No major acquisitions/changes have taken place in the Pakistani fleet:

	1986/87	1995/96
Mirage III	17	18
Mirage 5	50	56
A-5 Fantan	41	49
TOTAL	108	125

Fighter Aircraft

India. There has been some change in Indian holdings over the decade. The fleet is still heavily dependent on the MiG-21 series, particularly the Bis, and there have been no new acquisitions since 87–88 when the MiG-29s were inducted.

	1986/87	1995/96
MiG-21 FL/U	200	74
MiG-21 Bis	45	170
MiG-23 MF/UM	24	26
Mirage 2000 H/TH	—	35
MiG-29	—	67
TOTAL	269	372

Pakistan. Pakistan has acquired some newer aircraft in the shape of Chinese F 7P s and Mirage III Os replacing older F 6s. Overall numbers have moved upwards similar to Indian changes.

	1986/87	1995/96
F 6/ FT 6	170	100
F 16 A/B	30	34
F 7 P	—	79
Mirage III O	—	30
TOTAL	200	243

Other Platforms

The one significant change is that IISS estimate India has modified three Canberras for the ECM role; two Boeing 707s in the Elint role and is testing two Avro HS 748s in the AWACS role. ‘Traditional’ recce capabilities on both sides have not altered significantly from earlier levels.

Air launched Air to Air Missiles

India has a large spread of Soviet and French missiles spanning the spectrum from close combat to ‘beyond visual range’. These include the AA 2, 7, 8, 10, 11 and the R-530 D and 550. Pakistan’s holdings include the AIM-7 , AIM-9 , R 530 and R 550.

Air Force SAMs

India’s holdings include the SAM 2, 3, and 5. Pakistan holds the Chinese version of the SAM 2 and the French Crotale.

Air to Surface Missiles

The Indian Air Force has the AS 7 , 11B , 12 and 30 against land based targets and the Sea Eagle in the anti-shipping role. Pakistan holds the Exocet for shipping targets.

Summary

Indian air power has acquired a distinct edge in terms of ground attack capabilities and seems to be moving towards the deployment of electronic warfare platforms which could further enhance ground attack. Pakistan appears to be concentrating its investments in air defense aircraft presumably to offset the Indian edge.

Naval Forces

Major Platforms and Weapon Systems

Submarines

India. The Indian submarine fleet has undergone significant modernization over the last decade with Soviet Kilos and German Type 209s replacing the earlier Foxtrots. Overall numbers have almost doubled and are considerably higher than Pakistan's.

	1986/87	1995/96
Foxtrot	8	4
Kilo	—	8
T-209/ 1500	—	3
TOTAL	8	15

Pakistan. There has been no change in Pakistan's capability which remains:

	1986/87	1995/96
Agosta	2	2
Daphne	4	4
TOTAL	6	6
Midgets	5	3

Principal Surface Combatants

India. Quantitatively, there has been no increase in the Indian fleet, but qualitatively, considerable upgradation has taken place over the decade. Most of this happened seven to eight years ago, after which there has been little change.

	1986/87	1995/96
Aircraft Carriers	1	2
Destroyers	3	5
Frigates	21	18 ^a
TOTAL	25	25

^a excluding reserves

Pakistan. There have been significant additions to Pakistan's frigate holdings but large reductions in destroyers. The fleet is not comparable to India's in terms of surface to surface and surface to air capabilities.

	1986/87	1995/96
Destroyers	7	3
Frigates	—	8
TOTAL	7	11

Coastal Combatants

India. There has been a substantial increase in India's corvette holdings and newer Soviet types have been inducted and are being built indigenously. These have offset drops in Missile boat numbers. Mine warfare capabilities have not altered.

	1986/87	1995/96
Corvettes	4	17
Missile craft	14	6
Mine warfare	18	20

Pakistan. No change

	1995/96	1986/87
Missile craft	8	8
Mine warfare	3	3

Maritime and Naval Air Power

India. Indian capabilities have increased significantly both in numbers and in quality. The induction of a second carrier led to a major increase in ship borne attack; all new destroyers/frigates carry anti-submarine helicopters; new types of land based recce/ASW Tu-142 M and Il-38s were bought from the Soviets and coastal recce has been improved with Dorniers.

	1986/87	1995/96
Land based strike-Canberra	12	—
-Jaguar	—	6
Ship borne attack-Sea Harrier	8	20
Armed Rotary wing	25	75
Anti submarine/ maritime recce	15	46

Pakistan. There has been very little change in holdings which do not compare with India's.

	1986/87	1995/96
Fixed wing Mar recce/stand off strike	3	4
Armed rotary wing	10	13

Naval Surface to Surface Missiles

India. Of the total of forty-eight destroyers, frigates, corvettes and missile craft, thirty-two are equipped with the Styx missile in two variants. All new craft being built are similarly equipped.

Pakistan. The Pakistan Navy has a total of eleven missile equipped vessels; three destroyers carrying the Harpoon, and six missile craft with the Chinese HY-2. However, Pakistan also has six submarines with the ‘under sea’ launched Harpoon.

