The 'Arms Dynamic' in South-East Asia During the Second Cold War

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by

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CONTENTS

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List of Acronyms and Abbreviations

ABRI	Armed Forces of the Republic of Indonesia
AD	Air defence
AEW	Airborne early warning
APC	Armoured personnel carrier
ASEAN	Association of Southeast Asian Nations
ASW	Anti-submarine warfare
ATGW	Anti-tank guided weapon
CPB	Communist Party of Burma
CPM	Communist Party of Malaya
CPT	Commmunist Party of Thailand
DRV	Democratic Republic of Vietnam
EEZ	Exclusive Economic Zone
FAC	Fast attack craft
FMS	Foreign Military Sales
FPDA	Five Power Defence Arrangements
Fretilin	Revolutionary Front for an Independent East Timor
FULRO	United Front for the Liberation of Oppressed Races
IADS	Integrated air defence system
KNU	Karen National Union
Kostrad	Army Strategic Command
LSM	Landing ship, medium
LST	Landing ship, tank
MAF	Malaysian Armed Forces
MBT	Main battle tank
MCMV	Mine countermeasures vessel

MICV	Mechanised infantry combat vehicle
MoU	Memorandum of Understanding
MRL	Multiple rocket launcher
NDF	National Democratic Front
OPM	Free Papua Organisation
OPV	Offshore patrol vessel
PAVN	People's Army of Vietnam
PERISTA	Special Expansion Plan of the Armed Forces
PFF	Police Field Force
PKI	Indonesian Communist Party
PLA	People's Liberation Army
PPRC	Rapid Reaction Strike Force
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
R & D	Research and development
RMAF	Royal Malaysian Air Force
RMN	Royal Malaysian Navy
RN	Royal Navy
RSAF	Republic of Singapore Air Force
RSN	Republic of Singapore Navy
RTA	Royal Thai Army
RTAF	Royal Thai Air Force
SAF	Singapore Armed Forces
SAM	Surface-to-air missile
SIPRI	Stockholm International Peace Research Institute
SLOC	Sea lines of communication
SSM	Surface-to-surface missile
Tatmadaw	Burmese armed forces
UNCLOS	UN Convention on the Law of the Sea
VPAF	Vietnamese People's Air Force

Chapter I The Dynamic and the Boundaries

The defining shapers of the 'arms dynamic' in the SE Asian context are not specific to that region: they are, rather, characteristic of the international system as a whole. In other words, they are general and systemic. These defining shapers, Buzan has identified, lie in the conditions of international anarchy and technological progression which affect all states, making arms acquisitions a more or less permanent feature of state behaviour.[1]

The basic characteristics of international anarchy (to which Buzan draws attention) are the absence of a single authority throughout the international system as a whole and the concomitant one of states having to pursue 'self-help' policies to ensure their continued existence in such a system. [2] Such

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[1] See Barry Buzan, An Introduction to Strategic Studies: Military Technology and International Relations, (London: Macmillan/International Institute for Strategic Studies, 1987), pp.6-7. At this point Buzan is contending that these are the two "variables" which determine the "subject matter" of Strategic Studies. The 'arms dynamic' itself, he goes on to say, arises from changes in the "quantity and quality of military technology" possessed by states in conditions of international anarchy. See ibid., p.10.

The thesis will draw extensively on Buzan's work on the 'arms dynamic'; a descriptive term and analytical tool which he has been responsible for the development of. Buzan's work on the 'arms dynamic', moreover, represents arguably the most comprehensive and systematic coverage of the general process by which states acquire arms and effectively represents a distillation of the other major works on the subject. This is especially so with regard to his analysis of the concept of 'arms racing'.

* Since completing the main body of the thesis, Buzan (with Eric Herring) has revisited the idea of the 'arms dynamic' in a successor book to An Introduction to Strategic Studies. Barry Buzan & Eric Herring, The Arms Dynamic in World Politics, (Boulder/London: Lynne Reinner, 1998). The new book seeks to adapt the theory, and its application, to the circumstances of the post-Cold War era and the current trends in international relations and security studies theory. In the main, however, the basic theory remains unchanged although the technological imperative is no longer categorised as a distinct model and its deterministic aspects are played down. Other changes, including the addition of "internal repression and civil war" (p.103) to the range of factors in the domestic structure model and an increased emphasis attached to 'secondary' arms dynamics, reinforce the importance attached to these issues in the thesis. In view of the post-Cold War nature of the new book and the fact that it does not invalidate any of the theoretical approaches pursued here, no attempt has been made to retrospectively amend those points or ideas derived from An Introduction to Strategic Studies (where, indeed, any changes have occurred). The exception to this is that the concluding chapter to the thesis introduces one of the terms from the new book's attempt to refine the description of where particular dynamics fit on the overall pattern of behaviour.

characteristics, and the potential therein which exists for conflict between states in a range of "political, economic, and social" issue areas, gives rise to the possibility that occasionally "these conflicts will result in the use of force." [3]

Technological progression, on the other hand, is uncontested and its role in defining the arms dynamic is striking. The more so, perhaps, because of its seemingly accelerating nature: a nature which is widely recognised in much of the writing on arms. [4] Technological progression in the field of weapons and weapons systems is, of course, inextricably linked with that in the civil sector. "Despite its distinctive elements, the revolution in military technology needs to be seen, not as a thing apart, but as an integrated element of a broader revolution in science, technology and the human condition as a whole."[5] This has meant that as civilian technology has, almost inevitably, advanced, then so too has that in the military sphere.

The process of continous technological "advance" in the military sector leads to ever-improving military hardware and, Buzan contends, to the emergence of 'leaders' and 'followers' (the transfer of technology, and hardware, from the former to the latter occurring through so-called "diffusion"). [6] This division, in turn, being influenced by the anarchic and hierachical nature of the international system. As McKinlay argues, states will seek to "maintain and develop their power capabilities" (one of the components of which is military strength) in an uncertain, hierachical, international system.[7] If they can improve their position in the hierachy, it

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[2] These characteristics of international anarchy determined by Kenneth Waltz are not, of course, uncontested. See Fei- Ling Wang, "Four Cheers For International Political Anarchy", Journal of Chinese Political Science, Vol.2, No.1, Winter 1995, pp.73-84.

[3] Buzan, op. cit., p.6.

[4] Sheehan, for example, recognises the continuous process of technological improvement in weapons, and draws attention to the magnitude and pace of change in the Cold War era. Michael Sheehan, The Arms Race, (Oxford: Martin Robertson, 1983), p.11.

[5] Buzan, op. cit., p.26. For an exploration of the linkages between civil and military technology, and their evolving 'revolution', see ibid., pp.26-29.

[6] Ibid., p.9.

"will enhance the prospects of autonomy of a state and increase the margins of safety within which it can move."[8]

Front rank, or leading, states, are those arms **producers** who have the resources to pursue high-levels of R & D (research and development) to keep themselves at the 'leading-edge' of the constant process of military technological revolution. They thus maintain a "qualitative" edge over the following states. [9] Indeed, they have to retain such an edge if they are to preserve their "power position and/or their security" in the prevailing international system. [10]

The following states (that is, those not at the leading-edge of technology), which are usually only 'non-' or 'part-producers', "have either to upgrade the quality of their weapons or else decline in capability relative to those who do." [11] The desire to avoid a technological capability gap will be especially evident in cases where some form of inter-state rivalry exists.

The ability of such following states, whether producers or non-producers, to upgrade, will be facilitated by the fact that the leading states (in this case acting as **suppliers**) will often have rationales for "pumping qualitative advances back into the pipeline through the mechanism of arms aid and sales." [12] In other words, 'diffusion' occurs. Indeed, the arms trade, Buzan recognises, "sets a high, and continuously rising, global standard of military technology." [13] The "global standard" is high, he contends, "because it is set by the quality of the leading edge" and it is rising "because it is driven along at the pace of qualitative advance in the top-rank military producers. " [14]

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7 Robert McKinlay, Third World Military Expenditure , (London: Pinter, 1989), p.22.

8 Ibid., p.21

9 Buzan, op. cit., p.37.

10 Ibid.

11 Ibid., p.38.

12 Ibid.

13 Ibid., p.39.

14 Ibid.

The conditions of technological progression and an anarchic (and hierachical) international system are inter-related and, when combined, lead states to develop and improve their military capabilities. Arms acquisitions are a significant aspect of such development and improvement.

Under the conditions of technological progression and an anarchic international system, therefore, the process of arms acquisition can be regarded as a regular, or 'normal', pattern of state behaviour. This regularity, or normality, is, Buzan recognises, evidently distinct from the irregular, or 'abnormal', situation of 'arms racing': a situation which involves unusually intensive military competition. Indeed, for Buzan, 'arms racing' means a "notably intense process of military competition that contrasts with whatever passes for normality in military relations between states not at war with each other."[15]

It is the search for an all encompassing term which includes the two aspects of normality and abnormality which gives rise to Buzan's idea of the 'arms dynamic'. The 'arms dynamic' then, represents "the whole set of pressures that make states both acquire armed forces and change the quantity and quality of the armed forces they already possess." [16] The focus of this thesis, implicit in much of the above discussion, will be on the armaments dimension of the dynamic, although this cannot be entirely separated from that of armed forces' size and combat capabilities.

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[15] Ibid., p.72. Buzan derives his definition from, in particular, the work of Colin Gray who highlights the element of rapidity in military improvements in such cases of inter-state military competition. For Gray, the "minimal condition" for an arms race relationship to exist is "that there should be two or more parties perceiving themselves to be an adversary relationship, who are increasing or improving their armaments at a *rapid* rate and structuring their respective military postures with a *general* attention to the past, current, and anticipated military and political behavior of the other parties." Colin Gray, "The Arms Race Phenomenon", World Politics, XXIV 1971, p.40.

Similar thinking (again influenced by Gray's work) is displayed by Sheehan who contends that "the process of arms acquisition is the normal state of international relations", whereas an arms race requires abnormality. Sheehan, op. cit., p.9.

[16] Buzan, op.cit., p.73.

Within this 'whole set' there is an appropiate spectrum with the normal and abnormal situations at either end. These normal and abnormal situations are represented, respectively, by the terms "maintenance of the military status quo" and "arms racing". [17] The area in the middle of the spectrum, Buzan notes, is a difficult one in which to place particular cases, in which event it is the "direction of change" in behaviour which is important. [18]

If both 'maintenance of the status quo' and 'arms racing' are part of the same whole 'arms dynamic', then an important question arises: how are distinctions to be made between the extremes of the spectrum? Inter-related to this question is another one: if the 'arms dynamic' represents the 'whole set of pressures' influencing states to acquire and develop armed forces, then what are the individual pressures or factors which make up this whole set?

Buzan contends that one way of seeking to determine whether it is maintenance or racing which is occurring is, in fact, to explore the "processes that induce states to increase their military strength". [19] This exploration, in turn, requiring and enabling the identification of individual pressures or factors. Buzan, drawing on the wider theoretical literature derived from the Cold War experience, explores these pressures in regard to three models: first, the 'action-reaction' model; secondly, the 'domestic structure' model; and thirdly, the 'technological imperative' model. [20]

The 'action-reaction' model is engendered from the Cold War strategic nuclear rivalry between the Soviet Union and the United States. At its core is the belief (which rests on the assumption that the international system is anarchic) that a

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[17] "Maintenance of the military status quo" refers to "the general process by which states create armed forces and keep their equipment up to date". Ibid., p.72.

[18] Ibid., p.73.

[19] Ibid., p.74.

[20] Ibid., p.74. What follows is a necessarily brief, introductory, outline of the main features of these models. The models will be returned to in subsequent chapters on the various individual pressures as they can help to provide the basis of a general analytical approach for an assessment of these. Buzan pursues an extensive critique of the models in Chapters 6 - 9.

state will determine its military requirements with reference to the military capabilities of another state (or states), one which poses an actual, or potential, threat to it. "States to a large extent assess their military needs with the power of the most likely opponent clearly in mind. Therefore, developments in the military power of one state are likely to affect those in the other." [21]

An increase in military strength by one state (action) will heighten the level of threat perceived by other states which, in turn, will expand their military strength (reaction). Such an 'action-reaction' process can occur irrespective of the underlying motivation for a state to initially increase its military strength. As Buzan notes:

> It is difficult for any state to distinguish between measures other states take to defend themselves and measures they may be taking to increase their capability for aggression. Because the consequences of being wrong may be very severe, the dictates of prudence pressure each state to adjust its own military measures in response to a worst-case view of the measures taken by others. Since each adjustment is seen by other states as a possible threat, even a system in which all states seek only their own defence will tend to produce competitive accumulations of military strength.[22]

The effects of the 'action-reaction'model on the position of particular cases on the dynamic's spectrum will, of course, depend on the level of military competition. Buzan notes that high levels of competition will usually result in 'arms racing',

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[21] Sheehan, op. cit., p.12.

[22] Buzan, op. cit., p.78. Underpinning the inclination of states to behave in this way, Buzan recognises, are the workings of the so-called 'security dilemma'. The "security dilemma" exists when"the military preparations of one state create an unresolvable uncertainty in the mind of another as to whether these preparations are for 'defensive' purposes only (to enhance its security in an uncertain world) or whether they are for offensive purposes (to change the status quo to its advantage)". Nicholas J. Wheeler and Ken Booth, "The Security Dilemma", in John Baylis and N. J. Rengger (eds.), Dilemmas of World Politics, (New York: Oxford University Press, 1992), p.30.

whereas low levels of competition will see status quo maintenance. [23]

The basic model of action-reaction, Buzan summarises, is fairly straightforward, though he qualifies this with the caveat that the "only thing that may be clear is the general fact that the behaviour of states is driven by their sense of external threat. The specific details of the action-reaction process between states may be difficult to identify." [24]

Problems with the utility of 'action-reaction' as an analytical tool and explanatory model arose from the actual patterns of behaviour displayed by the superpowers and led to the development of the 'domestic structure' model. It was thought "that the process of the arms dynamic has become so deeply institutionalized within each state that domestic factors largely supplant the crude forms of action and reaction as the main engine of the arms dynamic." [25] In effect, therefore, action-reaction is not 'automatic' because states acquire and expand military capabilities for reasons "not affected by what the potential enemy may or may not be doing." [26] Having said this, though, it is still the existence of inter-state rivalries (and thus the idea of external threat) which provides the underlying motivation, [27] within the context created by the logic of an anarchic international system. [28]

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[23] Buzan, op. cit., p.78.

[24] Ibid., p.79. Buzan goes on to examine some of these details in terms of the variables of 'magnitude' 'timing' and 'awareness', having outlined the basic types of action-reaction which can occur. These are, primarily, "weapons-based" and "armed forces-based".
'Weapons-based' competition can occur over a single weapons system, a set of weapons systems, or entire arsenals, whilst 'armed forces-based' competition can entail both "quantitative" and "qualitative" factors. Ibid., p.80.

Significantly, it is also possible that political and economic factors can influence the arms dynamic action-reaction: for example, changes in foreign policy increasing feelings of hostility, and the use of force by an opponent. Ibid., pp.82-83. Thus, a "political 'action' may ... trigger a military 'reaction' ". Ibid., p.83.

[25] Buzan, op. cit., p.94.

[26] Sheehan, op. cit., p.13.

[27] See Buzan, op. cit., p.94.

The 'domestic structure' model, Buzan recognises, is, of course, based on the experience of the superpowers in general and the United States in particular. Much of the work on the model, therefore, applies "only to states that are major producers of arms"; little work having been done on the model in relation to 'part-' and 'non-producers'.[29] (This point about producers, or otherwise, is a crucial one to which we shall return later)

The 'domestic structure' model derived from the US experience provides a range of factors explaining the 'arms dynamic': "institutionalization of military research, development, and production"; "bureaucratic politics"; "economic management"; and "domestic politics". [30] The net effect of these factors, it was contended by some analysts, was the formation of a coalition of the interests of the R & D establishment, producers, the armed forces and government, encapsulated in the idea of a 'military-industrial complex'. The existence of a military-industrial complex thus suggested that "the process of arms acquisition had a logic of its own." [31]

Whilst many of these factors, and the specfic mechanics of them, are particular to the American experience, they do establish the idea that internal, or domestic, pressures or factors are important in terms of the "generation" of the 'arms dynamic' in both part- and non-producers, although the exact form will obviously vary from state to state. [32]

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[28] In the context of developing countries (within which the SE Asian experience can be included, with reservations) the primacy of the 'external' aspect has been disputed, however. Acharya, for example, argues that the centrality of "domestic factors in the security concerns of developing countries (in relation to inter-state or external threats) on the one hand, and their dependence on external security guarantees on the other, ... [means] that the primary explanation for arms acquisitions by these states has to be found outside the realm of inter-state power relationships." Amitav Acharya, An Arms Race in Post- Cold War Southeast Asia? Prospects for Control , (Pacific Strategic Papers No.8), (Singapore: Institute of Southeast Asian Studies, 1994), p.4.

[29] Buzan, op. cit., p.95.

[30] Ibid. For a detailed explanation of these see pp.95-101.

[31] Ibid., p.101.

[32] Ibid., p.104.

With regard to the applicability of the components of the US derived 'domestic structure' model in other cases, Buzan contends that the "most generally applicable elements ... are the existence of organizational pressures from the military establishment on weapons procurement, and the domestic insecurity logic of autism." [33] The latter entails that the governments of 'weak' states will pursue military expansion in response to an external threat which they have created, or magnified, in order to ameliorate internal divisions. [34] In the case of 'part-' or 'non-producers', where arms industries are small or non-existent, the role of R & D , production, and electoral factors will either be small or equally non-existent. [35]

Finally, there is the 'technological imperative' model which is based on one of the overall shapers of the 'arms dynamic', namely, the ongoing process of technological innovation. In developing and explaining this model Buzan expands upon the inter-relatedness of civilian and military technology and highlights how this inter-relatedness affects the 'arms dynamic' in two important ways. First, "a large element of the pressure for qualitative technological advance is not located in the military sector". [36] Secondly, the "military sector cannot escape the implications of a relentless qualitative advance over which it has only partial control." [37] In other words, the civil sector often pursues autonomous technological advance which has unavoidable consequences for, and spin-on effects on, the military one. A notable example of this spin-on effect would be the miniaturisation of electronic equipment.

For Buzan then, the underlying process of technological advance on which the 'technological imperative' model rests, represents an "independent variable" which is not fully explained by either of the other two models [38] and which has a

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[33] Ibid.

[34] See ibid., p.102.

[35] Ibid., p.104.

[36] Ibid., p.106.

[37] Ibid.

profound role in the 'arms dynamic'. Given the uncertainty inherent in an anarchic international system, states are concerned that their rivals may gain a technological edge and thus they seek to keep up with (or lead) the process of technological change "by continuously modernizing their armed forces." [39] Such modernisation, of course, merely exacerbating the 'security dilemma' where it is operative.

The 'technological imperative' model is evidently useful in terms of identifying another of the pressures or factors which make up the 'arms dynamic', but it can complicate the attempt to determine whether it is 'maintenance of the status quo' or 'arms racing' which is occurring. Buzan notes that the "technological imperative ... forces states to behave in a way that looks like arms racing, but where the principal motive is as much keeping up with the leading edge of technological standards as it is keeping up with other states." [40] Where there are high levels of 'technological innovation', therefore, the boundary between 'maintenance' and 'racing' will be far from clear. [41]

Implicit in much of the above discussion is the fact that all the models are inter-related, within the context of an anarchic international system, with no one model being able to provide a full and comprehensive explanation of the 'arms dynamic'. [42] A comprehensive understanding of the 'arms dynamic', therefore, necessitates analysis of inter-state, domestic, and technological pressures, factors, or variables. These pressures effectively represent sub-sets of the 'arms dynamic' whole.

Although these central areas of analysis, and the associated models, are derived from the experience of the US (especially)

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[38] Ibid.

[39] Ibid. p.109.

[40] Ibid.

[41] Ibid. Technological innovation can result in self-sustaining, qualitative, 'arms racing' where rivalries are intense. "Both sides attempt not merely to match and improve technologies, but to develop counters to them, creating pressures for the continued development of the initial technology." Colin McInnes, "Technology and Modern Warfare", in Baylis and Rengger, op.cit., p.155.

[42] See Buzan, op. cit., pp.108-112 for a summary of these inter-relationships.

and the Soviet Union during the Cold War, it is evident that they also comprise the 'arms dynamic' of developing states too. There is, however, an important distinction between the 'arms dynamic' of the superpowers (and other high-ranking states in the military pecking order) and that of developing states; one already intimated in the discussion of the wider applicability of the 'domestic structure' model. The former can be classified as "primary" (involving only major arms producers) and the latter as "secondary" (concerning only part- or non-producers).[43]

The distinction is highly significant for an understanding of the SE Asian 'arms dynamic' because it introduces another important pressure or factor into the equation.