Naval SAMs

India has five destroyers and three frigates that are equipped with integral SAMs.

Summary: Naval Forces

The Indian Navy was substantively enhanced in every respect towards the end of the 1980s and early 1990s. This has created a significant edge over Pakistan where the Navy has barely altered over the decade. However, Indian naval expansion has slowed down materially in the last five years particularly in terms of its “blue water” capabilities.

V

Summary Of Key Findings

Both India and Pakistan have *reduced* the proportion of GNP/GDP spent on defense over the decade under review, and both economies have been able, thereby, to spend more on other sectors. Pakistan’s economy has become more vulnerable to problems arising out of domestic and international indebtedness and to shortages in free foreign exchange reserves.

There is some evidence to show that both countries are modernizing weapons systems, although the rate of progress is very slow. Neither side has made any significant acquisitions of newer equipment, and India’s traditional quantitative superiority is gradually reversing. *The only really significant potential induction is short range surface to surface “dual capable” ballistic missiles on both sides. So far these do not appear to have been deployed.*

India seems to have acquired a distinct edge in ground attack capabilities and seems to be moving towards the deployment of EW capabilities which could further enhance this “edge”. Pakistan seems to be concentrating on air defense aircraft presumably to counteract these changes.

The Indian Navy seemed to be moving towards significant expansion in all respects in the mid-1980s, and that gave it a distinct edge over Pakistan where the navy has barely altered over the decade. However, much seems to have changed in Indian expansion during the 1990s, and the emphasis on “brown water” assets seems to have increased at the cost of “blue water” capabilities.

The trends suggested by the economic and the military indicators that we have used—and which come from completely different sources—all point in the same direction, a reduction in military preparedness on both sides. There is a visible downsizing in weapons holdings in many major systems although clearly there are gaps in IISS data based on some of the unexplained year to year fluctuations in their assessments. India is also downsizing army manpower in favor of enhanced “internal security” forces to tackle domestic problems. Some commentators believe that these paramilitary or armed police forces should be included as part of army estimates, but I do not

agree, taking into account the differences in training, command and control, leadership, equipment holdings, deployability, and mission profiles.

Given the above, one must conclude that there is a reduction in conventional military preparedness on both sides in 1994 relative to 1985. This could be the consequence of a variety of factors impacting jointly or severally to create this result. Some of the alternative explanations that require examination are:

- a) There has been a significant reduction in tensions between the two states and, consequently, both governments feel secure in reducing defense expenditures and using the resultant savings in more socially relevant areas.
- b) The two economies are facing severe crisis sufficient to ensure that finance for defense expenditures are not available even if the governments wanted to undertake such expenditures.
- c) The downsizing in weapons holdings is a function of increased unit costs for the more modern weapons compared to their predecessors. Effectivity has been enhanced through modernization even if numbers have dropped.
- d) There is a popular movement against defense expenditure in both countries at the cost of other “productive” spending and the two democratically elected governments are responding to this popular opinion.
- e) Some new factors have come into play in both states, after 1985 and before 1994, which have impacted on defense expenditures as reported.

These propositions will be further examined in Section VI with the objective of assessing their value in accounting for the reductions in conventional military preparedness, particularly in the case of India.

VI

Alternative Explanations

There is some evidence to suggest that relations between India and Pakistan in the period 1987 to 1994 were at the lowest possible level short of war. India was consistently accusing Pakistan of supporting terrorism and secession in both Punjab and Kashmir and Pakistan was countering by accusing India of aiding the “Muhajirs” in Sindh. Some commentators in the region and outside believe that the two countries came close to outright military conflict both in 1987 (as a consequence of the Indian “Brass Tacks” exercises) and in 1990 (following a rapid escalation in Low Intensity Conflict Operations in Kashmir). The period from 1990 to 1994 saw significant intensification in the Kashmir conflicts between Indian security forces and insurgents said to be trained and armed by Pakistan.

Given this background it seems fair to say that this environment was clearly not conducive to the reduction in defense preparedness that was being implemented by both governments. If anything, such an escalation in the potential for military conflict over specific and tangible issues between the two states should logically have led to a visible increase in military expenditures.

The Indian economy seems markedly stronger than it was a decade ago and “real” growth rates, while lower than required, have been consistent. There is absolutely no evidence to suggest that successive Indian Governments have cut back on defense expenditures specifically as a consequence of economic compulsions. In fact, it would probably be correct to assume that India was relatively better placed to afford enhanced expenditures on military preparedness had successive governments, at any time during the period, believed such expenditures to be essential for national security.

While there has been some modernization in both armed forces, the “newer” weapons systems are still over twenty-years old. There is no evidence of the introduction of either the most modern technologies or of force multipliers adequate to justify a decline in numbers of weapons deployed. The modernization undertaken by either state has not been adequate to explain the reductions in either numbers or expenditures.