The 'arms dynamic' in SE Asia during the Second Cold War can be described as secondary in nature. This secondary nature is based on the premiss that all the states under consideration (Burma, Indonesia, Malaysia, Singapore, Thailand and Vietnam) are either part- or non-producers. Attributing such a designation to them, of course, requires an examination of the demarcation between producers and part- or non-producers which, in turn, necessitates the identification of what can be termed 'major' weapons. It is these categories of major weapons which will also be the focus of the thesis in terms of the dynamic's outcomes: the thesis focussing on the arms acquisition component of the 'arms dynamic' through both production and transfers.

In demarcating between producers and part- or non-producers the objects of attention are major, conventional (as distinct from nuclear, biological or chemical), weapons. The issue of which weapons are major, however, is somewhat problematic with a range of categorisations being used by different sources (some of which vary over time): categorisations which are often too broad for meaningful purposes or narrow for manageable ones.[44]

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[43] Ibid., p.128.

[44] For example, Ross refers to "four types of major conventional weapons - aircraft, armoured vehicles, missiles, and naval vessels" in his work on arms production in developing and ASEAN (Association of Southeast Asian Nations) states. Andrew L. Ross, "The International Arms Trade, Arms Imports, and Local Defence Production in ASEAN", in Chandran Jeshurun (ed.), Arms And Defence In Southeast Asia, (Singapore: Institute of Southeast Asian Studies, 1989), p.26. Wulf, on the other

This thesis will utilise an amalgam of the various categorisations and attendant sub-divisions and qualifications. The major weapons which will be included are: tanks (main battle and light); armoured fighting and support vehicles; heavy artillery (towed and self-propelled of 100mm calibre or above, including unguided rocket launchers); 'guided' missiles and launchers; combat aircraft (including combat capable advanced jet trainers); transport aircraft; training and reconnaissance aircraft; combat helicopters (including anti-submarine warfare); transport and training helicopters; submarines; warships (all surface vessels, including mine warfare, over 100 tonnes); support ships; and

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hand, provides a more detailed categorisation of major weapons with ten, expansive, ones: "Fighters, light fighters, jet trainers"; "Light planes, transport planes"; "Helicopters"; "Guided missiles"; "Major fighting ships, fast attack craft"; "Small fighting ships"; "Submarines"; "Main Battle Tanks"; Artillery"; and "Light tanks, APCs". Herbert Wulf, "Arms Production in the Third World", in SIPRI Yearbook 1985: World Armaments and Disarmament, (London: Taylor & Francis, 1985), Table 10.1. pp.332-333. Whilst Mak, in his more recent work, utilises later SIPRI (post-1991) statistics which reflect the UN Conventional Arms Register's "seven major categories of offensive weapons" ("main battle tanks"; "armoured fighting vehicles"; heavy artillery"; "combat aircraft"; "attack helicopters"; "naval vessels"; and "missiles/missile launchers"). J. N. Mak, ASEAN Defence Reorientation 1975 -1992: The Dynamics Of Modernisation And Structural Change, (Canberra Papers on Strategy and Defence No.103), (Canberra: Strategic and Defence Studies Centre, 1993), Appendix: ASEAN Armed Forces Statistics, 1975 -1992, pp.175-176.

To complicate matters further, the SIPRI categorisations have become more detailed over time, changing in the late 1980s. In 1984 their data on major weapons had four categories; "aircraft, armoured vehicles, missiles and warships" (SIPRI Yearbook 1985, p.440): and, in 1988 it covered "five categories of major weapons: aircraft, armour and artillery, guidance and radar systems, missiles and warships." SIPRI Yearbook 1988: World Armaments and Disarmament, (London: Taylor & Francis, 1988), p.256. Although, to be more accurate, they effectively sub-divided these broad categories by providing a detailed list of inclusions (and exclusions) within each category (for example, the 'armoured vehicle' category in 1985 also included artillery); and they employed the criterion of 'military applicability' which meant transport aircraft and supply ships were included.

Finally, of course, there is the very comprehensive breakdown of weapons systems provided in The Military Balance. In the post - Conventional Forces in Europe Treaty era this leads to fifteen categories, with further sub-divisions: "Battle Tank"; "Armoured Personnel Carrier"; "Armoured Infantry Fighting Vehicle"; "Heavy Armoured Combat Vehicle"; Artillery"; "Submarines"; "Principal Surface Combatants"; "Patrol and Coastal Combatants"; Mine Warfare"; "Amphibious"; "Support and Miscellaneous"; "Weapons Sytems"; "Aircraft" [maritime]; "combat aircraft"; and "helicopters" ("attack", "combat support", and "transport"). The Military Balance 1993-1994 , (London: International Institute for Strategic Studies/Brasseys, 1993), pp. 6-8.

a miscellaneous category (including anti-aircraft guns of 20mm calibre or above).

If these constitute major weapons, then the demarcation between producers and part- or non-producers is fairly straightforward. Producer states are those which have the domestic capability (allowing for the importation of selected components) to produce and design all, or nearly all, of the major weapons outlined above. Part-producers, on the other hand, are those states who can domestically produce (but usually not design) most, or just a few, of them. The description part-producer can, in fact, be sub-divided according to which 'stage' in the development process of an indigenous design and production capability a state has reached in terms of a particular weapon type.[45] The designation non-producer is self-explanatory, meaning those states whose productive capability is limited to small arms and ammunition or no munitions at all. Employing his ten categories of major weapons, in tandem with the five stages of development, Wulf classifies the states under consideration as follows: Burma ("limited production"), Indonesia ("production in several categories"), Malaysia ("limited production"), Singapore ("production in several categories"), and Thailand ("limited production") as part-producers; and Vietnam as a non-producer, it only being capable of small arms production.[46]

The part-, or non-producer, status of these states, and thus the secondary nature of the SE Asian 'arms dynamic', means that that dynamic automatically includes arms suppliers

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[45] There are essentially five stages in the weapons development process according to Wulf. These are: stage one (the "repair, maintenance and overhaul of imported weapon systems"); stage two (the "assembly of imported weapons"); stage three (where "simple components are produced locally under licence"); stage four (where a "major portion of the weapon system is licence-produced"); and stage five (the capacity to locally design and produce weapons). Wulf, op. cit., p.330. Ross also provides details of the various stages, although he describes the first one as the local assembly of imported weapons and divides stage five into two and includes in it "manufacture based on domestic R & D but still incorporating foreign-designed or -produced components". Ross, op. cit., p.26.

[46] Wulf, op.cit., Table 10.1, pp. 332-333; and note 4, pp.342-343. These classifications with regard to the four ASEAN states (Indonesia, Malaysia, Singapore and Thailand) are supported by Ross who noted that "No ASEAN country has yet developed an across-the-board defence production capability." Ross, op. cit., p.29. (Ross provides details of the extent of ASEAN states' productive capabilities on pp.29-34)

(usually extra-regional powers) whose role can be highly influential. "External suppliers affect secondary arms dynamics by determining the amount and the quality of the weapons supplied." [47] They can thus influence the "rate, volume and quality of supply" which makes for greater unpredictability as regional military balances can be changed very rapidly by sudden infusions of hi-tech weapons. [48]

The role of extra-regional powers (the suppliers) goes beyond the provision of weapons alone, however, as this is inextricably linked with the wider issue of the security policies of these states and thus of their whole security relationship with the SE Asian states under consideration (where appropiate). The broad role of extra-regional powers, therefore, is one of the individual pressures or factors in the SE Asian 'arms dynamic'.

We have then, clearly identified one of the elements which makes up the SE Asian 'arms dynamic' during the Second Cold War. What other pressures or factors are there which might go to make up the 'whole' of the 'arms dynamic'?

It was noted above that the central areas (or sub-sets) of the 'arms dynamic' (inter-state, domestic and technological), derived from the three models, also comprise the 'arms dynamic' of developing states too. The work on the 'arms dynamic' of developing states (although that term is not employed, rather, the work focusses on the arms trade and defence expenditure [49]) points to a number of individual pressures or factors which are suitable for analysis.[50] These factors can also be seen as members of the three sub-sets.

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[47] Buzan, op. cit., p.129.

[48] Ibid.

[49] Though defence expenditure is, quite clearly, not arms acquisition, they are both part of the same equation; particularly if the 'arms dynamic' is taken in its broader sense of military forces as a whole. In any case, a proportion of defence spending in most, if not all, developing states is devoted to arms purchases even if that proportion is small (that is, in relation to that on more routine items such as wages, accomodation and training).

[50] The suitability of the wider experience of developing states in general for understanding the SE Asian experience has been queried. Acharya, for example,

The Stockholm International Peace Research Institute, in its 1975 study The Arms Trade With The Third World, put forward the argument that states purchasing arms will do so in order to fulfil three main "requirements". [51] First, the military requirements of internal and external defence; secondly, to affirm national identity through building-up armed forces; and thirdly, to gain the support of the armed forces. [52] These three factors, the Institute pointed out though, are, of course, often inter-linked. Furthermore, and this both suggests another pressure or factor and confirms the important role of suppliers, SIPRI argued that the "three factors alone do not represent conditions sufficient for the acquisition of weapons: they are all present in varying degrees in the Middle East, S.E. Asia and Africa, but the differences between these regions might be ascribed to their financial resources and to the attitude of the supplying countries." [53]

With regard to defence and security expenditure in developing states, Nicole Ball identifies five broad groups which act as determinants of expenditure: external conflicts; internal (regime) security; bureaucratic and budgetary factors; the influence of the armed forces; and the role of major powers. [54]

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contends that "while Southeast Asia is widely regarded as part of the developing world, it is not self-evident that the determinants of defence policy in the region are reflective of the security predicament of developing countries in general (as opposed to specific regional circumstances in Southeast Asia and the distinctive security concerns of regional actors)." Acharya, op. cit., p.2.

While there are circumstances and factors which may may have a greater (or lesser) impact and emphasis at particular times in SE Asia, and there is always a danger of over-generalisation, there is also, perhaps, a danger of searching for a regional uniqueness which may not necessarily make matters clearer. Acharya's own list of factors determining procurement decisions (bearing in mind it incorporates the post-Cold War period too) - including internal security concerns, defence 'self-reliance', concerns over the prevailing regional balance of power, economic growth and the influence of the military (see pp.27-40) - is, ultimately, very similar to those derived from the 'general' experience of developing states.

[51] Stockholm International Peace Research Institute (SIPRI), The Arms Trade With The Third World , (New York: Holmes & Meier, 1975), p.33.

[52] See ibid.

[53] Ibid., p.34.

[54] Nicole Ball, Security and Economy in the Third World, (Princeton, NJ: Princeton University Press, 1988), p.33.

Such groups are also fairly similar to those determinants of military expenditure which McKinlay explores in his study of military expenditure in the Third World (power capabilities; budgetary behaviour; international interaction - which incorporates the ideas of supplier policy and the technological imperative; domestic conflict; interstate conflict; and national security). [55]

At this stage, we can now draw on the sub-sets derived from the three models and those elements outlined above which are thought to be responsible for determining the general pattern of arms acquisitions and defence expenditure in developing states, to establish a list of the individual pressures or factors which need to be analysed for their possible inclusion in the SE Asian 'arms dynamic'. This list, accordingly, includes the following: external threat; defence policy and strategy; internal security; the role of the military; and technological factors. To this list must also be added the already clearly important pressure of the role of the suppliers, or, more broadly, relations with extra-regional powers.

It is an analysis of these pressures or factors for their relevance and significance in the 'arms dynamic' of the SE Asian states under consideration during the Second Cold War, which constitutes the substance of the thesis. It is already clear from the existing literature that the relevance and significance of these pressures or factors will vary from state to state. So, therefore, within each essentially thematic chapter, the focus will be on those states to which that theme applies most; following a more detailed examination of the analytical nature of the pressure or factor itself.

Having outlined those elements which are to be analysed for their potential role in the SE Asian 'arms dynamic' during the Second Cold War, all that remains, by way of an introduction, is to delineate and explain the geographical and historical boundaries of the thesis. This is not necessarily as entirely straightforward as it may appear for the geographical boundary (that is, the choice of states which are to be analysed for the operation of the 'arms dynamic' and its various elements) and the historical one both influence each other.

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55 See Mckinlay, op.cit.

Beginning with the geographical boundary, it was mentioned in the discussion of the 'secondary' nature of the 'arms dynamic' that the states under consideration are to be Burma, Indonesia, Malaysia, Singapore, Thailand and Vietnam. As 'SE Asia' is commonly regarded as containing ten states (these six, plus Brunei, Cambodia, Laos and the Philippines) [56] there is an evident need to explain and justify the exclusions and, concomitantly, one of the inclusions in particular. Buzan's concept of a SE Asian regional 'security complex' can be used to begin to provide such an explanation and justification.

For Buzan, a regional security complex constitutes a "group of states whose primary security concerns link together sufficiently closely that their national securities cannot realistically be considered apart from one another." [57] In other words, there is a high degree of security interdependence between the states in the region.

In the case of SE Asia, the prevailing security interdependencies since the communist victories in Indo-China in 1975 led, Buzan contends, to a SE Asian security complex of nine states: one "sharply divided into two groups: a communist-led, Soviet-aligned, and Vietnamese-dominated group of three (Vietnam, Laos, Kampuchea); and a non-communist, Western-oriented group of six, organized since 1967, in the Association of Southeast Asian Nations (Malaysia, Singapore, Philippines, Indonesia, Thailand, and since 1984, Brunei)." [58]

Although Burma is also a SE Asian state, it is not included in the nine member complex because of the weak security interdependencies which it has with all the other states except Thailand (the Thai exception resulting from the cross-border activities of ethnic insurgents opposed to the Burmese state). Burma, therefore, is described as a "buffer state, or zone of

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[56] See D. R. SarDesai, Southeast Asia. Past & Present, (3rd ed.), (London: Macmillan, 1994), p.3, for a brief discussion of the states which comprise SE Asia.

[57] Barry Buzan, People, States and Fear , (2nd ed.), (Hemel Hempstead: Harvester Wheatsheaf, 1991), p. 190.

[58] Barry Buzan, "The Southeast Asian Security Complex", Contemporary Southeast Asia, Vol.10, No.1, June 1988, p. 4.

relative security indifference" between the SE Asian and the South Asian regional security complexes. [59]

Why is Burma included in the analysis of the SE Asian 'arms dynamic' then, if it is not a member of the regional security complex? It is included, paradoxically, precisely because of this. It can act as a 'control' case due to its isolation from the inter-state elements of the 'arms dynamic' which affect the other states, particularly those resulting from the 'polarisation' of the SE Asian security complex into two distinct groups.

If Burma is not a member of the security complex and is included in the choice of states, then why are Cambodia, Laos, Brunei and the Philippines, who are all members, excluded? Their exclusion rests on the issue of the extent of external involvement in their military affairs: in effect, they do not display a comprehensive, active, 'arms dynamic' of their own.

As already intimated above with regard to the Vietnam dominated group in the security complex, during the Second Cold War in SE Asia Cambodia and Laos were part of a putative Indo-China federation and thus subject to Vietnam's hegemony. In the case of Cambodia, of course, Vietnam installed a regime in keeping with its own regional strategic objectives and excersised a considerable degree of influence over it. Thus, the People's Republic of Kampuchea did not function as a sovereign state throughout this period: a status which was further called into question by the ongoing civil war. Laos, on the other hand, was not subject to the same direct political control, but its defence and security was subject to Vietnamese control by virtue of the large numbers of Vietnamese troops which were stationed there.

The stationing of foreign troops (British and American, this time) also affects Brunei and the Philippines, our other two exclusions, as it is a manifestation of the close security relationships which they both had with their former imperial rulers, Britain and America respectively. For Brunei, it did not actually attain full independence until 1984 (halfway through the Second Cold War) and thus for a crucial part of

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[59] Ibid.

the period under consideration its external security was Britain's responsibility. The Philippines, on the other hand, had the presence of major US' forces at Clark Air Force Base and Subic Bay - acting as practical upholders of US security guarantees under the 1951 US - Philippines Mutual Defense Treaty - which meant that it too was relieved of the responsibilities of external defence.

This level of security dependence on external powers by Brunei and the Philippines meant that the 'arms dynamic' was effectively suppressed in both cases: a suppression evinced by the very limited arms acquisitions which both states made between 1979 and 1989. [60]

The years from 1979 to 1989 represent the period of the Second Cold War in SE Asia: a Second Cold War generated, and symbolised, by the Vietnamese occupation of Cambodia. Why set these years as the historical boundaries of the thesis?

It could be argued that as the origins of the SE Asian security complex, in terms of its polarisation into two groups, lay in the communist victories in Indo-China in 1975, that should be the beginning of the period of analysis. At that time, however, Vietnam was pre-occupied with the practical problems of re-unifying the two halves of the country with little interest in any Indo-China federation. Moreover, the intense hostility between Vietnam and the Khmer Rouge in Cambodia precluded effective Vietnamese hegemony over the Indo-China sub-region.

For the ASEAN states, the communist victories in Indo-China in 1975 were deeply disturbing. They overturned the prevailing regional balance of power and, in some cases, heightened senses of vulnerability to externally supported domestic communist insurgencies. It is possible to contend, though, that the years 1975 - 1978 constituted a distinct phase as the ASEAN states effectively came to terms with the communist victories and, indeed, sought to reach an accomodation with Vietnam over the changed regional power balance.

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60 See Mak, op. cit., Table 26 (p.262); and Tables 33, 34 and 35 (pp. 273-274, p.275, and p.277) for details of these.

Vietnam's invasion of Cambodia in December 1978 (and subsequent occupation) shattered such efforts, and changed the regional strategic situation overnight, making the polarisation of the regional security complex complete. Moreover, in view of the close defence ties between Vietnam and the Soviet Union resulting from the 1978 25-year Treaty of Friendship and Co-operation between them, Vietnam's invasion had wider consequences. It introduced directly into the SE Asian region the "higher-level security complex" [61] of superpower rivalry between the Soviet Union and the United States.

This factor is of crucial importance for our analysis of the 'arms dynamic' because 1979 marked the beginning of the Second Cold War between the two superpowers brought about by the Soviet invasion of Afghanistan in December 1979 and the subsequent Reagan defence build-up in the US. The onset of a new Cold War had major implications for the prevailing rate of technological change in weapons (and thus the technological imperative element of the 'arms dynamic') and for the arms supply and security policies of the two superpowers (the relations with extra-regional powers element).

1989 represents our end year because of the realisation of further major changes in the SE Asian regional, and higher-level, security complexes bringing the Second Cold War to an end. In SE Asia, this was characterised by the final withdrawal of Vietnamese forces from Cambodia which occurred in September 1989; whilst in terms of the superpower complex, it was characterised by the fact that Soviet forces were finally withdrawn from Afghanistan in February 1989, and the process of negotiation over reductions in conventional forces in Europe had begun. At the same time, the beginning of the outflow of East Germans into neighbouring countries heralded the imminent collapse of the whole Cold War edifice.

The thesis then, will seek to explore the various elements of the 'arms dynamic' in relation to Burma, Indonesia, Malaysia,

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61 Buzan, People, States and Fear, p.195.

Singapore, Thailand and Vietnam in the period 1979-1989 and to provide a conclusion which addresses two important questions. Is it possible to establish a general pattern of behaviour in the SE Asian 'arms dynamic, or, is the relative significance of the individual elements over time in each state so varied that this is impossible? Lastly, to the extent that any general pattern is discernible, does the 'arms dynamic' in SE Asia during this period correspond more closely to 'maintenance' or 'racing'?

Chapter II Assessing the External Threat

Implicit in the preceding discussion of the 'arms dynamic's' models, or sub-sets, and the various individual pressures or factors, was the idea of the dynamic's bifurcation into external and internal dimensions. Indeed, this external-internal division is a traditional feature of much of the writing on arms procurement and arms races, with the action-reaction model effectively being regarded as representing the external dimension and the domestic structure model the internal one.[1]

There is, though, no commonly accepted primacy accorded to either the external or internal dimension. The debate over the analytical precedence of either of them, and thus of the attendant models, is a long-standing one in the field of the 'arms dynamic' and arms races as Buzan recognises throughout his analysis of the 'arms dynamic' in An Introduction to Strategic Studies. It has also been contended that neither dimension can automatically be assumed to take precedence. Gray, after noting the limited study of arms race behaviour up to that point, argues that "we cannot reasonably assume the dominance of either action-reaction or of domestic process explanations."[2] Moreover, Buzan, in his opening comments on the domestic structure model, acknowledges that the fundamental issue is not whether one model is "better than the ... [other] in some general sense, but

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[1] Matthew Evangelista, for example, explores the basis of this external-internal division in the context of the arms race between the superpowers, after noting that such a division is a common feature of attempts to explain international relations behaviour. Matthew Evangelista, Innovation and the Arms Race, (Ithaca, NY: Cornell University Press, 1988), pp. 6-14. Interestingly, Evangelista notes that there is a debate over technology and whether its role in the arms race is best explained by external or internal explanations: a debate which he contends "remains unresolved". Ibid., p.15.

Marek Thee also recognises that what he terms "primary armaments determinants can be roughly divided into two categories" - internal and external. Marek Thee, Military Technology Military Strategy and the Arms Race, (London: The United Nations University & Croom Helm, 1986), p.102. Significantly, however, in terms of the debate over the role of technology, he contends that "technological momentum" (one of the five general 'theorems' of arms races which he considers) should be included amongst the "internal determinants" of arms races. Ibid., p.101.

[2] Gray, op. cit., p.78.

what proportion of observed behaviour each model explains for any given case."[3]

However, there is a need to provide a starting-point for an assessment of 'observed behaviour' and thus to determine which of the individual pressures or factors to begin an assessment of the SE Asian 'arms dynamic' with. With due regard, therefore, to the need to avoid automatic assumptions about the dominance of dimensions, or models, and of the importance of the proportional relevance of all *three* models, it is the intention here to begin with the external dimension: in this case, with the individual pressure of external threats.

The essence of the external dimension underpinning the action-reaction model was that within the context created by the logic of an anarchic international system the existence of inter-state rivalries provided the underlying motivation - the basis - for arms acquisitions by states. The anarchic system, according to Buzan, creates "a form of political relations that tends to produce military competition between states along action-reaction lines."[4] In other words, as one of the defining shapers of the general 'arms dynamic' the external dimension can be accorded some precedence, or primacy, over the internal one. This order of precedence, it could be contended with reference to the general 'arms dynamic', might also exist in the temporal sphere in the sense that the identification of an external threat would usually come before the development of internal pressures for arms acquisitions.

It is, therefore, with the idea of inter-state factors that we begin our analysis of the SE Asian 'arms dynamic': factors which are evident both in terms of external threat assessment and in terms of elements of the requirements of defence policy and strategy.

With regard to the SE Asian experience, however, the conventional wisdom suggests that the idea of inter-state factors - indeed, the external dimension as a whole - would not only be the wrong starting-point for a consideration of the pressures or factors leading states to acquire arms, but would

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3 Buzan, An Introduction to Strategic Studies, p.94.

4 Ibid., p.77.

only be of limited relevance at all. For example, Acharya does not accord inter-state factors any primacy (see Chapter I, footnote 28) and, instead, contends that the "primary explanation" lies elsewhere; presumably in what he terms 'non-interactive' and 'semi-interactive', as opposed to 'interactive', factors.[5]

Underlying the belief that the external dimension is of limited relevance, and thus the emphasis on 'non-interactive' (that is, domestic) factors, is the very idea of 'security' in the SE Asian context.[6] This idea has seen a particular focus on the internal aspect: a focus which is derived from the characteristic attributed to these post-colonial states (in which Thailand can be included) of 'weakness', or, 'ineffectiveness'.[7] Their weakness, or ineffectiveness, resulting from the very high

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5 The 'interactive' element occurs when arms procurement decisions "are linked to the desire of the buyer to enhance its capabilities vis-a-vis other states", whereas the 'semi-interactive', or 'non-interactive', element occurs when procurement decisions are "not primarily related to the capabilities of the neighbours" and acquisitions will occur "irrespective" of others' purchases. Acharya, op. cit., p.27. Amongst the 'semi-interactive' and 'non-interactive' factors which he identifies are internal security concerns (including insurgencies and geographic make-up) and concerns over the prevailing regional balance of power. See Ibid., pp. 27 and 31.

6 'Security 'in the SE Asian context has been recognised to have both an external and an internal aspect and to be comprehensive in nature, encompassing a number of issues (military, political, social, economic and environmental). Comprehensive security has been defined by the CSCAP (Council on Security Co-operation in the Asia Pacific) Working Group on Comprehensive and Co-operative Security as follows: "Comprehensive security is the pursuit of sustainable security in all fields(personal, political, economic, social, cultural, military , environmental) in both the domestic and external spheres". David Dickens (ed.), No Better Alternative: Towards Comprehensive and Cooperative Security in the Asia-Pacific, (Wellington, NZ: Centre for Strategic Studies, 1997), Appendix CSCAP Memorandum No.3: The Concepts of Comprehensive and Cooperative Security, p.163.

The writing on security in the SE Asian context is legion. It includes, for example, Mohammed Ayoob and Chai-anan Samudavanija (eds.), Leadership Perceptions and National Security. The Southeast Asian Experience, (Singapore: Institute of Southeast Asian Studies, 1989); Stephen Chee (ed.), Leadership And Security in Southeast Asia, (Singapore: Institute of Southeast Asian Studies, 1991); and F. Weinstein, "The Meaning of National Security in Southeast Asia", Bulletin of the Atomic Scientists, Vol.34, No.9, November 1978.

7 The term 'weak' state, based on low levels of socio-political cohesion, is employed by Buzan in his analysis of the concept of national security in relation to the nature of the state. See Buzan, People, States and Fear, pp.96-107. The same phenomenon of "inadequate societal cohesion" leads Ayoob to describe Third World states as ineffective ones. Mohammed Ayoob, The Third World Security Predicament: State Making, Regional Conflict, and the International System, (Boulder, CO:Lynne Reinner, 1995), p.28.

levels of ethnic, religious and cultural diversity within these states, and the difficulties the state (or, more aptly, regime) faces in establishing control over its territory and creating a national identity. It has been contended, therefore, that weak states' "principal distinguishing feature is their high level of concern with domestically generated threats to security".[8] Thus, their "sense of insecurity ... emanates largely from within their boundaries rather than from outside."[9]

This internal focus, however, does not preclude an external dimension - a concern about external threats - rather, it is the case that internal and external concerns have often been inextricably interconnected. Jeshurun, for example, argues that SE Asian states have tended to:

> place such a fundamental value on the sheer need for regime survival that they are possessed of an almost paranoic concern for their security and defence, in which there is no conceptual distinction drawn between external as opposed to internal threats.[10]

Put another way, in the context of the Third World as a whole, external threats "often attain prominence largely because of the conflicts that abound within Third World states."[11] If this latter point is taken to an extreme, then the aforementioned idea of the 'domestic insecurity logic of autism' would apply in which states were pursuing military expansion in response to an artificially created, or magnified, external threat.

From the above discussion of weak states and the linkages between internal and external threats in SE Asia and the developing world, a number of important points emerge which could affect our consideration of the relevance and

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8 Buzan, People, States and Fear, p.99.

9 Ayoob, The Third World Security Predicament, p.7.

10 Chandran Jeshurun, "Threat Perception and Defence Spending in Southeast Asia: An Assessment", in Chin Kin Wah (ed.), Defence Spending in Southeast Asia, (Singapore: Institute of Southeast Asian Studies, 1987), p.11. The most obvious manifestation of this interconnectedness for many SE Asian states during the Cold War was in the external sponsorship of domestic communist insurgencies by extra-regional communist powers.

11 Ayoob, The Third World Security Predicament, p.7.

significance of external threat assessment as an individual pressure or factor in the SE Asian 'arms dynamic'. First, internal threats may be so significant that external ones are of little or no relevance. Secondly, to the extent that external threats are perceived to exist then these owe more to intra-state factors than inter-state ones. Thirdly, and closely inter-related to the second point, if those external threats which are perceived to exist are essentially internally driven, they may not necessarily entail any inter-action with other states at all.

There are elements of validity to these points, but they are insufficient to negate the importance of external threat assessment as an individual pressure worthy of analysis. In particular, their validity appears to be greater in the years prior to those under consideration here.

The Second Cold War period, it can be argued, constituted a changed set of regional circumstances and, essentially, a transition phase from the weak states of the short-term post-colonial period into incipient conventional, states. In effect, and with the obvious exception of Burma, these states began to focus less on internal security concerns and to a greater or lesser extent *more* on external ones.[12]

This shift in focus occurred not just because of a partial strengthening of the states, or at least a sense of less acute weakness.[13] More significantly, it occurred because of changes in the regional strategic environment; including the abrupt one brought about by Vietnam's invasion (and subsequent occupation) of Cambodia. For several of the states, including Vietnam itself, this abrupt change led to the creation of 'real', as opposed to 'artificial', threats: threats which were independent of, though not completely

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[12] Even where states are preoccupied with internal security concerns, the anarchic nature of the international system, Buzan argues, means that they cannot wholly ignore the external dimension. "Domestic insecurities may or may not dominate the national security agenda, but external threats will almost always comprise a major element of the national security problem." Buzan, People, States and Fear, p.22

[13] The point here is that these states were less weak *in comparison* with either their formative years (Singapore in 1965, and a re-unified Vietnam in 1975), or, periods of acute political crisis (Indonesia in 1965; Malaysia in 1969; and Thailand in the mid-1970s).

disconnected from, intra-state factors, and thus took on an inter-state form.[14]

In the case of the ASEAN states, Vietnam's invasion also gave the external dimension another plane because of Vietnam's ties with the Soviet Union. These ties effectively linked the regional and international security complexes and saw at least some of the ASEAN states become concerned about an increased Soviet military prescence in the region.[15] Concurrently, the links between Vietnam and the Soviet Union and the effect of these and the Vietnamese invasion of Cambodia on China, meant that the sponsorship by China of the most pressing communist insurgencies (in Malaysia and Thailand) ended and, in tandem with other factors, led to the decline in the internal security threats they posed.

If the idea of external threat is an important component of the SE Asian strategic environment in the Second Cold War period, then how is the individual pressure of external threat assessment as an influence on states' arms acquisitions to be assessed for its relevance and significance? Is there a general analytical approach which can provide a useful starting-point for such an assessment; one which explains the relationship between external threat assessment and arms acquisitions?

From our earlier discussion it is clear that the relationship between external threat assessment and arms acquisitions lies at the heart of the action-reaction model of the superpower derived 'arms dynamic', with the model's "basic proposition ... [being] that states strengthen their armaments because of the threats they perceive from other states."[16] In its most

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[14] The ASEAN states under consideration had, in any case, traditionally sought to play down and minimise any external threats; particularly those which may be posed by a fellow member, or members. Far from their weakness leading them to create, or magnify, external threats, therefore, their weakness had led them to do the opposite as part of the process by which the states sought to limit competition between them in order to ensure their survival. See Mark G. Rolls, "ASEAN: Where from or Where to?", Contemporary Southeast Asia, Vol.13, No.3, December 1991, pp.324-325.

[15] Nicole Ball, making reference to Weinstein, describes this concern about an increased Soviet military presence as essentially being one about "indirect aggression from abroad": a term in which she also includes the external support of communist party insurgency. Ball, op. cit., p.33.

[16] Buzan, An Introduction to Strategic Studies, p.76.

elementary form, therefore, the model posits that an increase in military strength by one state (action) will heighten the level of threat perceived by other states who, in turn, will increase their military strength (reaction).

Such a 'systemic' relationship, to borrow from Gray,[17] is most evident when there is a clearly identifiable threat and a high level of military competition between the parties involved, as was the case with the superpowers during the Cold War. It is, however, Buzan contends, also evident when the threat is less clear-cut and the level of competition is lower:

> Even where there is no specific power struggle, or only a weak one, the action-reaction process still works at the level of maintenance of the military status quo. States will always have some sense of who they consider to be possible sources of attack even when they see the probability of war as being low. This perception will ensure an element of action-reaction in defence policy, albeit of a much more subdued kind than in an arms race.[18]

The distinction between an action-reaction process with a high level of competition and one with a low level, it is evident, is crucial to an understanding of where the dynamic fits on the spectrum of behaviour. It also provides a useful way of delineating between the inter-state factors of external threat assessment and strategic requirements. Thus, external threat assessment will consider to what extent clearly identifiable threats and a high degree of competition have influenced arms acquisitions, whilst strategic requirements (to be discussed in the subsequent chapter) will, partially, consider to what extent possible threats at a lower level of competition have influenced arms acquisitions.

The action-reaction process, beyond the basic proposition, is fairly complex, of course. The type, or "idiom" (to use Buzan's term), of the process in the military sphere can take a number of forms: weapons-based, armed forces-based, in

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[17] Gray, op. cit. p.71.

[18] Buzan, An Introduction to Strategic Studies, p.78.

overall military strength and in terms of deployment and strategic doctrine.[19] Moreover, the type of reaction may not be the same as (that is, consistent with) the action.[20]

Broadly speaking, however, there are two main categories of action which can cause a reaction - military and political. Gray sub-divides these into four types of action, or "triggering events": "a military-technological trigger *internal* to the arms race system"; "a political trigger *internal* to the arms race system"; "a military-technological trigger *external* to the arms race system"; and "a political trigger *external* to the arms race system."[21] Gray's sub-division is particularly significant because it recognises the inclusiveness of the technological aspect in any consideration of military actions and introduces the idea that actions external to the system can bring about reactions within it.

The action-reaction process, according to Buzan, also contains a number of "variables" ("magnitude", "timing" and "awareness").[22] These variables can be affected by the "motives" of the states involved: motives which can be divided into two pairs relating to the "military balance" (the desire to "change" or "preserve" a position) and the "military objectives" (the desire to create a fighting or deterrent capability) of the states involved.[23] The significance of the idea of states' motives, and of the variable of timing, lies in the fact that they may provide some indication as to whether the dynamic corresponds more closely to that of 'maintenance' or 'racing'.

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[19] See Ibid., pp.80-82.

[20] See Ibid., p.83.

[21] Gray, op. cit., p.72.

[22] 'Magnitude' refers to "what proportion the reaction bears to the triggering action"; 'timing' to "the speed and sequence of interaction"; and 'awareness' to "the extent to which the parties involved in the process are concious of their impact on each other, and whether they govern their own behaviour in the light of that conciousness." Buzan, An Introduction to Strategic Studies, p.84. Buzan explores these in detail, and outlines some of the problems associated with them, on pp.84-90.

[23] Ibid., pp.90-91.

There are, however, difficulties with assessing timing and the motives of states, as, indeed, there are with applying the "specific ideas" of the model to "particular cases."[24] Indeed, this was one of the reasons for the development of the other models of the 'arms dynamic'. It is also a reason for not seeking to apply the model too rigidly to our consideration of the relevance and significance of external threat assessment (or strategic requirements for that matter).

The model's use here is to provide a general analytical approach as a starting-point, based on its basic proposition and recognising that it can provide a way of helping to distinguish the nature of the 'arms dynamic' itself. Our interest, therefore, is in identifying where an action (of whatever type) heightens a state's sense of threat and leads to a reaction in terms of the acquisition of a major weapon, or weapons. Amongst the various actions, however, some emphasis will to be given to weapons-based ones as generators of a sense of threat.

The basic concept of threat is traditionally broken down into capabilities and intentions.[25] It has been contended, though, that given that capability can be "inherently threatening" because it creates the possibility of threat , especially as intentions can change and capability may actually signal hostile intent, the main component of threat is actually capability.[26] Of course, capabilities can change too as they

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[24] Ibid., p.93.

[25] Military capabilities constitute both "force structure" (equipment, manpower and command and control) and "preparedness for operations" (which includes training, doctrine, logistic support and maintenance). Bob Lowry, Indonesian Defence Policy and the Indonesian Armed Forces, (Canberra Papers on Strategy and Defence No.99), (Canberra: Strategic and Defence Studies Centre, 1993), p.2. For the purposes of this study, however, capability will be taken to be synonymous with the weapons element of force structure as that is the quantifiable dimension with which we are most concerned.

[26] Joh Jacob Nutter, "Unpacking Threat: A Conceptual and Formal Analysis", in Norman A. Graham (ed.), Seeking Security and Development: The Impact of Military Spending and Arms Transfers, (London: Lynne Reinner, 1994), pp.34-35. McKinlay also makes the point that the military capabilities of other states constitute "very real potential threats." McKinlay, op. cit., p.111

The intentions-capability 'dilemma' (Gray), or 'distinction' (Pearton), is an important one in threat assessment and defence decision-making. Pearton notes the pioneering work of Richard Cobden in 'The Three Panics' which introduced the

have a "dynamic" nature, particularly in view of technological changes,[27] and thus states also need to try and assess potential threats resulting from any changes in capability. In particular, states are especially concerned about any "capability gap" that may increase (or decrease) rapidly over a short period of time.[28]

To constitute a meaningful threat to a state's security, however, the capability possessed by a potential opponent must be able to be brought to bear in some way. In effect, there must be a "force interface" whether through geographical proximity or a power projection capability.[29] Indeed, Nutter contends that a "threat only exists between actors if one or both of these conditions pertains."[30]

Given, then, that the individual pressure of external threat assessment constitutes an action-reaction process in which there is a clearly identifiable threat (with capabilities being the crucial component) and a high level of military competition, it is readily apparent in which states this pressure might be of particular relevance and significance: Thailand and Vietnam. This is not to say, however, that they were locked into the same sort of symmetrical (or 'spiral') action-reaction process that characterised the superpower 'arms dynamic'. Indeed, the relationship between them was essentially asymmetrical in the sense that though Thailand saw Vietnam as a threat and a competitor, for Vietnam its threat and competitor was China. China, interestingly, by virtue of its support for the Khmer resistance in Cambodia and its interests in the South China Sea (plus the legacy of its links with communist insurgents in SE Asia), effectively straddled the boundary of the SE Asian security complex and was both internal and external to the system.

"operational distinction ... between taking the declared or inferred intentions of other states and taking what their resources allow them to do as a datum for policy-making." Maurice Pearton, The Knowledgeable State, (London: Burnett Books, 1982), p.90.

[27] Nutter, op. cit., p.39.

[28] Ibid., p.41.

[29] Ibid., p.47.

[30] Ibid., p.49.

Thailand

Thailand's concerns about Vietnam did not suddenly materialise with the Vietnamese invasion of Cambodia in December 1978. Thai concerns had already been made more acute by the Communist victories in Indo-China in 1975 which, initially at least, had appeared to portend the establishment of Vietnamese hegemony over Indo-China. What the 1978 invasion did mean, however, was that the Vietnamese threat was now on Thailand's doorstep. In other words, there was a heightened sense of "the presence of this threat."[31] Thailand, already concerned about Vietnam's dominance over, and stationing of troops in, Laos, had now lost its remaining traditional 'buffer' of Cambodia giving substance to long-standing Thai fears of a land-based threat to the central plains and Trans-Mekong areas.[32] In effect, there was, for the first time, a 'force interface' between Thailand and Vietnam.

The Thai-Vietnamese force interface also had an additional dimension because of Vietnam's close military relationship with the Soviet Union. Soviet support for Vietnam not only took the form of massive military aid, but also occurred in the form of the regular deployment of Soviet air and naval forces to Vietnam: deployments which were often a source of concern for the Thais. Thailand, therefore, was not only concerned about Vietnamese capabilities but, albeit to a lesser degree, Soviet ones too.[33]

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[31] Robert O. Tilman, Southeast Asia And The Enemy Beyond. ASEAN Perceptions of External Threats, (Boulder, CO: Westview Press, 1987), p.72.

[32] The importance of these areas to Thailand has been widely recognised. See, for example, Sukhumbhand Paribatra, "Thailand: Defence Spending and Threat Perceptions", in Chin, op. cit., p.77; and Sarasin Viraphol, "National Threat Perceptions: Explaining the Thai Case", in Charles E. Morrison (ed.), Threats to Security in East Asia-Pacific, (Lexington, Mass: Lexington Books, 1983), p.147.

[33] The Soviet Union was, in any case, widely regarded as a threat *because* of its links with the Vietnamese aggressor. See Tilman, op. cit., p.72. Sarasin Viraphol goes as far as saying that Vietnam's invasion and occupation of Cambodia, combined with its introduction of the USSR into the region, "inevitably invoked memories of the Vietnamese intentions allegedly contained in the Ho Chi Minh Testament. It has given credence to the widespread assumption that Vietnam is bent on creating its own empire in Indochina." Sarasin Viraphol, op. cit., p.151.

The general Thai concerns about Vietnamese ambitions in the aftermath of the communist victory in 1975, in conjunction with what this might mean for the CPT (Communist Party of Thailand) insurgency, had already led Thailand in 1976 to embark on a plan for the modernisation of the armed forces over a six-eight year period.[34] Elements of this plan were included in the 1977 paper 'Military Policy of the Ministry of Defence Buddhist Era 2520'. This policy had, as one of its objectives the ability to "defend and fight against external military threats": an objective to be achieved through (amongst other things) the "Rapid improvement and development of the standing military force ... on the principle of self-reliance, equipped to undertake 'forward defence operations' if necessary."[35]

Prior to the Vietnamese invasion in December 1978, the Thai Prime Minister Kriangsak had called, with some prescience, for the speeding up of this modernisation, stating that the Thai government "must quicken the pace of improving and building up the army, both with respect to arms and general capability, with the objective of bringing it to maximum defence efficiency and preparedness."[36] The subsequent Vietnamese invasion and occupation of Cambodia, and especially their attempts to suppress the Khmer resistance to that occupation, provided not only an "impetus" for the continuation of the modernisation programme,[37] but also a need to expand that programme and a clear sense of direction in arms acquisitions.[38] In essence, Thailand primarily sought

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[34] See FEER, 1 June, 1979, p.14.