While there has been some criticism of “wasteful” expenditure on defense, particularly in India, there can be no suggestion that there has been an outcry within the voting population sufficient to cause elected politicians to cut back on expenditures. If anything, I would hazard a guess that “jingoistic” statements by Indian politicians “blaming” Pakistan for a variety of Indian problems has been at its peak since the early 1990s. The drop in defense expenditure ratios in India runs counter to this increase in the level of rhetoric which, paradoxically, could well have been used to justify an increase in such expenditures.

Clearly, none of the alternatives examined above are adequate to explain the obvious disparity between inter-state relations, on the one hand, which have reached a decided low ebb in the latter part of the decade under review and the reductions in defense expenditure as a proportion of GDP/GNP in India on the other. There are, therefore, two possible explanations for this state of affairs relating to “new” elements in the equation:

One, the Indian Government has decided that war with Pakistan is no longer likely and, therefore, major investments in the Indian military are no longer required. This could be a result of the following “calculations”:

- (a) Pakistan does not have the capability to launch such a war
(and/or)
- (b) India has no intention to initiate a war and, therefore, war cannot occur
(and/or)
- (c) The international community will not tolerate such a war
(and/or)
- (d) “Costs”, will exceed any possible “benefits” of such a war.

While it is possible that one or more of these alternatives are considered possible or even probable, it is equally certain that the postures adopted by the two states towards each other do not exhibit any corresponding degree of optimism. Therefore, it is difficult to believe that the Indian government has decided to implement vital decisions regarding defense expenditures solely on the basis of an optimistic review of the likelihood of war in the future.

The second possibility is that the Indian government, and to a lesser degree their Pakistani counterparts, are convinced conventional war is a thing of the past because of the ground realities resulting from the existence of nuclear weapons on both sides.

India could believe that it has no compelling reason to attack Pakistan conventionally other than to relieve pressure on Kashmir. Such an attack in a nuclear environment could provide the trigger for escalation to nuclear war given that the attack could fuel Pakistan fears of potential defeat at the hands of a larger and better armed state. The nuclearization of the conflict would defeat the original objective of relieving pressure at minimal cost and, thus, render the option invalid. India could also believe that Pakistan would be deterred from attacking India conventionally by the possibility of Indian nuclear escalation and, in any event, the “defender” enjoys a definite advantage in terms of the requirement of men and materiel to defeat a conventional attack even using only conventional means.

Pakistan, equally, could believe that the possession of a nuclear weapons capability deters India from mounting a conventional assault, and an Indian nuclear capability would similarly deter Pakistan. Pakistan could also believe that reductions in Indian conventional capabilities were an adequate prerequisite for similar declines in Pakistani outlays.

If both sides concluded that (a) conventional war would automatically result in nuclear escalation; (b) that both sides were de facto nuclear weapons states and therefore such escalation would result in nuclear war; and (c) that such escalation would be an unacceptable price to pay, then both would have no real incentive to enhance conventional military preparedness.

As stated in the opening paragraphs of this paper, I have not examined the viability of this explanation in terms of fissile material holdings, nuclear weapons launch capabilities, or expenditures in areas related to nuclear weaponization. Therefore, this paper will not discuss the specifics about the validity of nuclear deterrence as an explanation of the reductions in conventional defense expenditure ratios. All I am prepared to say is that this line of argument seems to provide a more convincing explanation of the apparent downsizing than the other alternatives examined earlier in this paper.

VII

Conclusions⁹

Contrary to popular belief, there is no evidence of any increase in defense spending ratios in either India or Pakistan over the last ten years. In fact, both countries have reduced the ratios of such expenditures relative to their national economies.

There is also no evidence of any significant aggregation in weapons systems deployed by either country in any of the three sectors— ground, air, or sea.

⁹ These conclusions will not be vitiated by recent reports of agreements/contracts for conventional weapons systems acquisitions by both countries since the bulk of these acquisitions seem to be in the nature of replacements for existing systems that will require phasing out in the near future.

A prima facie evaluation of possible causes for this situation suggests that *a unique form of nuclear deterrence, not related to overt weaponization*, may have come into play and this has given successive governments in both countries the confidence to reduce proportional spending on conventional military capabilities during a period of a significant worsening of relations between the two countries. This hypothesis needs more exacting and detailed examination.