[35] Sukhumbhand Paribatra, op. cit., p.85.

[36] Cited FEER, 1 June, 1979, p.14.

[37] Randolph cites the comments of Richard Armitage to this effect. "Thailand continues a gradual military modernization given day-to-day impetus by events along her eastern border." 'Statement by Deputy Assistant Secretary of Defense for East Asian and Pacific Affairs Richard Armitage Before the East Asian and Pacific Affairs Subcommittee of the Senate Foreign Relations Committee, June 8, 1982,' "U.S. Policies and Programs in Southeast Asia, Hearings Before the Subcommittee on East Asian and Pacific Affairs of the Committee on Foreign Relations, U.S. Senate, (97th Congress, 2nd session, p.10), in R. Sean Randolph, The United States and Thailand: Alliance Dynamics, 1950-1985, (Berkeley, CA: Institute of East Asian Studies, University of California, 1986), p.225.

to acquire particular types of major weapons as a reaction to the deployment of weapons, and their subsequent utilisation, by Vietnam; rather than as a reaction to any changes in Vietnam's overall capability.

Thailand could not, in any case, seek to shift the military balance with Vietnam more to its favour, let alone seek to attain any form of military parity with it. The cost of this was prohibitive given the existing capability gap between the two.[39] Moreover, at the time of the Vietnamese invasion, the still pressing nature of the CPT insurgency meant that both defence resources and regular forces could not be directed solely towards the defence of Thailand's eastern border. Indeed, during the first few years of the Vietnamese occupation, Thailand's border defences appeared

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[38] This point about a sense of direction is not uncontested, however. Sukhumbhand Paribatra, in his analysis of the "pattern" of Thai arms procurement, contends that it "has been unchanging since 1976-77 even though the nature of perceived threats has changed somewhat. The emphasis was and still remains overwhelmingly on building up conventional capabilities for all three armed forces at the same time." Sukhumbhand Paribatra, op. cit., p.99. Thus, the mid-1980s, a time he argues when the land threat from Vietnam was most prominent, saw "most of the capital outlay ... concentrated on advanced weapons which ... [were] primarily not for use in land-based operations [for example, F-16s and air defence systems]." Ibid.

His argument, however, seems to fail to appreciate that although the Vietnamese occupation posed primarily a 'land' threat, the ramifications of that occupation meant that the threat was not solely land-based. Moreover, it also fails to take account of the 'combined' nature of modern conventional warfare and of the 'multi-role' capabilities of many modern weapons platforms.

[39] As a rough guide, for example, in 1978 the Vietnamese possessed ratios of 4:1 for army manpower; 6:1 for tanks; and 2:1 for combat aircraft. Derived from The Military Balance 1978-79.

Sukhumbhand Paribatra notes that in the planning stages in 1980-81 for the 5th 'Economic and Social Development Plan' (1982-86), it was estimated that to attain military parity with Vietnam c.9% of Gross Domestic Product per annum. would have to be devoted to defence expenditure. Sukhumbhand Paribatra, op. cit., p.89. The appropiate "ceiling" for defence spending, however, was deemed to be "up to 4.4 per cent of the national income or 24 per cent of the government budget, and for defence loans from allies of up to 4.4 per cent of the government's budget, throughout the period of the Fifth Plan." Ibid., p.88. These expenditure constraints on developing the standing force, he observes, were an important factor in the decision to develop the 'Total Defence' strategy which began to be implemented in 1981. Ibid.

It is arguable that Thailand did not actually need to attain an overall military parity with Vietnam anyway because Vietnam could not bring all its military strength to bear against Thailand due to its other preoccupations. What was required from the Thai point of view was that the imbalance should not be excessive at the crucial 'force interface' between them - the Thai-Cambodian border.

comparatively thin in terms of the number of Vietnamese troops they faced.[40]

Significantly, there appears to have been no expectation on the part of the Thais that Vietnam would mount a full-scale invasion. Vietnam gave early pledges that its troops would not cross the border in pursuit of the Khmer resistance and, initially at least, maintained an unstated buffer zone by keeping its forces some 15km away from the Thai border.[41] Nor was there any expectation that Thailand would have to be self-reliant if this eventuality occurred. Thailand had both the assurance of Chinese support in the event of any major aggression against it[42] and the hope that, despite doubts, the US would stand by its stated adherence to the security guarantees given to Thailand under the auspices of the 1954 Manila Pact.

Thailand's procurement strategy, therefore, for most of the period of the Vietnamese occupation, was to build up its capability to the extent that it could act as a partial deterrent to Vietnamese incursions into Thailand and, if that failed, to have the fighting capacity to repulse limited incursions.[43] In the latter respect, and bearing out the earlier argument about the significance of where any military imbalance was located, Thailand was especially concerned that the capability gap was

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[40] It is worth noting here that although there may have been pragmatic reasons for this intially, it subsequently seemed to be an unstated policy to maintain relatively light defences. The Thai military was anxious to avoid any major clashes with the Vietnamese right up to the mid-1980s, fearing that these could stretch its forces' operational capabilities (already limited by lack of spares and ammunition) and cause unacceptable casualties.

[41] See FEER, 30 November, 1979, p.15, and 25 July, 1980, p.8. This pledge, however, was essentially conditional on Thailand not assisting the Khmer Rouge. Even after cross-border clashes in April 1983, Hans Indorf observed that "Thai estimates categorically reject any possibility of a Vietnamese invasion." Hans Indorf, "Thailand: A case of multiple uncertainties" (The Armed Forces of the Asia-Pacific Region No 6), Pacific Defence Reporter, September, 1983, p.23.

[42] "Direct assurances of Chinese military support for Thailand were ... offered during a visit to Beijing by Thai Foreign Minister Sitthi Savetsila in August 1980." Randolph, op. cit., p.211. The Chinese had, of course, by this stage already sought to teach the Vietnamese a 'lesson'; one whose main effect was probably to divert Vietnamese troops away from operations in Cambodia to the defence of Vietnam's northern border with China.

[43] This Thai strategy is also referred to by Mak. See Mak, op. cit., p.81.

not going to be too great at the point of confrontation with the Vietnamese in tactical engagements.

In the wake of the Vietnamese invasion of Cambodia, Thailand's immediate priority was to rapidly strengthen its capacity for territorial defence against Vietnamese armour and to improve the mobility of the army. Increased mobility was deemed important in view of the fact that those units tasked with the defence of the strategically important Watthankorn Pass at Aranyaprathet were located some way to the rear.[44] Although the Thais had already been concerned by the reported build-up of the PAVN's (People's Army of Vietnam) armoured forces prior to the invasion, the nature of the tactics employed by Vietnam during the invasion made these concerns acute. The PAVN, Pike notes, "employ[ed] a highly visible Soviet-type attack: tank-led infantry plunged suddenly across the border, drove to the Thai frontier, then fanned out, and within days had occupied Kampuchea."[45]

In addition, therefore, to seeking to speed up the deliveries of weapons already ordered (for example, 'TOW' anti-tank missiles ordered prior to the invasion), the Thai Prime Minister Kriangsak's visit to the United States in February 1979 saw the Thais request the sale of a number of major weapons - not all of which were approved. In particular, Thailand requested the sale of M60A3 tanks to augment the army's existing inventory of ageing (and often inoperable) M41s and to enable the RTA (Royal Thai Army) to engage the better armed Vietnamese T-54/55s and T-62s.

The request for M60s was turned down, however, with the US regarding the tank as being both too expensive for the Thais and "not appropiate to Thai logistical conditions."[46] Instead, the Americans agreed to supply a limited number of M48A5s (with more to follow later)[47] and a number of M41s

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[44] See FEER, 2 February, 1979, p.8.

[45] Douglas Pike, PAVN: People's Army of Vietnam, (New York: Da Capo Press, 1991), p.69.

[46] Randolph, op. cit., p.215. It may also have been the case that as the M60A3 was still the mainstay of the US Army, it was deemed to be too sophisticated for sale to Thailand.

which could be cannibalised to provide spares for the RTA's existing M41s. Additionally, and influenced by both US concerns that Thai purchases should be cost effective and the nature of US tactics in Europe, the Thais ordered a large number of 'Dragon' ATGWs (anti-tank guided weapons).[48]

To improve the army's mobility additional M113 APCs (armoured personnel carriers) were ordered to further the process of upgrading elements of the infantry into mechanised units, whilst its firepower was enhanced somewhat with orders for 105 and 155mm howitzers: the need for long-range artillery being attributed with particular importance because of the PAVN's inventory of Soviet 130mm guns.[49] The RTAF's (Royal Thai Air Force) airlift capability was also to be enhanced with an order for three C-130 'Hercules' transport aircraft.

Although the priority for Thailand was to strengthen its capacity for territorial defence against the PAVN, the Vietnamese invasion had also generated anxieties about the paucity of Thailand's air defences. These were effectively limited to less than two squadrons of F-5s which was a legacy of the RTAF's primary role hitherto having being in support of counter-insurgency operations. During its invasion of Cambodia "the Vietnamese [had] used aircraft for the first time for tactical close support",[50] with one MiG-21 having apparently strayed into Thai air space and dropped its bombs

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[47] The deliveries of the M48s were undoubtedly staggered because of the difficulties the US had in obtaining any which it could supply to Thailand, given the US Army's existing shortage of MBTs (main battle tanks). See Ibid., p. 216.

[48] In view of the superiority the Warsaw Pact enjoyed in tanks, the US had devloped the concept of a layered anti-tank defence based around helicopters armed with 'TOW' missiles and infantry equipped with 'Dragon' ATGWs and short-range M72 light anti-tank weapons. As the Thais already possessed M72s and had 'TOWs' on order, the 'Dragon' was a logical choice to allow the replication of the concept. See FEER, 1 June, 1979, p.15.

[49] See FEER, 1 June, 1979, p.15. The Soviet 130mm gun appears to have been a particularly formidable artillery piece. Commenting on its earlier use during exchanges between the North Vietnamese Army and the Army of the Republic of Vietnam, Thompson states that it "outranged the American 105mm and 155mm howitzers in the fire bases by more than six miles .... [and] was also extremely accurate". Sir Robert Thompson, Peace Is Not At Hand, (London: Chatto & Windus, 1974), p.98.

[50] FEER, 1 June, 1979, p.15.

on Thailand.[51] To counter the threat posed by the capability of the MiG-21s possessed by the Vietnamese air force, Thailand requested approval from the US to purchase F-16s. This request was also turned down, however, with Thailand instead ordering an additional squadron of the F-5E 'export' fighter which was thought by the Americans to be a "more economical and practical alternative to the ... F-16s".[52]

These four main areas (anti-tank defence; mobility; artillery; and air defence) continued to be at the centre of the expanded modernisation programme: a programme which was given impetus by the day to day deployment and utilisation by Vietnam of its forces in Cambodia and which came to acquire greater emphasis as the CPT insurgency became less of a concern after 1981. The impetus was greatest, of course, when Vietnam's attempts to suppress the Khmer resistance in Cambodia led to the PAVN mounting cross-border operations into Thailand, especially if they showed up deficiencies in the Thais' capacity to respond to these incursions.[53]

The major Vietnamese incursions which occurred up to, and including, the one in 1985, can all be seen to have had the effect of either accelerating the delivery of weapons already ordered, or, creating a requirement for additional ones. In response to the first major incursion by PAVN units into Thailand in June 1980, for example, the US agreed to immediately expedite the deliveries of small arms, artillery,

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[51] See FEER, 26 January, 1979, p.12.

[52] Tim Huxley, The ASEAN States' Defence Policies, 1975-1981: Military Responses To Indochina?, (Working Paper No. 88), (Canberra: Strategic and Defence Studies Centre, 1984), p.32.

The decision to turn down Thailand's request for F-16s was also undoubtedly a result of the controls on arms transfers contained within Presidential Directive 13. For details of this directive and its various controls see Joanna Spear, Carter and Arms Sales. Implementing the Carter Administration's Arms Transfer Restraint Policy, (London: Macmillan, 1995), pp.86-95. Rather oddly, Spear makes no reference at all to US arms transfer policy towards Thailand during the Carter administration.

[53] Although the Thai military was anxious to avoid a direct confrontation with the PAVN where possible, particularly in view of the fear of any escalation, it was committed to a policy of 'resisting pusuit by force'. If this should occur, then it would prefer to rely on the use of artillery and air strikes. See FEER, 11 May, 1979, p.8 and 8 August, 1985, p.12.

and the remaining 35 M48A5 MBTs.[54] Symbolically, 12 months after this incursion the Vietnamese threatened to repeat it (if the Thais tried to repatriate Khmer refugees without Phnom Penh's approval) and, more ominously, the Vietnamese Deputy Foreign Minister stated that PAVN commanders were "now authorised to cross the border into Thailand in pursuit of resistance forces."[55]

It was not until April 1983, however, when a large Vietnamese offensive (the culmination of a major build-up of forces in Western Cambodia) was mounted against Khmer Rouge bases along the Thai-Cambodian border, that the explicit threat to Thailand's territorial integrity was realised. The PAVN attack on the Khmer Rouge saw artillery fire directed into Thailand, with a subsequent gound attack by tank-led infantry crossing the border in some places and Vietnamese units taking up positions in Thai territory to cut off Khmer Rouge escape routes.[56] The Thais responded to these attacks with artillery fire and, for the first time, used aircraft to carry out strikes on PAVN positions inside Thailand.[57] In terms of weapons acquisitions the US again expedited the deliveries of weapons already ordered including 'Redeye' SAMs (surface-to air missiles) and the newer M-198 155mm howitzers,[58] and subsequent to this clash, during which the Thais had been at a disadvantage during artillery exchanges with the PAVN's 130 and 155mm artillery pieces, the Thais placed an order for more of the M-198s.[59]

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[54] Randolph, op. cit., p.222.

[55] FEER, 12 June, 1981, p.12.

[56] See FEER, 12 June, 1981, pp.14-15.

[57] These aircraft, according to the Far Eastern EconomicReview, were F-5Es, although Indorf states that OV-10s were also involved. See ibid., p.15 and Indorf, op. cit., p.27. Hitherto, during the operations after the 1980 incursion, helicopter gunships had been used to provide air support. See FEER, 4 July, 1980, p.15.

[58] Randolph, op.cit., p.226. An earlier refusal by the Americans to supply 'Redeyes' had led Thailand to order 100 (?) 'Blowpipe' SAMs in 1981. See Michael Brzoska and Thomas Ohlson, Arms Transfers To The Third World, 1971-1985, (Oxford: SIPRI/Oxford University Press, 1987), Appendix 1, p.260. A further 50 (?) 'Blowpipes' were ordered in 1982.

[59] The M-198s had a longer range (18,150m) and a higher rate of fire (4 rounds per minute) than the older M-114s (14,955m and 1 rpm). See Ian V. Hogg, Artillery 2000, (London: Arms & Armour Press, 1990), Current Artillery Equipment, p.153.

The need for this longer range artillery was clearly demonstrated during the Vietnamese operations against the Khmer Rouge Base 1003 (some two miles inside Thai territory) a year later, when Thai forces were hampered in their efforts to dislodge PAVN units from hills inside Thailand by Vietnamese long-range artillery fire.[60]

The Vietnamese dry season offensive in 1985 saw cross-border activities at their highest level recorded, with frequent Vietnamese attacks on Thai forces, villages and aircraft occurring and PAVN units occupying positions up to a mile inside Thailand in the Trat salient.[61] This high level of activity would certainly have influenced the decision by the Chinese to supply Thailand with Type 69 MBTs and Type 59/1 130mm guns (although the actual timing of their supply cannot be confirmed). The Chinese also played a more proactive role in Thailand's defence at this time. They mounted cross-border raids into northern Vietnam to exert pressure on the Vietnamese to desist from their activity across the Thai-Cambodian border, which was in keeping with the past Chinese practice of shelling Vietnamese positions across the Sino-Vietnamese border in response to Vietnam's incursions into Thai territory.[62] Moreover, the intensity of Vietnamese aggression was also of increasing concern to the US and it undoubtedly influenced the decision by Congress not to place obstacles in the way of the sale of F-16As and AN/TPQ-36 counter battery radars to Thailand.[63]

The intensity of Vietnamese activity in 1985, when added to the fact that the CPT insurgency was rapidly approaching its denouement, appeared to bring about a change in Thailand's

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[60] See FEER, 19 April, 1984, p.15.

[61] See FEER, 4 July, 1985, p.36 and 23 May, 1985, p.56.

[62] See FEER, 5 May, 1983, p.42 and 21 March, 1985, p.50.

[63] Although, for the purposes of this study, they are not included in major weapons acquisitions, the three AN/TPQ-36s ordered by Thailand were a significant acquisition because of their ability to enhance the effectiveness of the M-198s the Thais had ordered. With an ability to cover an area along the border of some 10-12 km, the radars would be able to calculate the positions of Vietnamese guns from the incoming rounds and then "provide [Thai] gunners with six-digit coordinates" of those positions. FEER, 17 October, 1985, p.43.

perceptions of the Vietnamese threat and in the *modus operandi* for responding to incursions. Towards the end of the year, the Thais were reported to have "changed their rules of engagement to ensure a more effective response to any [future] Vietnamese cross-border strike",[64] and according to one Thai military source the Thais were developing plans for a "substantial counterattack".[65] This more robust posture fitted in with the increasing attention which was being paid to Vietnamese intentions. In the planning stages for the 6th Economic and Social Development Plan (1987-1991) the threat from insurgencies was played down and that from external sources highlighted, particularly the likelihood of Vietnamese border incursions "motivated by a desire to suppress Cambodian resistance activities or to hold pieces of Thai territory for bargaining."[66]

Somewhat paradoxically, however, the announcement by the Army Commander, General Chaovalit, in February 1987 of a future modernisation programme for the army (based around the desire to develop a 'deterrent' capability through a capacity for offensive operations entailing cross-border strikes) was predicated on the belief that Vietnam would not pose a serious threat for the next five years due to its current economic problems. In other words, the modernisation programme was more to deal with a future threat than an existing one.[67]

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[64] FEER, 12 December, 1985, p.26.

[65] Cited Ibid., p.27.

[66] Sukhumbhand Paribatra, op. cit., p.90.

Thai fears were partially realised in 1987, which saw a three month campaign over Chong Bok, when the Vietnamese displayed a new tactic of seizing strategic high ground on Thai territory in order to stop Khmer resistance infiltration into Cambodia (and possibly as a preparation for "deeper probes " into Thailand). FEER, 30 April, 1987, p.28. One RTA Regional Commander even went so far as to state that the PAVN campaign at Chong Bok was part of an attempt by the Vietnamese to annex Thailand's 17 (*sic*) north-eastern provinces for part of an Indo-China Federation. See FEER, 9 July, 1987, p.35.

[67] See FEER, 19 February, 1987, pp.26-27. As events turned out, this assessment was correct in one sense: by December that year Vietnam had begun to withdraw its forces from along the Thai-Cambodian border, partly as a result of its increasing economic difficulties.

At the heart of the modernisation programme, and in order to create an offensive capability, was the plan to upgrade two of the infantry divisions tasked with the defence of the eastern border into mechanised units, and to provide additional tanks for the two cavalry divisions. In 1987, therefore, Thailand ordered Chinese Type 69-II MBTs and YW531H APCs, and American 'Stingray' light tanks and M48A5 MBTs,[68] followed with a further order for Type 69s in 1988. The strengthening of Thailand's offensive capability was also evident in the 1988 order for AH-1G attack helicopters, which were to be armed with 'TOW-2' anti-tank missiles.

Although the modernisation programme was meant to be a response to concerns about future Vietnamese capabilities, in the short-term, as Tim Huxley notes, it was actually made imperative by the poor showing of Thai forces in their attempts to dislodge Laotian forces from a disputed mountain area near Ban Rom Klao in late 1987-early 1988.[69]

By late 1988, however, the relevance of external threat assessment as a significant influence on Thai arms acquisitions was rapidly diminishing as the evolution of the Cambodian peace process occurred and the force interface with Vietnam was effectively ending with the withdrawals of Vietnamese troops. Moreover, there was also a shift in Thai security policy vis-a-vis Indo-China as part of a reorientation of security policy towards the economic sphere.[70] The rationale for the ongoing modernisation programme, therefore, in terms of the external dimension, was subsequently to shift into the realm of strategic objectives.