Appendix One Economic Data

TABLE A1.1 Economic Data for India and Pakistan: 1986 to 1994

	1986	1987	1988	1989	1990	1991	1992	1993	1994
India									
GNP at current prices \$ bill	149.40	161.50	184.40	205.00	225.90	235.10	253.10	267.10	287.10
GNP at constant 1994 prices	194.20	203.50	223.80	238.10	251.50	252.00	263.90	272.60	287.10
Mil expend at current prices \$ bill	5.37	5.81	6.23	6.50	6.55	6.30	6.38	7.43	8.23
Mil expend at constant 1994 prices	6.98	7.33	7.56	7.55	7.29	6.75	6.66	7.58	8.23
Cent Govt expend at 1994 prices	46.63	47.15	50.47	55.14	55.36	52.33	53.81	58.59	56.60
Mil expend as % GNP 1994 prices	3.60	3.60	3.40	3.20	2.90	2.70	2.50	2.80	2.90
CGE as % GNP at 1994 prices	24.00	23.20	22.60	23.20	22.00	20.80	20.40	21.50	19.70
Mil expend as % CGE at 1994 prices	15.00	15.50	15.00	13.70	13.20	12.90	12.40	12.90	14.50
Pakistan									
GNP at current prices \$ bill	28.40	30.63	33.61	36.57	39.88	42.94	47.14	48.97	51.41
GNP at constant 1994 prices \$ bill	36.93	38.60	40.79	42.46	44.39	46.02	49.16	49.98	51.41
Mil expend at current prices \$ bill	1.82	2.23	2.33	2.34	2.77	2.61	2.92	3.17	3.07
Mil expend at constant 1993 prices \$ bill	2.37	2.81	2.83	2.72	3.08	2.80	3.04	3.23	3.07
CGE at constant 1994 prices \$ bill	9.38	9.58	9.71	11.08	10.80	11.38	12.83	13.12	13.33
Mil exp as % GNP (constant price)	6.40	7.30	6.90	6.40	6.90	6.10	6.20	6.50	6.00
CGE as % GNP (constant price)	25.40	24.80	23.80	26.10	24.30	24.70	26.10	26.30	25.90
Mil exp as % CGE (constant price)	25.20	29.30	29.20	24.50	28.50	24.60	23.70	24.70	23.00

Source: Arms Control and Disarmament Agency, *World Military Expenditures, 1995*

TABLE A1.2 Asian Development Bank Data (\$ bill)

	1986	1987	1988	1989	1990	1991	1992	1993	1994
India									
Int LT debt	17.94	21.70	26.31	30.12	33.69	27.02			
Int ST debt	2.25	2.50	2.87	2.96	3.93	4.00			
Debt repay	2.29	1.89	1.95	1.98	2.41	3.68			
Tot ext debt	48.35	55.82	58.47	63.93	69.14	71.56			
FFE Res	5.44	5.60	4.15	3.11	1.20	3.58	5.46	9.81	23.05
Pakistan									
Int LT debt	3.54	3.95	4.37	4.46	5.10	5.76			
Int ST debt	1.29	1.47	1.90	2.33	2.54	3.23			
Debt repay	0.69	0.76	0.85	0.80	0.90	0.95			
Tot ext debt	14.89	16.69	16.96	18.30	20.06	22.97			
FFE Reserve	0.70	0.49	0.39	0.52	0.30	0.52	0.85	1.20	2.93

Source: Asian Development Bank, *Key Indicator of Developing Asian and Pacific Countries*.

TABLE A1.3 Asian Development Bank Data

	1985	1986	1987	1988	1989	1990	1991	1992	1993
India									
Nat gas Petjls	146.00	210.00	235.00	260.00	316.00	388.00	397.00	520.00	
Coal/Lig Mmt	157.48	170.46	185.35	197.56	208.56	211.39	224.5	250.12	
Elec prd Bkwh	183.39	201.28	218.98	241.31	268.66	289.44	313.04	327.91	
Crude prd Mmt	29.86	31.16	30.14	31.58	33.69	33.31	31.01	27.39	
Pakistan									
Nat gas Petjls	315.00	330.00	341.00	371.00	386.00	423.00	440.00	543.00	575.00
Coal/lig Mmt	2.20	2.26	2.75	2.64	3.14	3.05	3.19		
Elec prd Bkwh	30.17	33.48	38.62	40.28	43.88	47.33	51.97		
Crude prd Mmt	1.28	1.93	2.01	2.19	2.29	2.62	3.15	3.72	

Source: Asian Development Bank, *Key Indicator of Developing Asian and Pacific Countries*.

TABLE A1.4 International Bank of Reconstruction & Development Data

	1985	1986	1987	1988	1989	1990	1991	1992	1993
India									
GNP Rs bill	2603.40	2903.30	3299.90	3917.70	4510.40	5253.00	6047.80	6947.40	7745.80
Exports \$ bill	8.75	9.19	11.60	13.18	15.84	17.72	17.48	19.56	21.55
Imports \$ bill	15.86	15.09	16.75	18.96	20.26	23.30	20.30	23.58	22.76
Ext debt \$ bill	40.97	48.28	55.73	58.44	73.39	81.99	83.95	90.13	91.78
long term	36.61	43.33	50.05	52.09	65.89	73.45	76.88	83.79	88.16
short term	4.36	4.95	5.68	6.35	7.50	8.54	7.07	6.34	3.62
Intl Reserves (excl'd gold)	6.66	6.73	6.39	4.96	4.11	1.52	3.63	5.76	10.20
Pakistan									
GNP Pak Rs bill	510.50	555.90	608.90	704.50	797.80	892.90	1044.50	1223.90	1357.00
Exports \$ bill	2.74	3.38	4.18	4.53	4.78	5.52	6.46	7.27	6.64
Imports \$ bill	5.89	5.38	5.83	6.62	7.12	7.36	8.46	9.37	9.50
Ext debt \$ bill	13.37	14.87	16.67	16.91	18.26	20.57	22.96	24.10	26.05
long term	12.06	13.00	14.39	14.48	15.49	17.38	18.80	19.70	21.55
short term	1.31	1.87	2.28	2.43	2.77	3.19	4.16	4.40	4.50
Intl Reserve (excl'd gold)	0.81	0.71	0.50	0.39	0.52	0.30	0.53	0.85	1.20

Source: International Bank of Reconstruction and Development, *World Tables 1995*.

TABLE A1.5 Institute for Defense Studies and Analysis Data

	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
India											
GDP Rs bill	2622.43	2929.49	3332.01	3957.79	4568.3	5320.30	6156.55	7056.00	8856.20	9097.25	10443.00
CGE Rs bill	531.12	640.23	703.05	814.02	950.49	1040.73	1127.31	1277.53	1380.28	1516.99	
Def exp Rs bill	79.87	104.77	119.67	133.41	145.00	154.26	163.47	175.82	215.00	230.00	255.00
CGE as % of GDP	20.30	21.90	21.10	20.60	20.80	17.60	18.30	18.10	15.60	16.70	
Pakistan											
GDP Pak Rs bill	545.89	618.04	596.30	759.35	887.81	992.66	1211.30	1359.30	1481.30	1677.00	
CGE Pak Rs bill	100.04	111.86	136.15	156.42	173.27	183.66	199.00	235.00	258.00	295.02	334.74
Def Exp P Rs bn	34.76	41.33	47.02	51.05	57.93	63.60	76.96	89.11	91.10	101.85	115.25
CGE as % of GDP	18.30	18.10	22.80	20.60	19.50	18.50	16.40	17.30	17.40	17.60	
India											
DE as % of GDP	3.05	3.58	3.59	3.37	3.17	2.90	2.65	2.49	2.68	2.53	2.39
DE as % of CGE	15.04	16.37	17.02	16.39	15.26	14.69	14.50	13.76	15.58	15.15	
Pakistan											
DE as % of GDP	7.10	7.57	7.61	8.56	7.62	7.16	7.74	7.70	6.96	6.88	6.88
DE as % of CGE	34.75	36.94	34.53	32.64	33.43	34.63	38.67	37.91	34.31	34.52	34.43

Source: Institute for Defense Studies and Analysis, *Asian Strategic Review*.

TABLE A1.6 International Monetary Fund data

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
India										
GDP Rs bill	2622.40	2929.50	3332.00	3957.80	4568.20	5355.30	6168.00	7053.30	8010.30	9456.20
GDP Rs bill 90	3937.50	4129.10	4326.20	4755.50	5068.00	5355.30	5381.40	5629.20	5881.60	6252.20
GNP Rs bill	2608.10	2911.40	3305.80	3912.90	4510.90	5279.70	6059.80	6910.30	7864.30	9310.20
Dom debt Rs bl	1083.60	1315.40	1532.90	1830.40	2202.60	2610.40	2942.50	3359.00	4003.60	4558.90
Intl debt Rs bl	181.50	203.00	232.20	257.50	283.40	315.30	369.50	422.70	458.90	495.10
Total Debt	1185.10	1518.40	1765.10	2087.90	2286.00	2925.70	3312.00	3781.70	4462.50	5054.00
Exports Rs bl	149.50	165.40	202.80	259.10	346.10	406.40	562.50	673.10		
Imports Rs bl	217.50	223.60	252.60	320.10	402.10	487.00	562.50	730.00		
Exports \$ bill	9.47	10.25	11.88	13.51	16.14	18.29	18.10	20.02		
Imports \$ bill	15.08	15.69	17.66	20.09	22.25	23.44	21.09	22.15		
Pakistan										
GDP P Rs bill	472.46	514.53	572.48	675.39	769.75	855.94	1020.60	1211.38	1341.95	1564.97
GDP P Rs bl 90	645.88	681.41	725.38	780.69	819.41	855.94	902.70	973.35	992.03	1032.13
GNP P Rs bill	510.47	555.89	608.86	704.48	797.80	892.84	1044.51	1223.92	1356.89	1579.77
Dom debt P Rs bl	143.93	193.39	225.25	284.49	327.53	376.60	441.58	527.60	612.64	
Intl debt P Rs bl	140.16	167.00	187.03	207.74	253.66	297.65	335.00	375.23	446.04	
Total debt	284.09	360.39	412.28	492.23	581.19	674.25	776.58	902.83	1058.68	
Exports P Rs bl	49.89	63.27	79.06	93.60	108.32	126.58	172.81	209.22	217.42	245.86
Imports P Rs bl	106.73	103.48	109.27	131.20	156.64	173.29	188.68	247.41	296.05	313.30
Exports \$bill	2.65	3.19	3.94	4.41	4.80	5.38	6.38	6.88	6.76	
Imports \$bill	5.88	5.97	6.25	7.10	7.37	8.09	8.64	9.67	9.31	

Source: International Monetary Fund, *International Financial Statistics Yearbook*.