A major factor underlying the Vietnamese decision to withdraw from Cambodia was the pressure put upon it to do

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[68] The 'Stingrays' met both the RTA's existing requirement for a manoeuvrable light tank more suited to Thai terriain than the heavier M48s and the growing need to replace the increasingly obsolescent M41s in the 1st Cavalry Division's inventory. See FEER, 12 July, 1984, p.14 and 30 March, 1989, p.19.

[69] Tim Huxley, "The ASEAN States' Defence Policies: Influences and Outcomes", in Colin McInnes and Mark G. Rolls (eds.), Post-Cold War Security Issues In The Asia-Pacific Region,
(London: Frank Cass, 1994), p.149.

[70] See Mark G. Rolls, "Thailand's Post- Cold War Security Policy and Defence Programme", in McInnes and Rolls, op. cit., p.98.

so by the Soviet Union as the latter sought to re-establish Sino-Soviet ties and, after 1986 especially, build new relationships with the non-Communist SE Asian states. Associated with the shift in Soviet policy towards Vietnam and the wider region was a reduction in the Soviet military presence which had been centred around deployments to bases in Vietnam.[71] By late 1989, therefore, Thai concerns about Soviet capabilities had more or less dissipated, with the Thai Foreign Minister, Siddhi Savetsila, stating that the Soviet withdrawals "would help ease our suspicions and reduce tension in the region".[72]

Prior to the shift in Soviet policy and the associated withdrawals, however, and particularly in the years immediately following the Vietnamese invasion of Cambodia, the Thais had been concerned about Soviet capabilities too. This was not just because of Soviet backing for Vietnamese expansionism: the Thai National Security Council Chief, Squadron Leader Prasong, stating in 1981 that "the Soviet Union is making use of Vietnamese expansionism ... to further its own goals in the area ...."[73] Thai arms acquisitions, therefore, in certain cases, can also be seen as a reaction to the deployment by the Soviet Union of its capabilities in the region. It is, though, difficult to disentangle reactions to Soviet air and naval deployments from reactions to the broader nature of the Vietnamese threat itself, especially when this enters the domain of Thai maritime security.

As will be explored in more detail in the context of the influence of strategic requirements on the various states' arms acquisitions, the Second Cold War period coincided with an increasing focus by SE Asian states on the various aspects of maritime security. In particular, these aspects centred around "the protection of offshore resources, [the]

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[71] The Soviet ambassador to the Philippines stating in a speech in Manila in February 1990, that between 1984 and 1987 Soviet naval forces in the Pacific had been reduced by some 57 ships and submarines and that MiG-23 fighters and Tu-16 bombers had now been withdrawn from Vietnam. Reuter Textline, 1 February, 1990.

[72] Cited Michael Richardson, "Major changes in power balance as Soviets withdraw from Cam Ranh", Pacific Defence Reporter, March, 1990, p.14. For details of the Soviet withdrawals from Vietnam see ibid., pp.13-14.

[73] Cited FEER, 6 March, 1981, p.15.

demarcation of maritime boundaries and [the] defence of claims over disputed islands."[74] Furthermore, as Acharya notes, these aspects were inextricably interconnected with the wider issue of the security of vital SLOCs (sea lines of communication)[75]: an issue which was clearly affected by the Soviet naval presence.

Thailand was no exception to this pattern of an increasing focus on martime security. The security of the Gulf of Thailand, especially, was accorded greater significance because of its resource potential and because of the existence of disputes with Vietnam over maritime boundaries. These boundary disputes having their inherent conflict potential magnified by the Vietnamese behaviour displayed towards Thailand during operations in Cambodia. Thai concerns about the Gulf were also exacerbated by the rapid naval build-up pursued by Vietnam between 1979 and 1983 (particularly in terms of fast attack craft) which threatened to create a capability gap where previously a rough parity had existed. Moreover, any concerns about a capability gap were clearly aggravated by the increasing numbers of Soviet warships in Vietnamese (and Cambodian) waters after 1979 which also had the potential to threaten Thai security in the Gulf of Thailand.[76]

The Thai response to the need to protect its interests in the Gulf of Thailand, and the attendant reaction to the threat posed by Vietnamese and Soviet naval capabilities, was twofold. First, to develop its naval capabilities. Secondly, to develop its aerial maritime reconnaissance capabilities

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[74] Amitav Acharya, "Arms Proliferation Issues in ASEAN: Towards a More 'Conventional' Defence Posture?", Contemporary Southeast Asia, Vol.10, No.3, December 1988, p.245.

[75] Ibid., p.247.

[76] In the wake of a visit in late October 1980 by the Soviet carrier Minsk to the Cambodian port of Kompong Som, during which it sailed close to the Thai coast, there were fears expressed by the Thais that the Gulf of Thailand "could become a focus of future Soviet attention if there was a perceived need to apply more pressure on the Thais over the Cambodian issue." FEER, 9 October, 1982, p.28.

In 1982, US intelligence sources noted that Soviet vessels "including one attack cruise-missile submarine, one major and two minor surface combatants, an oiler, an intelligence gatherer, a buoy tender, a repair ship and a stores vessel, currently use Cam Ranh Bay on ... a continual basis." Ibid., p.27.

(although this also has to be seen in the context of the inter-related problems of the continuing exodus of refugees from Vietnam and the increasing incidence of piracy in the Gulf of Thailand).[77]

In terms of naval capabilities, a limited build-up was pursued centred around the acquisition of more fast attack and patrol craft (MV-400s and 'Sattahip' class patrol vessels) and, notably, two missile corvettes. These corvettes were, significantly, capable of both surface and sub-surface warfare which was an indication that they were, partially, a reaction to Soviet capabilities (the Vietnamese navy not possessing a submarine warfare capability).[78] Although the build-up was limited, mine warfare capabilities were also bolstered with two West German minehunters being ordered in 1984-85 and the amphibious side of naval operations was not neglected either with orders in the same period for two LSTs (landing ship, tank) - these ships being ordered at a time when Thai defence planners were concerned about the threat which Vietnamese amphibious forces might pose to the "vulnerable" Trat salient.[79]

Aerial maritime reconnaissance capabilities, representing a cost effective response, were expanded considerably with

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[77] Richardson notes the comments of UNHCR (UN High Commissioner for Refugees) officials who "said piracy in the Gulf of Thailand first became a serious problem in 1978 as the number of refugees leaving southern Vietnam in small boats grew." Michael Richardson, "ASEAN and Indo-Chinese Refugees", in Alison Broinowski (ed.), Understanding ASEAN, (London: Macmillan, 1982), p.110. The UNHCR's concerns were subsequently to see it fund the acquisition by Thailand of a 'Nomad Searchmaster' maritime reconnaissance aircraft specifically to conduct anti-piracy operations in the Gulf.

[78] The Thai reaction to the deployment of Soviet submarines can also be seen in the order placed in 1984 for advanced 'Stingray' torpedos to arm the 'Makut Rajakumarn' frigate (previously not equipped for anti-submarine warfare); although it has also been suggested that this order was not unrelated to concerns at this time about the possible future development of a Vietnamese submarine capability. These concerns arose from the presence of a Russian 'Whisky' class submarine at Cam Ranh Bay whose purpose appeared to be "to provide initial training for potential Vietnamese submariners" and the arrival of more of the type to apparently provide "sea training" opportunities. Desmond Wettern, "Soviet submarines for Vietnam, but wither Admiral Gorshkov?", Pacific Defence Reporter, March 1985, p.14.

[79] FEER, 8 August, 1985, pp.12-13. The Thai Marines received additional LVTP7 amphibious vehicles in 1984 when units were positioned in the salient to combat Vietnamese cross-border incursions there.

orders for Model 337 'Skymasters', F27-200 'Maritime Enforcers' (which were eventually armed with 'Harpoon' anti-ship missiles) and F27-400Ms, plus the receipt of four N24A 'Nomad Searchmasters' from Australia under the Defence Co-operation Programme between the two states.

Thai concerns about Soviet capabilities in the Gulf of Thailand also extended to air operations. Most notably, those by Tu-95D reconnaissance aircraft which were reported in early 1981 as having been flying "electronic eavesdropping missions" over the Gulf from their base at Da Nang.[80] In addition to their role in monitoring the movements of the US 7th Fleet, the Thais were concerned that they were capable of "monitoring insecure land-based military transmissions" too.[81] The Israeli IAI-201 aircraft acquired by Thailand in the early 1980s, with their capacity for electronic countermeasures, could assist in countering this, although their primary function was gathering intelligence in the border area between Thailand and Cambodia.

Soviet air capabilities in Vietnam were not just limited to reconnaissance aircraft, but also included combat aircraft. By 1983 a squadron of Tu-16 bombers was based at Cam Ranh Bay and in 1985 a squadron of MiG-23 fighters was operational there too.[82] The MiG-23 deployment is particularly interesting because it encapsulates the nexus of Soviet and Vietnamese capabilities in Thai threat perceptions and because it is thought, erroneously, to represent a clear example of an action-reaction process over a single weapons system (that is, advanced combat aircraft).

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[80] FEER, 6 March, 1981, p.14. These Tu-95s were seen in their "most northerly overflight", in the northern Gulf, in late July 1984. FEER, 23 August, 1984, p.11.

[81] FEER, 6 March, 1981, p.14.

[82] There were Thai claims, based on radar observations of Vietnamese airspace, that the MiG-23s were operational as early as the beginning of 1984, although the Americans did not concur with this. See FEER, 5 April, 1984, p.43. It seems more probable that whilst the aircraft may have arrived in Vietnam at the end of 1984, they were not actually fully operational until the following year. In February 1985 it was reported by a Royal Thai Air Force spokesman that a MiG-23 "had been detected on radar landing at Phnom Penh's Pochentong airport". Michael Richardson, "The F-16 for South-East Asia: Arms Race or strategic balance?", Pacific Defence Reporter, May 1985, p.17.

The deployment of Soviet MiG-23s to Vietnam, at a time of heightened Vietnamese activity across the Thai-Cambodian border, was effectively the triggering action which led the US finally to approve the supply of F-16As to Thailand (Thailand having made a second request for the aircraft in December 1983). Significantly, and this is indicated in the date of the Thai request which was well before the arrival of the MiG-23s, the actual deployment of the MiGs was not the action which led the Thais to order F-16s. Instead, it represented the culmination of more long-standing Thai fears about the imbalance between the RTAF and the VPAF (Vietnamese People's Air Force) and about the presence of Soviet aircraft in Vietnam. The arrival of the Soviet MiG-23s in Vietnam, it was thought by the Thais, was a prelude to the Soviet Union making the aircraft available to Vietnam and thus a further increase in the capability gap. Their arrival also meant that the Soviets would be able to enter Thai airspace virtually unchallenged because the RTAF's F-5s (of which more had been ordered in 1984 (?)) would not be capable of intercepting them.[83]

The decision to acquire the F-16, therefore, an aircraft which was well regarded for its multi-role capabilites, resulted from Thailand's need for it to meet a number of requirements. First, in terms of air defence, the F-16 was intended to act as a deterrent to Soviet air incursions and any potential ones by the VPAF. Secondly, in its ground attack role, the F-16 was meant to reduce the imbalance somewhat by providing the RTAF with the capacity to mount "offensive counter-air" operations against Vietnamese aircraft on the ground.[84] Thirdly, and this reinforces an earlier point about the multi-role nature of many modern conventional weapons, the F-16 was also able to fulfil the RTAF's long-standing requirement for a close ground support aircraft capable of operating in a 'conventional' warfare environment (unlike the T-33s and

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[83] See FEER, 30 May, 1985, p.45. The RTAF had drawn attention to the numerical imbalance in aircraft between Thailand and Vietnam during its lobbying of the Americans in 1984: an imbalance which was also of concern to the US. See Richardson, The F-16 for South-East Asia, p.17 and Michael Richardson, "F-16As for Thailand?", Pacific Defence Reporter, June 1984, p.52.

[84] FEER, 25 October, 1984, p.50. The requirement for such a capability was clearly indicated by the related order for 'Maverick' missiles to arm the F-16s with.

OV-10s designed for a counter-insurgency one).[85] It is also evident that the extended range of the F-16A meant it was well suited for air patrols over the Gulf of Thailand too. In this regard, Khatharya Um has gone as far as saying that the need to provide improved "air security" over the Gulf (and the Andaman Sea) was an "objective" which the acquisition of the F-16 was meant to fulfil.[86] Although maritime security was becoming increasingly important, the more pressing need at the time Thailand requested the F-16 for an improved air defence and ground support capability would suggest that this was only a subsidiary requirement.

Vietnam

One of the arguments put forward in the US by the opponents of the sale of F-16s to Thailand (or any other ASEAN state) was that their sale could have a triggering action leading Vietnam to request the supply of MiG-23s from the Soviet Union: a view which appeared to be lent substance by a commentary in the Vietnamese daily Nhan Dan which stated that their acquisition would be taken as a signal of Thailand's 'hostility' towards Indo-China.[87] Supporters of the sale, however, argued that it would have no such triggering effects. Richard Armitage, for example, the Assistant Secretary of Defense for International Security Affairs, stated in his testimony to a Congressional committee that: "It is our conviction that MiG-23 aircraft would be available to Vietnam whether or not Thailand or other ASEAN countries procured an FX or an advanced aircraft. Therefore, a decision to sell ... (advanced) aircraft to ASEAN countries would not necessarily be a catalyst to an escalation of the arms race."[88]

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[85] See FEER, 29 December, 1983, p.16. For a ground support role the F-16 could be fitted with a number of armaments including a Vulcan 20mm cannon, rockets, and a variety of bombs.

[86] Khatharya Um, "Thailand and the Dynamics of Economic and Security Complex in Mainland Southeast Asia", Contemporary Southeast Asia, Vol.13, No.3, December 1991, p.265.

[87] See Richardson, F-16As for Thailand?, p.50.

[88] Cited, ibid., p.52.

The thinking behind Armitage's statement contains an element which is crucial for our analysis of the relevance of external threat assessment as an influence on Vietnam's arms acquisitions: namely, that Vietnamese arms acquisitions were often influenced by the policy of its patron, the Soviet Union. The statement also implies that Vietnam did not take Thailand's capability (or that of any of the other ASEAN states) into account in its threat calculations.

Indeed, for Vietnam, Thailand constituted neither a clearly identifiable threat nor a state with which it was engaged in a high level of military competition. There was, therefore, no action-reaction process with Thailand, irrespective of any changes in Thai capability. It is also arguable that even if Thailand had entered into Vietnamese threat calculations, the overwhelming military superiority which Vietnam enjoyed for most of the Second Cold War period meant that it "may [have] be[en] able to tolerate some disproportion in the magnitude of the measures taken by itself and its rival."[89]

For Vietnam, it goes without saying, any concerns at all about a threat from Thailand in the west were presumably almost completely overshadowed by the threat from China in the north, especially after the punitive invasion of Vietnam by the PLA (People's Liberation Army) in February 1979.

This invasion, and the subsequent cross-border fighting which occurred in the years thereafter, was the direct result of the competition between China and Vietnam for influence over Cambodia and Indo-China as a whole. The competition was underpinned by historical antagonisms and unresolved border disputes, and aggravated by the introduction of the Soviet Union into the regional power equation as a result of its ties with Vietnam.[90]

The Chinese invasion, in Vietnamese eyes, not only demonstrated that China was a clear threat and military competitor, but also the readily apparent danger of the force

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[89]Buzan, An Introduction to Strategic Studies, p.85.

[90] For analysis of these various issues see Charles McGregor, The Sino-Vietnamese Relationship and the Soviet Union, Adelphi Paper 232, (London: International Institute for Strategic Studies, 1988).

interface between them across their shared land border (an interface existing in the South China Sea too). It highlighted too, the large, quantitative, capability gap between them and brought about a clear reaction in terms of the strengthening of Vietnam's conventional warfare capabilities in preparation for any future war with China; although it was not expected that China would actually repeat its first 'lesson'.
Subsequent changes in China's capability, one of the 'lessons' for the PLA from the invasion being the need to modernise its own major weapons,[91] however, elicited little or no response after the initial build-up of Vietnam's own capabilities.

The major reason, it appears, for this limited response lay in the changing policy of the Soviet Union - on whom Vietnam was totally dependent for its major weapons - towards China in the mid-1980s and, by implication, towards Vietnam too. Thus, we return to the earlier point about the significance of the policy of its Soviet supplier for Vietnam's arms acquisitions.

A convincing case can be made, in fact, that although the pressure of the external threat from China is relevant to Vietnamese arms acquisitions, this has to be considered in conjunction with Soviet policy. In effect, the Vietnamese reaction to the Chinese threat was contingent upon the Soviet Union's assessment of China and that the arms transfers that the Soviet Union made to Vietnam were determined as much by the Soviet Union's requirements as by Vietnam's. This was particularly so, Pike notes, in the areas of air defence and naval capabilities.[92] In other words, Soviet arms to Vietnam for the purposes of defence against China were meant to fulfil both Vietnamese *and* Soviet requirements. In this respect, Pike goes as far as to contend that:

> Analysis of the kinds of weapons the USSR supplies to Vietnam suggests a dual purpose - to increase

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91 Details of the various lessons for the PLA from the invasion are given by Harlan W. Jencks, "Lessons of a 'Lesson': China-Vietnam, 1979", in Robert E. Harkavy and Stephanie G. Neuman (eds.), The Lessons of Recent Wars in the Third World, Volume I, (Lexington, Mass: Lexington Books, 1985), pp.148-153.

92 See Douglas Pike, Vietnam And The Soviet Union. Anatomy Of An Alliance, (Boulder, CO: Westview Press, 1985), p.197.

Vietnam's defensive capability against China and to increase the USSR's offensive capability against China. Soviet generals, seemingly determined to pass on to the Vietnamese some of the burden of containing China, have assigned them specific missions and given them the military hardware required to perform such missions.[93]

In terms of our analysis of the pressure of external threat assessment, therefore, this nexus between Vietnamese and Soviet requirements would appear to make it more appropiate to assess the major weapons acquired by Vietnam in the context of the later chapter on the role of the suppliers.

For the remaining states under consideration the relevance of external threat assessment is not so clear-cut as in the cases of Thailand and Vietnam. It is of either indirect relevance, essentially being limited to a short-term catalyst (Singapore and Malaysia), or, not relevant at all (Indonesia and Burma).

On first appearances, though, Singapore and Malaysia, according to conventional wisdom, are usually grouped with Thailand in the sense that the Vietnamese invasion of Cambodia provided a clearly identifiable threat which led to a reaction in terms of arms acquisitions. Such thinking is implied by Mak, for example, when he contends that the invasion "was arguably the single most important factor which triggered the first big conventional ... arms build-up within ASEAN because of the perceived need to at least deter any overland Vietnamese attack."[94] And it is made more explicit by Denoon who states that "interviews with government officials and strategists from the three countries confirm that military decisions in the late 1970s and early 1980s were designed to deal specifically with potential Vietnamese aggression."[95]

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[93] Ibid., p.199.

[94] Mak, op. cit., p.4.

[95] David B. H. Denoon, "Defence Spending in ASEAN: An Overview", in Chin, op. cit., pp.66-67.

More appropiately, perhaps, Singapore and Malaysia should be compared with Thailand in the sense that the Vietnamese invasion of Cambodia provided an impetus (albeit of a shorter duration) to ongoing processes of modernisation. External threat assessment, therefore, as an individual pressure cannot easily or usefully be clearly separated from the broader requirements of defence policy and strategy.

Singapore

In terms of Singapore's threat perceptions, following the Vietnamese invasion of Cambodia "Singapore's leaders ... emphasized the external threat to the country's national security as emanating from Vietnam."[96] Moreover, in a similar vein to Thailand, for Singapore the Vietnamese threat had also to be seen in conjunction with the Soviet Union's increased role in the region and its search for global dominance. Thus, in the minds of the Singaporean leadership, the Vietnamese invasion of Cambodia and the Soviet invasion of Afghanistan a year later were part of "the same overall pattern of aggression."[97] According to Tilman, the Singapore Prime Minister Lee Kuan Yew's view on this was that: "The USSR [was] ... intent on world domination, and the invasions of Afghanistan by the Soviet Union and Kampuchea and Laos by Vietnam, [were] ... part of this strategy."[98]

Vietnam's invasion, and its ties with the Soviet Union, were essentially an actualization of long-standing Singaporean concerns about the threat to its survival that would be posed by any regional instability: instability which could result from disruption, or military confrontation near its borders, brought about by its neighbours and/or external powers.[99] Singapore's security thinking after the invasion, therefore, saw the defence of Thailand as crucial for Singapore's

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[96] Lau Teik Soon, "National Threat Perceptions of Singapore", in Morrison, op. cit., p.122.

[97] FEER, 26 September, 1980, p.12.

[98] Tilman, op. cit., p.71.