TABLE A1.7 United Nations Statistical Yearbook data

	1986	1987	1988	1989	1990	1991	1992	1993
<i>Agriculture</i>								
India								
Cereals Millmt	165.0	156.1	183.9	199.4	193.9	191.6	201.7	201.5
Ed oil seed Mmt	4.8	4.9	6.9	7.2	7.2	7.4	8.5	8.2
Sugar Mmt	7.6	9.2	10.2	9.9	12.1	13.1	13.9	11.8
Pakistan								
Cereals Mmt	20.9	18.5	19.2	21.0	21.0	21.1	22.1	23.8
Ed oil seed Mmt	0.6	0.6	0.6	0.6	0.7	0.9	0.7	0.6
Sugar Mmt	1.2	1.4	1.9	2.1	2.0	2.2	2.6	2.8
<i>Industry</i>								
India								
Fertilrs Mmt	9.1	9.9	9.8	11.1	11.6	12.6	12.8	12.2
Cement Mmt	35.0	37.1	41.1	44.2	46.2	51.7	53.7	
Cott fab Mmsq	12.6	12.4	12.9	12.3	12.5	16.2	15.3	16.4
Pakistan								
Ferts Mmt	1.2	1.2	1.3	1.7	1.8	1.9	1.8	2.1
Cement Mmt	5.8	6.5	7.1	7.1	7.5	7.8	8.3	
Cott fab Mmsq	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3

Source: United Nations, *Statistical Yearbook*.

TABLE A1.8 United Nations Statistical Yearbook data

	1986	1987	1988	1989	1990	1991	1992	1993	1994
India									
Imports \$ bill	15.40	16.70	19.10	20.60	23.60	20.40	23.60	22.80	
Exports \$ bill	9.40	11.30	13.20	15.90	18.00	17.70	19.60	21.60	
FFE res \$ bill	5.44	5.60	4.15	3.11	1.21	3.58	5.46	9.81	23.10
Exch rate US\$	12.60	13.00	13.90	16.20	17.50	22.70	25.90	30.50	31.40
Pakistan									
Imports \$ bill	5.40	5.80	6.60	7.10	7.40	8.50	9.40	9.50	
Exports \$ bill	3.40	4.20	4.50	4.80	5.50	6.50	7.30	6.70	
FFE res \$ bill	0.70	0.49	0.39	0.52	0.85	1.20	2.93		
Exch rate US \$	16.60	17.40	18.00	20.50	21.70	23.80	25.10	28.10	30.60

Source: United Nations, *Statistical Yearbook*.

Appendix Two: Military Data

TABLE A2.1 IISS: Ground Forces Manpower

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
India										
Active Regular	1100	1100	1200	1100	1100	1100	1100	1100	1100	980
Terr Army	40	40	40	160	160	160	160	160	160	160
1 st Line Reserve	200	200	200	300	300	300	300	300	300	300
Ladakh Scouts			5	5	5	5	5		5	30
Rashtriya Rifles										
SFF			8	8	8	10	10	10	10	10
BSF			90	90	90	140	171	171	120	185
Assam Rifles			40	40	40	15	35	35	29	52
ITBP			14	14	14	22	29	29	29	35
NSG			3	5	5	5	7.5	7.5	7.5	7.5
Pakistan										
Active Regular	450	450	450	480	500	500+	515	510	520	520
1 st Line Reserve	500	500	500	500	500	500	500	300	300	500
National Guard			75	75	150	150	180	185	185	185
Front Corps			65	65	65	65	65	65	65	35
Rangers			15	15	16	23	23	23	25	35

Source: International Institute for Strategic Studies, *The Military Balance*.

TABLE A2.2 IISS: Ground Forces Formations

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
India										
CORPS HQ	8	9	10	10	10	10	11	11	12	12
Divisions										
Armored	2	2	2	2	2	2	2	2	2	3
Mechanised	1	1	1	1	1	1	1	1	1	
Infantry	22	20	20	19	19	21	22	22	22	17
Rapid										4
Mountain	7	9	11	11	11	11	10	10	10	10
Independent Brigades										
Armored	7	7	8	5	5	8	5	5	5	5
Infantry	10	10	7	7	7	9	7	7	7	7
Mountain	1	1	1	1	1	1	1	1	1	1
Artillery	4	10	3	3	3	5	3	3	3	3
Special Forces	1	1	1	1	1	1	1	1	1	1
Pakistan										
CORPS HQ	7	7	7	7	9	9	9	9	9	9
Divisions										
Armored	2	2	2	2	2	2	2	2	2	2
Infantry	17	17	17	14	19	20	20	20	20	20
Independent Brigades										
Armored ^a	6	6	6	7	9	7	7	7	8	8
Infantry	8	8	8	4	4	6	8	9	9	9
Special Forces	1	1	1	1	1	1	1	1	1	1

Source: International Institute for Strategic Studies, *The Military Balance*

Notes: ^a including RECCE

TABLE A2.3 IISS: Ground Forces Platforms/Systems

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
<i>MBTs</i>										
India (excluding reserves)										
T-55	1040	800	800	800	800	500	800	800	800	500
Vijayanta	1250	1500	1700	1700	1700	1700	1700	1200	1200	800
T 72/ M-1	350	350	650	650	700	900	1300	1400	1400	1100
PT-76 (light)	150	100	100	100	100	100	100	100		
<i>Total</i>	<i>2790</i>	<i>2750</i>	<i>3250</i>	<i>3250</i>	<i>3300</i>	<i>3200</i>	<i>3900</i>	<i>3500</i>	<i>3400</i>	<i>2400</i>
Pakistan (excluding reserves)										
M-47						150	150	120	120	120
M-48 A 5	450	450	450	500	500	280	280	280	280	280
T 54/55	50	50	50	50	50	50	50	50	50	50
Type 59	1100	1100	1100	1200	1300	1300	1300	1200	1200	1200
Type 69					?	200	200	200	200	200
Type-85							?	40	>100	>200
<i>Total</i>	<i>1600</i>	<i>1600</i>	<i>1600</i>	<i>1750</i>	<i>>1850</i>	<i>1980</i>	<i>>1980</i>	<i>1890</i>	<i>>1950</i>	<i>>2050</i>
<i>AFVs /PCs</i>										
India										
BTR-60	360	360	50	50	50	50	50			
OT 62/64	400	350	400	400	400	400	400	400	157	157
BMP 1/2	600	600	700	700	800	800	800	900	900	900
BRDM Held: numbers not indicated										
<i>Total</i>	<i>1360</i>	<i>1310</i>	<i>1150</i>	<i>1150</i>	<i>1250</i>	<i>1250</i>	<i>1250</i>	<i>1300</i>	<i>1057</i>	<i>1057</i>
Pakistan										
Ur-416	45	45								
M-113	600	800	800	800	800	800	800	800	820	850
BTR-70										169 UNPROFOR
<i>Total</i>	<i>645</i>	<i>845</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>800</i>	<i>820</i>	<i>1019</i>
<i>S.P. Arty</i>										
India										
105 mm Abbot	60	60	80	80	80	80	80	80	80	80
130mm M-46	100	100	50	100	100	100	100	100	100	100
<i>Total</i>	<i>160</i>	<i>160</i>	<i>130</i>	<i>180</i>	<i>180</i>	<i>180</i>	<i>180</i>	<i>180</i>	<i>180</i>	<i>180</i>
Pakistan										
105mm M-7	12	12	12	12	50	50	50	50	50	50
155mm M 109A2	100	64	64	95	125	125	150	150	150	150
203mm M 110	40	40	40	40	40	40	40	40	40	40
<i>Total</i>	<i>152</i>	<i>116</i>	<i>116</i>	<i>147</i>	<i>215</i>	<i>215</i>	<i>240</i>	<i>240</i>	<i>240</i>	<i>240</i>
<i>Towed Artillery</i>										
India										
75/75-24	850	850	900	900	900	900	900	900	900	900
76mm M 48	200	200	215	215	215	215	215	215	215	215
25 pdr	800	800	1000	1000	1000	1000				
100mm M 1944	185	185	185	185	185	185	185			
105 IFG I/II	280	280	30	30	30	100	100	1200	1200	1200
105 M 56	800	860	800	800	800	800	800	50	50	50
122mm D 30									?	550
130mm M-46	400	400	550	550	550	550	550	550	550	750
5.5 inch	140	140	150	150	150	150				
155 FH 77B		some	30	50	410	410	410	410	410	410
<i>Total</i>	<i>3655</i>	<i>>3715</i>	<i>3860</i>	<i>3850</i>	<i>3860</i>	<i>4000</i>	<i>3160</i>	<i>3325</i>	<i>3325</i>	<i>4075</i>
Pakistan										
85mm T 56	180	180	?	?	?	200	200	200	200	200
25 pdr	1000	1000	?	?	?	200	200	200		

(continues)

TABLE A2.3 (continued)

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
<i>Towed Artillery</i>										
Pakistan										
105 M-101			200	200	250	300	300	300	300	300
100mm T 59	?	?	?	?						
105 M 56 pack				50	50	50	50	50	50	50
122 T 60						200	200	200	200	200
122 T 54			100	100	400	?	?	400	400	400
130 T-59-1	100	?	?	?	200	200	200	200	200	200
155 M 59		?	?	?	85	30	30	30	30	30
155 M 114	40	60	60	60	100	60	60	60	60	60
155 M 198	75	95	95	100	100	100	100	100	100	100
203 M 115						20	20	20	26	26
5.5 inch	?	?	?	?	45	45	45	45		
<i>Total</i>	<i>1395+</i>	<i>1335+</i>	<i>455+</i>	<i>510+</i>	<i>1230+</i>	<i>1405+</i>	<i>1405+</i>	<i>1805</i>	<i>1566</i>	<i>1566</i>
<i>Multiple Rocket Launcher System</i>										
India										
122 BM 21	120	120	80	80	80	80	80	80	80	80
Pakistan										
122 BM 11/83	?	?	?	?	?	36	45	45	45	45
<i>Surface to Surface Missiles</i>										
India										
Prithvi										
Pakistan										
Hatf-1				?	?	?	18	18	18	18
Hatf-2						?	?	?	?	?