[99] Ibid., p.48.

security.[100] In effect, it could be contended that despite the absence of a Vietnamese power projection capability there was some form of force interface in existence between Singapore and Vietnam.

Despite this interface, however, in terms of the manifestation of threat as capability, from Singapore's perspective this was essentially limited to one category - combat aircraft - and resulted from the linkage of Vietnamese and Soviet capability. In this regard, Chin Kin Wah notes that the Soviet-Vietnamese alliance, and the associated presence of Soviet aircraft at Cam Ranh Bay (particularly the long-range Tu-16s) and modernisation of the VPAF, "increased Singapore's sense of vulnerability with respect to air defence."[101]

The orders for 'I-Hawk' and RBS-70 SAM, and 'Rapier' AD (air defence), systems between 1979 and 1981, along with the order for F-5Es in 1980, can be seen partially as a reaction to these Soviet and Vietnamese capabilities. The process of improving Singapore's air defence system, as part of its overall defence strategy, however, was also an ongoing one. Thus, these acquisitions have also to be seen in the context of a pattern of "incremental additions to provide greater depth to capabilities already in existence"[102]: a point which is also valid with regard to later acquisitions in these categories.

Malaysia

The idea of ongoing efforts to improve elements of conventional capability, and the need to see any reaction to the Vietnamese invasion in the context of these, is equally applicable to Malaysia. This is particularly so because of the apparently causal relationship between the invasion and the

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[100] This concern was apparently given substance by the dispatch of Singapore commandos to Thailand to assist in the defence of the Thai border. Discussion with former SAF (Singapore Armed Forces) NCO, April 1997.

[101] Chin Kin Wah, "Singapore: Threat Perception and Defence Spending in a City-State", in Chin, op. cit., p.199. The defection of a Vietnamese airliner to Singapore in November 1979 with little warning, he recognises, only aggravated this sense. Ibid.

[102] Huxley, The ASEAN States' Defence Policies, 1975-81, p.43.

precipitate defence expansion programme which Malaysia embarked upon between 1979 and 1981.[103]

Although it is undeniable that the Vietnamese invasion and the concomitant threat posed to Thailand's security were "unsettling" for Malaysia, and thus needed to be taken account of in Malaysia's national security calculations,[104] it is far less obvious that the invasion created an action-reaction process: one which led to arms acquisitions by Malaysia based on the emergence of a clearly identifiable threat and thus concerns about Vietnam's capabilities. It has been suggested, in fact, that the Vietnamese invasion provided the "final catalyst" for ongoing moves to develop conventional warfare capabilities.[105]

Certainly, it would be fair to say that the Vietnamese invasion heightened existing, and growing, perceptions of external threat and gave greater impetus to the ongoing attempts to develop conventional warfare capabilites. Thus, as Tim Huxley contends, although the invasion heightened concerns, "the military expansion programme was justified in terms of the need to be prepared to face a much wider range of military contingencies than had been thought likely in the past" rather than with reference to a Vietnamese threat.[106] Indeed, in this respect, PERISTA was motivated as much by wider strategic objectives as it was by a clearly identifiable threat; although the two were clearly linked to some extent because of Malaysian concerns about possible Vietnamese activity in the South China Sea and the general instability in the region resulting from the invasion and occupation of Cambodia.

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[103] The basis of this expansion lay in the long-term Special Expansion Plan of the Armed Forces (PERISTA). This plan aimed to develop and re-orientate the Malaysian Armed Forces to fulfil a number of conventional capabilites in addition to their counter-insurgency role. The first phase of the plan was timetabled for 1979-1983. For further details, see Muthiah Alagappa, "Malaysia: From the Commonwealth Umbrella to Self-Reliance", in Chin, Defence Spending in Southeast Asia, pp.183-185.

[104] Ibid., p.183.

[105] Mak, op. cit., p.128.

[106] Huxley, The ASEAN States' Defence Policies, 1975-1981, p.35.

Significantly for an assessment of the impact of the Vietnamese invasion as an external threat leading to arms acquisitions by Malaysia, much of the defence expansion plan initially outlined (not all of it was actually implemented due to financial constraints after 1980/81) was in the areas of personnel and infrastructure and not in major weapons. Even those weapons ordered in the early 1980s, for which money was made available under the defence expansion plan, which might have been thought to have been influenced by, and designed to counter, Vietnamese capabilities (most notably the orders for various APCs) were already decided upon in 1977-78.[107] The requirement for them was influenced by a variety of factors and not just those relating to the idea of an external threat. Particularly notable in view of Thailand and Singapore's concerns about Vietnamese and Soviet air capabilities, was the fact that under PERISTA no fighter aircraft were acquired.[108] In fact, the only acquisition by Malaysia which appears to have been (at least partially) influenced by Vietnamese - ground - capabilities, was the order for an unknown number of SS-11 ATGWs which were delivered in 1979. These obviously had no real utility for anything other than operations against armoured forces.

Even the influence of the external threat from Vietnam as a catalyst for Malaysia's defence expansion was relatively short-lived. By 1981, the Malaysian Prime Minister, Dr. Mahathir, had declared that: "I do not think [the Vietnamese] will have much time for a lot of adventures outside of Vietnam. I do not think it is their intention to invade Asean."[109] Downplaying any threat from Vietnam was also

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[107] In announcing the large expansion plan under the 4th Malaysia Plan, the Prime Minister, Datuk Hussein Onn, made it clear that the expansion was decided upon earlier - especially for the air force - but was "accelerated" by the Vietnamese invasion. Straits Times, 5 July, 1980, p.1

[108] Malaysia had intended to acquire an additional squadron of F-5Es under the first phase of PERISTA but this purchase was postponed in 1982 in the wake of the 1981 economic downturn. See Alagappa, op. cit., p.188. The planned purchase of the F-5Es contradicts his earlier point the the RMAF's planned development under the first phase had "[n]o provision ... for increasing the numbers of fighter interceptor aircraft." Ibid., p.185. Alagappa does point out, however, that the two RF-5Es ordered in 1980 for "tactical reconnaissance" enhanced Malaysia's air defence capabilites. Ibid.

[109] The comment made during a visit to Jakarta in August 1981. Cited FEER, 21 August, 1981, p.14.

compatible with Malaysia's more long-run threat perceptions, which tended to regard China as the "greatest long-term threat".[110] The threat from China, however, was primarily in the context of Malaysia's internal security, and thus China did not constitute a military competitor whose capabilities were a source of concern for Malaysia in the sense employed here.

Indonesia and Burma

The thinking displayed by Malaysia about the threat from China also helps to explain why the influence of external threat assessment is non-existent on Indonesian arms acquisitions. For Indonesia, China was also regarded as the "most serious external threat facing [it]",[111] although this too was related more to its perceived propensity to proffer support to communist elements within Indonesia than to concerns about its power projection capabilities and the need to react to them.[112]

Moreover, this concern about China, in tandem with the shared experience of an independence struggle (the primary influence on Indonesian foreign policy-making according to Tilman),[113] meant that the Vietnamese invasion did not cause any of the sorts of concern in Indonesia that were evident in the cases of Thailand, Singapore and, less so, Malaysia. Not only was there no real geographical or power projection derived force interface between Indonesia and Vietnam - Indonesia being physically difficult for Vietnam to invade in any case - but Indonesia also viewed Vietnam's strategic ambitions as essentially being limited to Indo-China. These

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[110] Zainal Abidin B. Abdul Wahid, "Malaysian Threat Perceptions and Regional Security", in Morrison, op. cit., p.109. In this context it was actually thought that a "stable, independent, and reasonably strong Vietnam" was in Malaysia's best interests as it "could serve as a buffer against China". Ibid.

[111] Tilman, op. cit., p.87. A view which was confirmed in discusssions with the Vice-Governor of LEMHANNAS (Institute of National Resilience), Jakarta, January, 1996.

[112] China's propensity for internal interference was based on the experience of 1965 in which the PKI (Partai Kommunis Indonesia - Indonesian Communist Party), in the view of Indonesian policy makers, received "massive support from the PRC" in the GESTAPU affair. Tilman, op. cit., p.87.

[113] See Ibid., p.74.

ambitions thus challenged those of Thailand as the - to borrow from Ayoob - sub-regional 'power centre',[114] and consequently did not constitute a threat to Indonesia's own regional power ambitions in maritime SE Asia.

Lastly, the non-existent influence of external threat assessment in the case of Burma is for the rather different reason that the external dimension was virtually absent from the Burmese 'arms dynamic' during almost all the Second Cold War period: an absence which was clearly a function of the preoccupation with the internal security dimension, but also one of the complete lack of inter-state relationships between Burma and any other country. This lack of inter-state relationships, among other factors, also means that Burma merits little attention in the next chapter on the requirements of defence policy and strategy.

Using the idea of an 'action-reaction' model characterised by a clearly identifiable threat and a high level of military competition as the basis for an evaluation of the influence of external threat assessment on arms acquisitions, it is evident that this pressure has only had a major effect in the case of Thailand (taking into account that Vietnam's reaction to the external threat posed by China was dependent upon the policy of its Soviet patron). Although both Malaysia and Singapore shared some of Thailand's concerns about the threat posed by Vietnam - and concomitantly the Soviet Union - this did not generally lead them to procure weapons. Instead, the Vietnamese threat acted as a reinforcement (and sometimes an accelerator) for ongoing procurement plans. The pressure for these states to acquire arms clearly lay elsewhere as, indeed, it did for Burma and Indonesia.

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[114] The term 'regional power centre' is employed by Ayoob in his analysis of the effects of such states on regional security. Ayoob, op. cit., p.60.

Chapter III The Requirements of Defence Policy and Strategy

The pressure to be considered here is, self-evidently, not a singular one like many of the others, but a binary one. Its binary, and expansive, nature is derived not only from the ongoing attempt to juxtapose the superpower derived 'arms dynamic' with the determinants of arms procurement in the developing world, but also from the internal logic of the thesis itself. It contains, therefore, elements which are widely acknowledged to influence arms acquisitions as well as those which are not.

In the latter respect, this pressure can be regarded as a residual one as it encompasses some of those factors which are often overlooked in other analyses of arms procurement and which do not appear to fit clearly into any of the other pressures or factors. It highlights as well one of the weaknesses in seeking to apply the theory of the 'arms dynamic' derived from the superpowers' experience too rigidly to the regional, developing world, context. The sense of overwhelming threat which underpins that dynamic - even if it does not fully account for the production and acquisition of weapons - tends to mean that any non-threat strategic objectives are subsumed in it, rather than being considered on their own merits. In addition, the relevance of the less intense form of action- reaction - characterised by possible threats and low level competition - to other states is often neglected.

The requirements of defence policy and strategy thus provides a way of linking elements of the superpower derived theory with the experiences of developing states. It acts as a bond too between the external dimension, the internal one, and the role of technology. Moreover, this pressure can also be regarded as a bond between the Second Cold War period and the years preceding and succeeding it, containing, as it does, vital elements of continuity and change.

Defence policy and strategic requirements are, of course, inextricably linked. Defence policy is defined here as the acquisition, or maintenance, of a military capability in order to fulfil strategic objectives. These strategic objectives, in

turn, being determined by the priorities of threat assessment and the protection of vital national interests.[1] The pressure, therefore, essentially contains three aspects. First, the military capability of the state itself. Secondly, the possible threats which that state might face. And thirdly, the state's national interests. It is an assessment of the way in which each of these aspects can influence a state's arms acquisitions which constitutes the analytical approach to be employed in this chapter.

To contend that a state's own military capability - both broadly and narrowly defined - influences its arms acquisitions may appear somewhat odd at first. As an influence on arms acquisitions, however, it is more or less constant in nature and can be seen in terms of being an important residual factor. Its influence on arms procurement can operate in two ways.

First, at the start of the Second Cold War period each state possessed existing military capabilities in accordance with the requirements of defence policies determined by previous strategic objectives (and the influence of other pressures). There is, therefore, an automatic continuity of capability from the pre-Second Cold War period to the Second Cold War period itself. In view of the propensity of states to seek to preserve a military capability once it has been established - in accordance with both the needs of long-term strategy and the same sort of 'organisational momentum' (or, rather, inertia) found in other areas[2] - a number of the weapons acquired by

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[1] The definition of strategic objectives used here is partially derived from that used by Karp in his idea of 'national strategy' and partially from Synnot's analysis of the factors which go to make up medium powers' defence policy. See Aaron Karp, "Military Procurement and Regional Security in Southeast Asia", Contemporary Southeast Asia, Vol.11, No.4, March 1990, pp.337-338; and Admiral Sir Anthony Synnot, "The Determinants of Defence Policy for a Medium Military Power", in Robert O'Neill and D. M. Horner (eds.), New Directions in Strategic Thinking, (London: Allen & Unwin, 1981), pp.281-283.

The classic definition of strategy is that it is to do with the connection between 'military power' and 'political purpose' or 'political objectives'. See Colin S. Gray, Strategic Studies, (Westport, Conn: Greenwood Press, 1982), p.24; and John Garnett, "Strategic Studies and its Assumptions", in John Baylis et al., Contemporary Strategy, (London: Croom Helm, 1975), p.3.

[2] This has been discussed by Buzan in terms of the role of the Services in the domestic structure model and by Denoon in relation to the relatively constant defence

the states under consideration will have been obtained to maintain an already existent capability. This can occur through the replacement of written off or lost equipment; through the purchase of weapons to provide spare parts; or, through the replacement of obsolescent hardware[3] (which can often actually extend existing capabilities, or, generate new ones).

It will also be evident that (particularly in the more mundane categories of weapons such as transport and training aircraft and helicopters) a number of the items procured were intended to augment existing capabilities; enhance overall force structures; or, provide improved training opportunities. In addition, limited quantities of some weapons were procured to evaluate potential acquisitions. This was often - but not always - in order to maintain exisiting capabilities which were threatened with technological obsolescence. Into this bracket can be fitted Malaysia's order for four F-5F fighters in 1979 and Thailand's for a single, refurbished, German M41 tank in 1984. Other weapons acquired for evaluation purposes (for example, Thailand's first two 'Stingray' tanks and Indonesia's first B737-200 aircraft) were meant to help determine which weapons should be acquired to meet new capability requirements resulting from the influence of other pressures.

Secondly, capability can also influence arms acquisitions in a much more dynamic way. The acquisition of certain weapons, either as the result of a need to replace obsolescent ones or to fulfil a new strategic objective, may require (or facilitate) the procurement of other weapons for operational effectiveness. For example, as Karp notes in the context of the Philippines' acquisition of jet trainers in the late 1980s, the

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expenditure levels displayed by many SE Asian states. See Buzan, An Introduction to Strategic Studies, p.100; and Denoon, op. cit., pp.60-61.

[3] In respect of the need to replace obsolescent hardware there is an obvious, and unavoidable, overlap with the influence of technology on arms acquisitions: an indication of the bond provided by the pressure of defence policy and strategy. To provide a delineation between the two influences the focus here will be on the specific examples of replacement equipment procured and the extent to which this has been affected by regional developments. The general, and systemic, nature of the pressure of the process of technological progression will be considered in a later chapter.

desire to create a capacity to operate advanced fighters necessitates an investment in jet trainers too.[4]

With regard to threat assessment - and we are again referring to the external dimension - it has already been indicated that the focus here is on the influence of the less intense form of the action-reaction process on states' arms aquisitions: a process occurring where there are possible threats and a low level of military competition rather than clearly identifiable threats and high level competition. In all other respects, however, the process is the same revolving around the occurrence of an action by one state which heightens the sense of threat perceived by another and leads to a reaction in terms of arms acquisitions. Here, again, threat being seen as synonymous with the capability of a potential opponent.

The distinction between the two forms of action-reaction process, and thus the nature of the threat, is one of both immediacy and intensity. Possible threats are not necessarily unidentifiable - as Buzan notes, states will usually have some idea of who might attack them (see Chapter II) - instead, they are latent rather than manifest. In such circumstances, therefore, states are not concerned about changes in capability which could affect an ongoing or imminent conflict, but more about the long-term effects of these changes on the prevailing military balance.

The possible threats which regional states' perceive usually emanate from within their own region, especially where a security complex is in existence. A regional security complex provides a ready source of states with which to compare capabilities against[5] and obvious 'force interfaces' between its members. It may also have a history of antagonism and confrontation which can influence its members' 'strategic cultures' (that is, their '"ways of war' and 'ways in defense preparation"').[6]

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4 Karp, op. cit., p.354.

5 For any state, as McKinlay notes, its military capabilities are only relevant in comparison with "those of other states". McKinlay, op.cit., p.111.

6 Gray, Strategic Studies, p.92.

Within a regional security complex such as the SE Asian one, however, in which even on the same side of the main divide patterns of enmity can co-exist with those of ostensible amity, it may be difficult to distinguish between the "development or acquisition of new military technology by a potentially hostile country" which is seen as a threat and that by "a friendly nation [which] is seen as a political challenge, part of the competition for status within the international system."[7] Acharya makes a similar point with his contention that it is "difficult to separate strategic competition from prestige/imitation as the determinant of potential arms purchase decisions since both involve an interactive dynamic leading to the rise in the overall level of armaments within the region."[8]

What is clear, though, is that the action-reaction process at the regional level - the interactions between regional states - can have a significant influence on regional states' arms acquisitions. Indeed, from their research, Brzoska and Ohlson contend that: "At the regional or sub-regional level, there is the almost automatic pressure [to acquire arms] arising from circular arms procurement patterns and regional arms races."[9] Moreover, earlier research on the ASEAN states - which drew attention to the impact of the introduction of new categories, or generations, of weapons systems - suggests that the "interactive weapons acquisition" which occurred will also be apparent in the Second Cold War period too.[10] In particular, it may be the case that neighbours' acquisitions of sophisticated weapons systems may illustrate, or highlight, the technological imperative and thus indicate an 'objective' requirement for modernisation. In this instance, of course, it would be very difficult to separate the requirements of strategy from technological factors as an influence on weapons procurement.

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[7] Asbjorn Eide and Mary Kaldor, "Conclusion", in Mary Kaldor and Asbjorn Eide (eds.), The World Military Order, (London: Macmillan, 1979), p.257.

[8] Acharya, An Arms Race in Post-Cold War Southeast Asia?, p.30.

[9] Brzoska & Ohlson, op. cit., p.127.

[10] See Ron Huisken, Arms Limitation in South-East Asia: A Proposal, (Canberra Papers on Strategy and Defence No.16), (Canberra: Strategic and Defence Studies Centre, 1977), pp.16-17.

That other component of a state's strategic objectives - the protection of national interests - is somewhat less affected by any interaction with other states. National interests are relatively, though not entirely, constant, encompassing the need to maintain political independence and territorial integrity, uphold trade links, and, on occasion, influence events beyond national borders if they have the potential to threaten the national security of the state itself. The defence policy, and concomitant capability, which such national interests give rise to will, therefore, be heavily influenced by "enduring geographic ...[and] economic features".[11] The policy and capability which ensues therefore, will, likewise, be similarly enduring over time.

Although 'enduring geographic features' are fixed, the awareness of certain aspects of these and the associated importance attached to them can be subject to change over time, with important implications for defence policy and force structure. The Second Cold War period was, significantly, a time of such change with regard to the maritime sphere: one brought about by a combination of resource demands and changes in international law. As Khatharya Um contends, the increasing "need to access and manage scarce resources ... compelled a reassessment of international maritime regimes."[12]

Accordingly, therefore, the 1982 UNCLOS (UN Convention on the Law of the Sea) "resulted in the creation of new maritime regimes, including [provision for] extended territorial seas and 200-nautical mile exclusive economic zones."[13] In so doing, however, without providing a way of resolving disputes over overlapping EEZs, the law not only

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[11] Synnot, op. cit., p.282. To these enduring features Synnot also adds another - '"political" - one, "such as whether a country is non-aligned or has particular alliances." Ibid. This aspect will obviously be important in terms of the impact of relationships with extra-regional powers.

[12] Khatharya Um, op. cit., p.260.

[13] Mak, op. cit., p.30. In the case of the ASEAN states, as Mak notes, they declared their own EEZs (Exclusive Economic Zones) even before the UNCLOS had been ratified. Ibid.

increased the importance of maritime national interests,[14] but also created an additional source of potential inter-state disputes.

The fact that the emergence of this emphasis on the maritime sphere of geographically determined national interests (far beyond that which might hitherto have occurred anyway) occurred at a time when the internal component of security was being downplayed only highlighted its potential significance for the arms acquisitions of many of the states.

From our discussion of the various aspects which go to make up the pressure of defence policy and strategy, it is readily apparent that the pressure as a whole will be of relevance to all the states under consideration. They all have exisiting capabilities and national interests, for example, even if they are not concerned with possible threats. The weight attached to the importance of each of the aspects, however, may vary from state to state. It is also apparent that the pressure as a whole will be of greater significance for some states than for others according to existing capabilities, prevailing strategic circumstances, and the extent of the significance of some of the other related pressures (notably the more intense form of action-reaction and the internal security dimension). For example, in the case of the more intense form of action-reaction being significant - and here we are referring to Thailand rather than Vietnam - all three aspects of policy and strategy tend to be seen through the lens of the clearly identifiable threat. Those states in which the pressure of policy and strategy was of particular significance are Singapore and Vietnam (albeit for very different reasons) and, to a slightly lesser degree, Indonesia and Malaysia. It was of little significance for Thailand and Burma.

Singapore[15]

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[14] Ibid., p.31. The UNCLOS also emphasised the maritime dimension in another way by drawing attention to "the issue of the right of coastal states to protect their maritime integrity and sovereignty versus the transit rights of international shipping." Ibid.

[15] I am particularly grateful to my superviser, Dr. Tim Huxley, for his comments on the various aspects of Singapore's defence policy and procurement which are discussed here.

Of all the states under consideration here, Singapore - by virtue of its physical characteristics and its strategic culture - provides the most complete example of the influence of policy and strategy on major weapons acquisitions during the Second Cold War period.[16]

For Singapore, the enduring features of its small physical base and population size (combined with the ethnic make-up of that population); its dependence on others for such vital resources as water (and its general dependence on external trade links as an entrepot centre); the need to create a stable environment conducive to economic growth (and concomitantly foreign investment); and the formative experiences in the 1960s of its separation from the Federation of Malaysia and 'confrontation' with Indonesia, have all shaped its defence policy. That defence policy, therefore, has accordingly centred around the creation of a military capability sufficient to "deter" and, if necessary, "defend" Singapore "against external threats which might develop within the immediate region."[17]

Because of its all too evident lack of strategic depth, the capacity to defend Singapore had come to mean that Singapore must pursue a strategy of forward defence, with capabilities to match. This meant that the working assumption was that Singapore had to be defended in Malaysia: in effect, that the defence of Singapore and Malaysia was "indivisible".[18] Of course, the indivisibility of

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[16] Not unrelated to this is the fact that Singapore has been described as possessing "the only armed forces in the region fully oriented for conventional, as opposed to counter-insurgency, warfare." Karp, op. cit., pp.348-349.

[17] Huxley, The ASEAN States' Defence Policies, 1975-81, p.16. These threats were most commonly regarded as being likely to emanate from Malaysia and Indonesia, although not necessarily in the form of actual military aggression but possibly in the form of political "pressure": such pressure perhaps being occasioned by instability in either of its larger - Malay - neighbours. See Tim Huxley, "Singapore and Malaysia: A Precarious Balance?", The Pacific Review, Vol.4, No.3, 1991, p.208. See also Tim Huxley, "Singapore forces shape up", Jane's Defence Weekly, 19 November, 1994, p.25; and FEER, 13 April, 1989, p.29.

[18] This description is used by the Singapore Ministry of Defence. Defence of Singapore 1990, (Singapore: Ministry of Defence, 1990), p.9 .

The indivisibility of Singapore's defence with that of Peninsular Malaysia was not, of course, a new development. It was first emphasised prior to the Second World War by the General Officer Commanding Malaya, Major General William Dobbie, as the

Malaysia and Singapore is given a different connotation if Malaysia itself constitutes a possible threat.[19]

Both the general requirements of forward defence and the possible need to mount a pre-emptive strike on Malaysia have meant that since 1965 Singapore has placed a premium on two things: first, on air defence (including a strike capacity) and, secondly, on mobile, offensively-oriented, ground forces. In establishing these capabilities appropiate attention has been paid to the hardware aspect.[20] Moreover, to give meaning to the SAF's deterrent capability in these areas, any possible aggressors - Malaysia especially - must perceive of it as a "superior force" which gives Singapore an obviously favourable military balance.[21] To a great extent, therefore, Singapore sought to be proactive rather than reactive in many of its arms acquisitions.

Although by 1978 the basis of the required air defence and ground force capabilities had been established, with the then most "essential" hardware having being acquired,[22] the early part of the Second Cold War period saw a consolidation and expansion of these. This consolidation and expansion was mainly brought about by the long-term influences of strategy rather than by the actions of other regional states.

British forces began to prepare for possible Japanese aggression in the Far East. See Ong Chit Chung, Operation Matador. Britain's War Plans against the Japanese 1918-1941, (Singapore: Times Academic Press, 1997), Chapter 3.

[19] This point is recognised in an article in the Far Eastern Economic Review, in a discussion of the so-called 'Mersing' line. FEER, 13 January, 1983, p.30. The 'Mersing line' is also discussed by Tim Huxley, who contends that the amount of territory seized in establishing such a line would secure access to essential water supplies and provide a feasible area to maintain control over. See Huxley, A Precarious Balance?, p.208.

[20] This is for the very reason that because of its small population size Singapore could not hope to depend on manpower. As the then Minister of State (Defence), Dr Yeo, was reported speaking in parliament: "Singapore had to be capital intensive in its defence because it could not afford to have a large standing army." Straits Times, 21 March, 1982, p.8.

[21] Huxley, A Precarious Balance?, p.210. The need for air superiority was, of course, imperative if Singapore was to be able to be defended at some distance from the island state itself. Discussion with a former SAF NCO, April 1997.

[22] See Chin, Singapore: Threat Perception and Defence Spending, p.208.

To further develop the army's firepower and mobility, orders were placed for a further 150 AMX-13 light tanks in 1979 and some 600 M113 APCs in 1982(?). These orders can be seen in the context of the Singapore army's need to be able to mount a rapid and successful armoured thrust into the Malaysian state of Johor in order to secure the so-called 'Mersing line'. Improvements to the army's 'tactical mobility' through the expansion of the RSAF's (Republic of Singapore Air Force) inventory of helicopters - notably the acquisition of 22 'Super Pumas' in 1985-87 - can also be seen in the context of the requirements of operations in combination with the armoured forces to secure territory in Johor. Huxley describes the sort of army operations which could be expected as follows:

> Singapore army units would quickly seize the initiative in the land war: light armoured forces would cross the causeway into Johor Bahru, already secured by para-dropped commandoes [sic] and heli-mobile 'guards' units. These airmobile forces would conduct rapidly-paced operations in support of the armour as it advance into the peninsula.[23]

Given the fact that Singapore's orders for the AMX-13s and the M113s occurred at a time when Malaysia was embarking on a move to develop its own conventional warfare capabilities, including an expansion of its armoured forces,[24] it might appear that Singapore was reacting to Malaysian intentions. Indeed, Singapore would have been concerned about the prospect of any armoured thrust it might make into Johor being countered by an expanded Malaysian armoured force, especially as the Malaysian army was already well respected for its professional capabilities.[25] In reality, however, the expansion of Singapore's own armoured forces was probably planned long before Malaysia's intentions were clear. Thus, although Singapore might have appeared to have been 'reactive', it was truly still being **proactive**.

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[23] Huxley, A Precarious Balance?, p.208.

[24] Malaysia had decided in 1978 to acquire some 60 MBTs to form its first tank regiment, which was intended to be operational by the end of 1980. See Straits Times, 20 March, 1980, p.14. Ultimately, Malaysia was only to acquire 26 'Scorpion' light tanks in 1983-84.

[25] Discussion with a former SAF NCO, April 1997.

The requirements of operations in Malaysia - specifically the need to mount a pre-emptive or first strike on the RMAF while its aircraft were still on the ground followed by attacks on vital installations such as the Malaysian army's headquarters - undoubtedly influenced Singapore's acquisition of 'Maverick' ASMs in 1981.[26] This purchase, however, given the utility of the missiles for attacking concentrations of armour, may also have been related to the possibility of the Malaysian army acquiring a significant armoured capability. Indeed, during the Second Cold War period, there was a gradual move to to expand the RSAF's role to encompass ground support.

Air defence, though, in its various forms, remained the first priority for the RSAF during this period with many major weapons being acquired to consolidate and expand that capability. In particular, considerable importance was attached to the creation of a comprehensive, layered, ground air defence system consisting of guns and missiles. This system, when added to with radars and fighter aircraft, would thus provide an "overlapping" defensive shield.[27] Between 1979 and 1981, therefore, orders were placed for 'I-HAWK', RBS-70, and 'Rapier' AD and SAM systems, with 35mm Oerlikon anti-aircraft guns being ordered in 1984(?).[28] The 'I-HAWKs' could, however, also be seen in the context of maintaining an existing capability as they were procured as eventual replacements for the RSAF's ageing 'Bloodhound' SAMs which had been transferred to Singapore by the departing British forces.[29]

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[26] See Huxley, A Precarious Balance?, p.208. The thinking here was very much influenced by the Israeli experience during the 'Six Day War' in 1967 when such a strike by the Israeli air force led to the destruction of the Egyptian air force before it had got off the ground. Israel, it has been widely recognised, had a crucial influence on Singapore's 'strategic culture' and on the development of the SAF's doctrine and order of battle in the aftermath of the Republic's separation from the Federation of Malaysia in 1965.

[27] Defence of Singapore, p.40.

[28] The 'Rapiers', RBS-70s and Oerlikons provided short-range defence, whilst the 'I-HAWKs' were for medium-range defence. Long-range defence would be provided by fighter aircraft. See Straits Times, 9 May, 1990, p.24.

[29] The 'Bloodhounds' were not actually taken out of service until c.1990 however.

The procurement of these various missile systems, as was noted in the preceding chapter, can also be seen as a partial reaction to Singapore's concerns about Soviet and Vietnamese capabilities. Furthermore, these concerns also highlighted a lacuna, or weakness, in Singapore's existing air defence system and pointed the way towards another important 'incremental addition' to that system.[30]

Singapore's existing ground-based radar network, in view of the size of the city-state, was only able to provide extremely limited warning time (about one minute) of incoming aircraft and was acutely vulnerable to fast, low-flying, aircraft such as the Soviet MiG-23.[31] The decision was taken, therefore, in 1983, to acquire four E-2C 'Hawkeye' AEW (airborne early warning) planes which would be used "primarily to detect and track low-flying aircraft."[32]

The consolidation and expansion of the other component of the overlapping defensive shield - fighter aircraft - was also evident in the orders for additional F-5Es and for Singapore's first batch of F-16s.

The eventual order for eight F-16A/B 'Fighting Falcons' (see Appendix entry for full details) certainly represented a significant, qualitative, improvement to the RSAF's fighter complement. Their purchase, however, was officially portayed rather differently with it being indicated that they were intended to represent the beginning of a programme to replace the RSAF's 'Hunters'.[33] In effect, Singapore was

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[30] It is unlikely that the limited capabilities of either the Malaysian or Indonesian air forces at this time would have have generated the same response.

[31] See Straits Times, 24 March, 1987, p.2. The Singaporeans, it appears, were unwilling to rely totally on the Malaysian ground-based radar designated to the IADS (integrated air defence system) operating under the auspices of the FPDA (Five Power Defence Arrangements). See Michael Richardson, "New eyes and sting for 'poisoned shrimp' ", Pacific Defence Reporter, March 1983, p.43.

[32] Straits Times, 24 March, 1987, p.2. The E-2Cs were also capable of monitoring the movements of ships and vehicles, and could act as command and control platforms for fighter interceptors.

[33] The 'Hunters' were, in any case, really intended to perform a ground attack - rather than interceptor - role.

seeking to play down the acquisition of the F-16s for the purposes of minimising the concerns of its two Malay neighbours.

Singapore's order for F-16s at this time might also appear to have been an attempt to keep up with the prevailing state of technology in the region, illustrated by Thailand's order for the aircraft. It is most probable, though, that Singapore's decision to procure F-16s was taken before Thailand's - even if the actual order which it placed in 1984 for F-16/J79s "was placed in close consultation with Thailand"[34] - in keeping with its proactive policy on arms procurement.

The first 'Skyhawk' order (for 40 aircraft in 1981) should not be seen in the context of expanding Singapore's fighter cover.[35] These aircraft were not intended to perform an air defence function at all, but were instead eventually meant to provide a ground attack and maritime strike capability. A further order for 'Skyhawks' in 1983 was meant to provide replacements and a source of spare parts.

Lastly, the RSAF received 24 T-33As in 1980-82 and 30 S-211 jet trainers in 1984-87. The S-211s were acquired as replacements for the BAC 'Strikemasters', but as the number of S-211s was almost double that of the 'Strikemasters' they were intended to replace it evidently represented a major expansion of basic jet and weapons training capabilities - at a time when there was an ongoing expansion in combat aircraft.

Notable by its omission so far has been the area of naval capabilities. This mainly reflects the limited acquisitions in this area by Singapore during much of the Second Cold War period, which is in itself indicative of both the priority accorded to the areas already discussed[36] and of the adequacy

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[34] FEER, 1 August, 1985, p.31.

[35] For this reason, in addition to the aforementioned advance planing practised by Singapore, the 'Skyhawk' order should not be construed as a reaction to the purchase by Malaysia of the same aircraft a year earlier.

[36] In this regard, Mak notes that what he terms the 'third phase' of Singapore's defence build-up - the development of the RSN (Republic of Singapore Navy) - only

and relative modernity of the RSN's existing vessels (especially the 'Sea Wolf' fast attack craft acquired in the 1970s).[37]

Although Singapore was less affected by the new focus on maritime security in the mid-1980s than its maritime SE Asian neighbours, it was not immune from the implications of this development, both in terms of an increased emphasis on maritime national interests and in terms of potential developments in the naval capabilities of other states. From Singapore's perspective it was no longer sufficient in the new climate to be able to ensure its 'seaward defence' by the defence of its maritime approaches. It was now increasingly necessary to be able to protect its vital SLOCs too. To do so required the acquisition of larger warships capable of operations over extended distances and possessed of a capability for a wider range of naval operations. The decision to acquire six 'Victory' class missile corvettes (of which three had been delivered by the end of 1989) was mainly in order to fulfil this need: "the purchase of the ... missile corvettes for the navy was made mainly to ensure free access to the sea lines of communications ... as it is of vital national interest."[38]

The missile corvettes were, significantly, to be equipped for ASW (anti-submarine warfare) which reflected the "RSN's increased concern over the threat posed to Singapore by submarines passing through the Malacca Straits".[39] This concern, the Straits Times notes, was "based on the RSN's experience of tracking Soviet submarines passing through the straits submerged."[40] This experience almost certainly

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occurred after ground and air capabilites had more or less been fully established. See Mak, op. cit., p.100.

[37] These vessels would certainly be adequate for the RSN to fulfil its designated roles in the event of any campaign against Malaysia of securing "the maritime flanks of the thrust into Malaysia against interference by the Malaysian navy"; deterring "intervention by the navies of other interested powers"; and interdicting "maritime communications between Peninsular and East Malaysia." Huxley, A Precarious Balance?, p.208.

[38] Straits Times, 23 March, 1989, p.23.

[39] Straits Times, 2 September, 1986, p.1.

[40] Ibid.

heightened anxieties about the prospect of Malaysia developing a submarine force which was under discussion in the late 1980s.

Additionally, and in keeping with Singapore's policy of upgrading its weapons where practicable to enable them to perform more effectively (to be discussed in a later chapter), two of the 'Sea Wolf' FAC (fast attack craft) were retrofitted with 'Harpoon' SSMs (surface-to-surface missiles) acquired in 1986-89(?).

Vietnam

For Vietnam, the influence of defence policy and strategy on arms acquisitions can be summed up in terms of the operational requirements of the pacification of Khmer resistance to the Vietnamese installed government in Cambodia after the December 1978 invasion. To the extent, that is, that this pressure can be isolated from a complex mix of factors and, concomitantly, that the weapons acquired can be seen to have had as their main purpose the fulfilment of strategic requirements. The invasion of Cambodia resulted, in the first place, from what has been described as Vietnam's "abiding security fixation" with Cambodia (and, indeed, Laos too).[41]

In Vietnamese strategic thinking, Indo-China had long been regarded as a single entity. This point was reiterated during the Vietnamese operations in Cambodia in the mid-1980s by the PAVN's commander there, Colonel General Le Duc Anh:

> Indochina is a single battlefield and the militant strategic alliance among the three Indochinese countries involves the law of survival and development for each as well as the three collectively.[42]

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[41] Michael Leifer and John Phipps, "Vietnam and Doi Moi: Domestic and International Dimensions of Reform", (Discusssion Paper, no.35), (London: Royal Institute of International Affairs), p.23; cited Michael C. Williams, Vietnam at the Crossroads, (London: Pinter/Royal Institute of International Affairs, 1992), p.61.

[42] Col. Gen. Le Duc Anh, "PAVN and Its Noble International Mission in Friendly Cambodia", *Tap Chi Quan Doi Nhan Dan*, (December 1984); cited Pike, Vietnam and the Soviet Union, p.207.

For Vietnam, therefore, a vital national interest during the Second Cold War was establishing and maintaining a 'special relationship', or 'solidarity', with Cambodia which would see the promotion of Vietnam's own security.[43] To do so, in turn, necessitated the consolidation of the CNUFNS (Cambodian National Front for National Salvation) government under Heng Samrin and, crucially, the pacification of resistance to that government.

Underpinning the resistance to the Vietnamese-backed government in Phnom Penh - and here we are primarily referring to the communist Khmer Rouge - was Vietnam's old antagonist, China, with whom it had been competing for influence over Cambodia and Indo-China since re-unification in 1975. Indeed, it can be argued that, for the Vietnamese, the clear external threat from China was also manifest in the latter's support for the resistance in particular and its opposition to Vietnam's dominance over Indo-China in general. In effect, "the hostility from Pol Pot's regime before its overthrow ... [which was] part of the broader Chinese strategy to weaken Vietnam by multi-pronged pressure"[44] had now reached a new level of intensity with full-scale conflict between the Khmer Rouge and Vietnamese forces in

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[43] The term 'special relationship' is referred to by Evans and Rowley in citing the comments of a Vietnamese official in 1978. Grant Evans and Kelvin Rowley, Red Brotherhood at War. Indochina since the Fall of Saigon, (Leichhardt, NSW: Pluto Press, 1984), p.97. 'Solidarity' was that used by the Vietnamese after the signing of the Vietnam-Kampuchea Treaty of Peace, Friendship and Co-operation in February 1979: a term which also applied to Laos. See BBC Summary of World Broadcasts (hereafter SWB), 20 February 1979, FE/6047/A3/23.

Whatever the term employed, there was a debate over whether or not Vietnam's dominance over Cambodia and Laos at this time meant that Vietnam's national interests lay in the establishment of a putative 'Indo-China Federation'. A theme running throughout Evans and Rowley's book is that this was not, in fact, a Vietnamese aim. See Evans and Rowley, op. cit., pp.34-35; 93-98; and 196-198. Moreover, as an article in the Far Eastern Economic Review in 1979 argued, given the existence of - in essence - security treaties with Cambodia and Laos (plus a range of other co-operation agreements) a Federation as such was unnecessary. See FEER, 6 April, 1979, p.9.

[44] FEER, 11 January, 1980, p.18. Sauvageot contends that Chinese support for the Khmer Rouge after 1976 was actually an attempt "to attack Vietnam from the west." J. Andre Sauvageot, "Vietnam, Defence Expenditure and Threat Perception: Defending Communist Indochina", in Chin, Defence Spending in Southeast Asia, p.295.

Cambodia and China's post-invasion strategy of seeking to 'bleed Vietnam white'.

The obvious linkage between the clearly identifiable threat posed by China and Vietnam's national interests vis-a-vis Cambodia has two main implications for any analysis of the influence of defence policy and strategy on Vietnam's arms acquisitions.

First, it could be argued that the conflict in Cambodia between the Khmer Rouge and Vietnamese forces represented another manifestation of the action-reaction process already evident between China and Vietnam in the context of external threat assessment. In this case, the action (political and military) of Chinese support for the Khmer Rouge led to a reaction in terms of the Vietnamese need to develop the capability to pacify that resistance.

Secondly, and problematically, the simultaneity of the Vietnamese reaction to China's punitive invasion in 1979 and its need to build up its forces for longer than anticipated operations in Cambodia, means that it can be difficult to distinguish at times between those weapons acquired to strenghen Vietnam's capabilites for a future war with China, and those obtained to strengthen its capabilities for conducting operations in Cambodia, in the massive arms build-up which occurred in the years 1979 to 1981. This is especially so because some weapons had an obvious utility in both arenas. In this regard there appears to be something of a difference of opinion between Pike and Sauvageot. Pike contends that in the three years after the invasion many of the weapons acquired were for the purpose of prosecuting the campaign against the Khmer resistance, whereas Sauvageot contends that during the early years of the campaign in Cambodia, Vietnam was mainly using old Soviet and US kit - with some new hardware from 1983 onwards - as the modern equipment acquired was deployed to units facing the Chinese in the north.[45]

The near impossibility of making a clear distinction between the primary impetus for the acquisition of some major

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45 See Pike, Vietnam and the Soviet Union, p.210; and Sauavageot, op. cit., p.301.

weapons - for possible use against the Chinese or for operations in Cambodia - means that certain weapons will inevitably be discussed in the context of both factors.[46]

What is much more clear-cut, however, is that major weapons were central to Vietnam's pacification operations in Cambodia in the years following the invasion. Their central importance reflected the significant shift which had occurred during the 1970s in Vietnamese strategic culture, especially in the aftermath of re-unification and during the build up of the PAVN prior to the invasion of Cambodia.