Source: International Institute for Strategic Studies, *The Military Balance*

TABLE A2.4 IISS: Air Platforms and Systems

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
<i>Ground Attack</i>										
India										
HF 24 Marut	18	?	20	20	20					
Ajeet	72	72	80	80	48					
MiG 21 MF	59?	60	90	120	108	112	112	144	144	144
Jaguar	68	79	72	70	80	80	80	80	89	97
MiG 23 BN	72	95	90	60	64	54	54	54	54	54
MiG 27	24	24	72	72	80	56	100	96	120	148
Canberra	23	23	10	10						
<i>Total</i>	337+	353+	434	432	400	302	346	374	407	443
Pakistan										
Mirage III	17	16	16	18	18	18	18	18	18	18
Mirage V	50	50	62	58	58	58	58	58	58	56
A 5 Fantan	41	41	41	135	135	50	50	50	50	49
<i>Total</i>	108	107	119	211	211	126	126	126	126	125
<i>Fighter</i>										
India										
MiG 21 FL	200	120	150	200	74	74	74	74	74	
MiG 21 bis					108	108	108	170	170	
MiG 23 MF	45	45	45	65	65	26	26	26	26	26
Mirage 2000	24	40	40	52	46	36	36	36	35	35
MiG 29		44	40	49	50	54	54	59	59	67
<i>Total</i>	269	249	275	366	361	298	298	303	364	372
Pakistan										
F 6	170	170	170	150	150	110	100	100	100	100
F 16 A/B	30	39	39	40	39	39	39	35	34	34
F 7P				20	40	40	75	75	80	79
Mirage III O									30	30
<i>Total</i>	200	209	209	210	229	189	214	210	244	243
<i>Reconnaissance/Survey</i>										
India										
Gulfstream				2	2	2	2	2	2	2
Learjet				2	2	2	2	2	2	2
Canberra	8	8	8	8	8	8	8	8	8	8
HS 748		4	4	4	4	4	4			
MiG 25 R	8	7	8	8	6	6	6	6	6	6
<i>Total</i>	16	19	20	24	22	22	22	18	18	18
Pakistan										
Mirage III (R)	14	13	13	13	12	12	12	12	12	12
<i>E W a/c</i>										
India										
AWACS HS 748									4?	2 (test)
ECM Canberra									5	5
Elint B707										2
<i>Attack Helicopters</i>										
India										
Mi 25/35					16	16	16	32	32	32
Pakistan										
AH-1 TOW	10	20	20	20	20	20	20	20	20	20

Source: International Institute for Strategic Studies, *The Military Balance*

TABLE A2.5 IISS: Naval Platforms /Systems

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
<i>Submarines</i>										
India										
Foxtrot	8	8	8	8	8	7	4	4	4	4
Kilo		1	3	6	8	8	8	8	8	8
T 209/1500		2	2	2	2	2	3	3	3	3
Charlie Demo			1	1	1					
Total	8	11	14	17	19	17	15	15	15	15
Pakistan										
Agosta	2	2	2	2	2	2	2	2	2	2
Daphne	4	4	4	4	4	4	4	4	4	4
Total	6	6	6	6	6	6	6	6	6	6
Midgets	5	2	3	3	3	3	3	3	3	3
<i>Principal Surface Combat</i>										
India										
Carriers	1	2	2	2	2	2	2	2	2	2
Destroyers	3	4	5	5	5	5	5	5	5	5
Frigates	21	20	22	19	19	20	20	17	18	18
Total	25	26	29	26	26	27	27	24	25	25
Pakistan										
Destroyers	7	7	8	7	3	3	3	3	3	3
Frigates				10	10	10	10	11	6	8
Total	7	7	8	17	13	13	13	14	9	11
<i>Principal Coastal Combat</i>										
India										
Corvette	4	4	5	8	10	13	14	15	15	17
Missile Craft	14	14	13	13	12	9	8	6	6	6
Mine Warfare	18	18	17	20	20	22	20	20	20	20
Pakistan										
Missile Craft	8	8	8	8	8	8	8	8	8	8
Mine Warfare	3	3	3	3	3	3	3	3	3	3
<i>Amphibious</i>										
India										
Lct	1	1	1	1	1	1	1	1	1	1
Lsm	7	8	9	9	9	8	8	8	8	8
Lcu	4	4	8	8	9	7	7	7	7	7
<i>Maritime Air</i>										
India										
Landatk-Canb	12	12	?							
Jaguar				8	?	8	8	8	8	6
Shp Atk Harr	8	8	8	8	18	21	21	23	23	20
Armd Heptrs	25	29	53	53	73	75	75	75	75	75
Asw/Mr Fxd	15	13	18	21	17	22	22	39	38	46
Pakistan										
Asw/Mr Fxd	3	3	3	4	5	6	4	4	4	4
Armed Heptrs	10	10	9	10	10	10	9	10	16	13

Source: International Institute for Strategic Studies, *The Military Balance*

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