At the heart of this shift, according to Pike, was the virtual abandonment of Vietnam's traditional guerilla warfare strategy and the adoption, instead, of a heavy weapons - high-technology - approach: a shift, he contends, brought about by the combined influence of Soviet and US military doctrine.[47] The nature of this shift was certainly evident in both the tactics and language of the invasion itself, with Vietnam's "strategic offensive" being based on the creation of "an over-powering force to wipe out the enemy."[48]

[46] Stephanie Neuman makes no attempt to distinguish between influences in her analysis of Soviet arms supplies to Vietnam in 1979 and 1980, although as she dicusses these in the context of the aftermath of the brief Sino-Vietnamese war the implication is clear. Instead, she draws a distinction between the 'phases' in the supply of weapons. In 'phase one' (mid-1979) "replacement equipment that could be absorbed and maintained immediately" (for example, tanks and artillery) was supplied; and in 'phase two' (end of 1979 - early 1980) "new and more sophisticated deliveries began to arrive" (for example, strike aircraft and SAMs). Stephanie G. Neuman, Military Assistance in Recent Wars, (New York: Center for Strategic and International Studies/Praeger, 1986), p.18

[47] The influence of Soviet doctrine is more or less self-explantory as it was a natural consequence of the increasingly close ties between the Vietnamese and Soviet militaries after 1976. Almost perversely, the influence of US military doctrine was derived from the favourable nature of many PAVN officers reactions to the Americans use of heavy weapons which they had witnessed during the struggle for re-unification. See Pike, PAVN, pp.255-263 *passim*. PAVN officers, however, had also gained an appreciation of the utility of major weapons from their own firsthand experiences during the Second Indo-China war. The North Vietnamese first successfully employed some of their Russian supplied heavy artillery and tanks against South Vietnamese rearguard forces in early 1971, as they sought to respond to a damaging raid by the latter into their rear areas. This action by the North Vietnamese, Thompson contends, subsequently led them to focus on conventional warfare as the best way of defeating the South. See Thompson, Peace Is Not At Hand, pp.91-92.

[48] The comments of the Vietnamese Defence Minister, Gen. Vo Nguyen Giap, just prior to the invasion. Cited in FEER, 19 January, 1979, p.10.

Despite the 'over-powering force' employed in the invasion - over 100,000 troops with armour, artillery and air support - and the speed of its execution, the Vietnamese were unable to fulfil their main objectives of destroying the Khmer Rouge's armed forces before they could disperse and capturing the political and military leaderships before they could do likewise. What was expected, therefore, to be a six-month long campaign (for which the Soviet Union had supplied sufficient weapons in advance)[49] became instead an extended, counter-insurgency, campaign necessitating the acquisition of more major weapons. Some of these weapons were intended to perform a particular tactical role according to the requirements of operations in Cambodia.

In the immediate aftermath of the invasion, and up to 12 months later, the Vietnamese forces were essentiallly engaged in conventional warfare against the armed forces of the Khmer Rouge: a function of the failure to destroy them in the initial assault. The Khmer Rouge were operating at brigade strength, with armour and artillery support, and mounting counter-attacks on Vietnamese forces occupying major towns.[50]

The requirements of countering such attacks and the preparations at the end of 1979 to mount a major offensive aimed at destroying Khmer Rouge main force units - which saw tanks and APCs moved into the western border area with Thailand - would certainly suggest that some of the T-55 MBTs and BTR-60P APCs supplied to Vietnam at this time may have been intended for operations in Cambodia.[51] This would seem more likely given the apparent attitude of the Soviet Union which wanted the Vietnamese to "stabilise the situation in Kampuchea quickly" so it could further the expansion of its own influence in SE Asia.[52]

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[49] See Pike, Vietnam and the Soviet Union, p.210.

[50] See FEER, 9 February, 1979, p.10.

[51] See FEER, 7 December, 1979, p.22. The need to break up concentrations of Khmer Rouge forces may also have meant that some of the Su-7s acquired at this time may have been deployed in southern Vietnam for possible operations in Cambodia, rather than in the north.

One of the most pressing needs of the PAVN during the early stages of the post-invasion period (and subsequently too) was the need to improve its troops' mobility and logistic support. This was particularly important in view of the Khmer Rouge forces' ability in these early stages to disrupt road communication links on which the Vietnamese forces were virtually wholly dependent. As the area of operations subsequently shifted into the more peripheral parts of Cambodia, it also became essential because of the difficulty of operating in, and resupplying, more remote areas. This difficulty was also exacerbated by the annual onset of the monsoon season. To these ends, the Vietnamese acquired a squadron of An-12 transport aircraft in 1979 and a large number of Mi-6 and Mi-8 transport helicopters in 1979-1980.[53] In addition to the Vietnamese squadron of An-12s which was reportedly based at Bien Hoa, and indicative of the level of Soviet support for Vietnamese operations in Cambodia, the Soviet Union also deployed its own aircraft (An-12s and Il-62s) and crews to Cambodia to provide air transport.[54]

After the immediate post-invasion period and the major dry season offensive of 1979-80, the Vietnamese were primarily engaged in the protection of Cambodia's infrastructure which entailed largely static defence. By the middle of 1981, however, and reflecting a growing realisation that its direct military role in Cambodia should end sooner rather than later, Vietnam began to build up its forces for a dry season offensive in the north and west of Cambodia. To this end 'new' T-54s, PT-76s and APCs were deployed in Cambodia,

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[52] Ibid. This point raises the issue of to what extent Soviet supplies to Vietnam for operations in Cambodia were actually intended to fulfil Soviet requirements - in much the same way as those for use against China were. Although in a broad, geostrategic, sense they were - as was the case with **all** Soviet support for Vietnam - their practical purpose was to meet Vietnamese, rather than Soviet, military requirements in Cambodia.

[53] There were no reports of PAVN operations in Cambodia at this employing assault helicopters, so the Mi-8s acquired were almost certainly all transport versions. The use of combat helicopters only occurred in later Cambodian operations in the mid-1980s. Discussion with Associate Professor Laurie Barber, University of Waikato, 5 August, 1997. The Soviet Union was also reported to have supplied a number of Mi-8 transport helicopters directly to the Cambodian government. See FEER, 13 June, 1980, p.44.

[54] See Pike, Vietnam and the Soviet Union, pp.198 and 210.

some close to Poipet on the Thai-Cambodian border.[55] It is impossible to determine whether or not the T-54s (most probably actually T-55s) and APCs were actually 'new' - being part of the deliveries of these weapons which occurred in 1979-1981 - or were only new to Cambodia, having previously been deployed in northern Vietnam as part of the build-up of defences there. The PT-76s, on the other hand, were almost certainly acquired specifically for these (and other) operations in Cambodia being both highly manoeuvrable and - at half the weight of a T-54/55 - light enough for use "in mangrove swamps".[56]

The 1981/82 dry season offensive, Evans and Rowley note, also saw the "first regular use of Antonov-26 transport aircraft for ferrying troops and supplies".[57] Indeed, the Antonovs were acquired as part of the aforementioned efforts to improve the PAVN's mobility and logistics supply. The An-26s, apparently, also played a different role during operations in western Cambodia in December 1981, when there were reports of them having 'pallet-bombed' targets in the border area.[58]

By this stage, with one exception (see below), the Vietnamese no longer appear to have required any more weaponry having now acquired a sufficient quantity and range of weapons to be able to mount large-scale offensive operations against resistance forces. It is notable in this respect that no new weapons were acquired prior to the massive operations in early 1983. Moreover, and taking account of the underlying influence of their Soviet suppliers on Vietnam's policies in Cambodia, it is also notable that by 1982 the Soviet Union had clearly indicated that it wanted the Cambodian army to take "most of the responsibility for security by 1985."[59] Indeed, Soviet and Vietnamese thinking was beginning to coalesce at this point in time with the two states both wanting

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55 See FEER, 8 January, 1982, p.14, and 3 July, 1982, p.11.

56 Pike, PAVN, p.263.

57 Evans and Rowley, op. cit., p.252.

58 See FEER, 8 January, 1982, p.15.

59 FEER, 10 March, 1982, p.10.

to see the conduct of the war handed over to the Cambodians themselves. To facilitate this, the Vietnamese equipped Cambodia's first armoured regiment with ex-PAVN T-54s and PT-76s in 1984.[60]

As part of a five-phase plan to 'Cambodianize' the war, the Vietnamese decided to mount a series of major offensives against the resistance during the 1984/85 dry season.[61] These were aimed at destroying their forces on the ground and depriving them of a foothold in "strategically important areas",[62] and forcing them out of camps along the Thai-Cambodian border. It was in order to stengthen its forces' capabilities to mount these vital operations, and probably specifically to attack the Khmer Rouge in their stronghold in the north around Tonle Sap, that Vietnam acquired 30 (?) Mi-24 helicopters.[63]

With the acquisition of the Mi-24s, the influence of the strategic requirements of operations in Cambodia effectively ended. A year after these offensives - which had achieved only partial success - Vietnam began to seek a negotiated way out of its Cambodian imbroglio and its already ongoing troop withdrawals steadily accelerated until the final withdrawal of forces in September 1989.

Indonesia

If Vietnam's strategic culture had increasingly come to emphasise the importance of a 'heavy weapons approach' - as demonstrated during its involvement in Cambodia - and Singapore's had long placed a premium on the deterrent effect of advanced conventional capabilities, then Indonesia's strategic culture, in stark contrast, had by and large eschewed

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[60] See FEER, 6 September, 1984, p.11.

[61] For details of these plans see Carlyle A. Thayer, The Vietnam People's Army Under Doi Moi, (Pacific Strategic Papers No.7), (Singapore: Institute of Southeast Asian Studies, 1994), p.10.

[62] FEER, 12 December, 1985, p.27.

[63] See Ibid. There were, of course, obvious parallels here with the tactics employed by Soviet forces in Afghanistan.

"modern military techniques and equipment".[64] Instead, and influenced by both historical experiences (notably the struggle for independence from the Dutch) and enduring geographic and economic features, Indonesia's strategic culture has focussed on "mass-based, 'low-tech' tactics".[65] This focus is most clearly evinced in Indonesia's 'Sishankamrata' (Sistem Pertahanan Keamanan Rakyat Semesta - Total People's Defence and Security System) and its reliance on a 'guerilla warfare' approach for dealing with any potential invader.[66]

Such a focus, though, does not mean that Indonesia has seen no need for major conventional weapons (in the late 1950s/early 1960s, for example, during the campaign against the Dutch in West Papua, both the Navy and Air Force were rapidly expanded), nor, indeed, that the influence of the requirements of defence policy and strategy on arms acquisitions was negligible during the Second Cold War period. It does mean, however, that the utility of such weapons for Indonesia was viewed in the context of a broadly based military strategy aimed at fulfilling a number of requirements. Thus, according to Lowry, Indonesia "has an 'active defensive' deterrence strategy, based on guerilla warfare with limited conventional military capabilities, designed to cope with lower level external threats, internal security, resource protection, and regime maintenance."[67]

The multiple nature of the tasks which Indonesia's conventional forces may be asked to perform provides an obvious pointer as to the scope of the strategic requirements which will influence arms acquisitions. More problematically, it also indicates that it will be difficult to distinguish at times between the influence of this pressure on arms acquisitions and that of the internal security dimension as there will be overlaps between them. This is most - but not exclusively - evident in the case of equipment for the Army. Armoured vehicles have been procured for the "combat

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[64] Alan Dupont, "Indonesia's Defence Strategy and Security: Time for a Rethink?", Contemporary Southeast Asia, Vol.18, No.3, December 1996, p.282.

[65] Ibid., p.281.

[66] For further details, see Bob Lowry, op. cit., pp.17-18.

[67] Ibid., p.18.

support units" possessed by most military area commands of the territorial forces and for the central forces' Kostrad (Komando Strategis Angkatan Darat - Army Strategic Command) "cavalry reconnaissance companies", both of which have been developed to respond to internal and external security threats.[68]

Acknowledging that there will be overlaps between the influences of the requirements of defence policy and strategy and the internal security dimension on Indonesia's arms acquisitions, it is still clear that the former was an important factor; particularly in terms of the aspects of capability and national interest. The Second Cold War period saw the continuation of efforts begun in the mid-1970s to modernise ABRI's (Angkatan Bersenjata Republik Indonesia - Armed Force of the Republic of Indonesia) equipment inventory. It also saw a new emphasis attached to one of Indonesia's enduring geographically determined national interests - its archipelagic status. The new emphasis attached to this status provided a focus, and impetus, for elements of the modernisation programme. Additionally, Indonesia was also affected by various military developments within the SE Asian security complex which also indicated the need for the modernisation, or establishment, of certain capabilities.

The stimulus for the modernisation drive which began in the mid-1970s was provided by a combination of the communist victories in Indo-China and the experience of the invasion of East Timor and its aftermath. These two experiences, Lowry contends, led to an "awareness of the need to rejuvenate the armed forces."[69] In particular, they focussed the minds of those responsible for Indonesia's defence on the fact that whilst ABRI's equipment holdings may still have been numerically large from the build-up in the 1950s and 1960s, much of it was largely inoperable due to a chronic lack of servicing and spare parts. This was especially so in the case of the more capital intensive services - the Navy and the Air Force. Thus, although efforts were made prior to 1979 to re-

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[68] Robert Lowry, The Armed Forces of Indonesia, (St. Leonards, NSW: Allen & Unwin, 1996), pp. 92 and 232. See pp.85-94 for a detailed analysis of the Army's structure and role.

[69] Lowry, Indonesian Defence Policy, p.42.

equip ABRI (for example, orders were placed for South Korean FAC in 1976 and for F-5E fighters in 1977) the extent of the requirements for major weapons to maintain - or, rather, re-establish - existing capabilities was such that the modernisation programme was more or less ongoing throughout the Second Cold War period.[70]

An interesting characteristic of Indonesia's modernisation during the Second Cold War was that it can predominantly be ascribed to what was seen as an "objective need for improvements in ... hardware",[71] with an impetus being provided by the need to protect vital national interests. Indonesia's modernisation programme, therefore, appears to have been mostly autonomous of the acquisitions made by other members of the complex: there seems to have been no action-reaction process between Indonesia and any other state and thus the aspect of possible threat as an influence on arms acquisitions is of only limited relevance. Part of the explanation for this lies in a certain insularity displayed by Indonesia resulting from its pre-occupation with the internal dimension of security. It also lies in the fact that Indonesia did not view any of its SE Asian neighbours as posing even a latent threat to it (there were certainly no fears of invasion)[72] and consequently it was not overly concerned with shifts in the prevailing military balance.

To say, however, that Indonesia's modernisation programme was primarily internally driven - and that there was no action-reaction process in evidence - is not the same as saying that weapons developments within the complex had no bearing on Indonesia at all. It is arguable that some of the major weapons acquired by other states in the complex (and elements of their overall capabilites) did have an effect on Indonesia in the sense of providing an example of the prevailing state of military technology and pointing to

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[70] The modernisation programme was also a long drawn out one because of the lack of resources which were available to fund it: a traditional factor constraining Indonesia's development of its conventional capabilities.

[71] Jusuf Wanadi and M. Hadisoesastro, "Indonesia's Security and Threat Perceptions", in Morrison, op. cit., p.83.

[72] See Lowry, Armed Forces of Indonesia, p.1. He attributes this to Indonesia's "size, military capability, and strategically advantageous location." Ibid.

lacunae in its own capabilities. This is most evident with regard to the F-16, but is visible in terms of air defence missiles too.

Following the rejection of its 1983 request for F-16As[73] Indonesia reportedly decided in 1984 against acquiring a latest generation - high-tech - fighter, mostly on the grounds of cost.[74] The United States' eventual willingness to acquiesce to Thai and Singaporean demands for the F-16As, however, apparently led to renewed Indonesian interest in the aircraft and another request to purchase them in 1985 (which was approved). Andrew MacIntyre contends that the revived request can partially be explained by Indonesia's concerns about its status vis-a-vis Singapore and Thailand:

> Perceiving itself to be the leading member of the ASEAN grouping, and as such the prime manager of regional stability, Indonesia would find it extremely difficult to abide a situation in which Singapore and Thailand possessed front-line aircraft qualitatively far superior to its own.[75]

Although there is undoubtedly an element of truth in this, especially given the timing of the Indonesian order, it is more likely that the impact of the prospective introduction of the F-16 into the region by Singapore and Thailand highlighted the present state of combat aircraft technology for Indonesia. The actual decision to procure F-16s, therefore, owed more to the influence of the technological imperative.

The need to keep "abreast with advanced technology" was, Crouch argues, also visible in Indonesia's orders for 'Rapier' AD missile systems in the mid-1980s.[76] In the case of AD

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[73] This request appeared to have been motivated by a desire to modernise and expand the Air Force to the extent that it would have the capacity to oppose a "major threat" to Indonesia through "conventional air ... strategies" (i.e., strategic strike and air interdiction). Lowry, Indonesian Defence Policy, p.43. This desire emanated from a prior, and soon to be dropped, strategy of "strategic denial". Ibid., p.36.

[74] See FEER, 7 March, 1985, p.11 and 21 March, 1985, p.33.

[75] Andrew MacIntyre, "Don't worry about those Indonesian F-16s", Pacific Defence Reporter, August 1986, p.9.

missiles, however, Indonesia was mainly reacting to regional military developments. Although, as we have seen, Indonesia did not share the concerns of some of its ASEAN neighbours about the threat posed by the expansion of Soviet and Vietnamese air force capabilities, the general climate was such that Indonesia realised the importance of the need for it to have an advanced missile capability. This capability - which it had not hitherto possessed - was necessary for Indonesia to bolster its own, inadequate, air defence system. In this respect it is noteworthy that the acquisition of RBS-70 SAMs occurred at a time of maximum regional concern about air defence capabilities. The 'Rapiers' were ordered soon after the ABRI commander - General Murdani - had visited Vietnam in February 1984 as part of a series of visits to regional militaries. This visit led him to tell parliament on his return "that the Indonesian armed forces needed accelerated modernisation, acquiring among other things **ground-to-air missiles** [emphasis added]."[77] The 'Rapiers' were, Lowry notes, subsequently "deployed on asset protection tasks ... to protect vital infrastructure" in accordance with the Air Force's priorities.[78]

Returning to the general need to maintain, or reconstruct, existing capabilities through a process of modernisation, this was especially evident in terms of one of the Air Force's most basic capabilities - flying training - and led to a large number of aircraft for all stages of training being acquired during the Second Cold War. It had been recognised in the 1970s that there was an exigency for the Air Force to concentrate on "maintaining the training squadrons and their programs" because of concerns about a "personnel generation gap" and obsolescent Soviet (and US) kit,[79] and this exigency was reinforced by the modernisation and expansion of the Air

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[76] FEER, 14 February, 1985, p.34. For Lowry, the acquisition of 'Rapiers' by Indonesia "symbolised the upgrading of conventional capabilities post-1983". Lowry, Indonesian Defence Policy, p.63.

[77] FEER, 1 March, 1984, p.9.

[78] Lowry, Indonesian Defence Policy, p.65. Air defence priority was accorded to the vital straits of Malacca, Sunda, Lombok and Makassar and to the Arun and Bontang liquified natural gas plants. See Ibid., p.62. The RBS-70s were used to equip one Kostrad AD battalion "for the local defence of vital objects." Ibid., p.65.

[79] Lowry, Armed Forces of Indonesia, p.106.

Force's air defence and ground attack capabilities with the earlier acquisitions of the F-5Es and with the acquisition of a large number of A-4 'Skyhawks' in the early 1980s.

The training aircraft which were acquired demonstrated the need to meet the requirements of flying training across the board (that is, primary, basic and advanced). A total of 40 AS-202 'Bravos' were acquired for primary training; a further nine T-34s (some 16 had already been acquired in 1978) for basic training; and a further 12 'Hawk' T-53s (eight already being purchased for this role) were acquired for advanced training.[80] Five T-41s were also ordered for general training requirements.

The training dimension was also evident in terms of the Army's acquisition of nine Hughes 300 helicopters in 1983. This occurred at a time when the Army's inventory of helicopters was expected to expand significantly with the acquisition of up to 50 NBo-105s which had been ordered back in 1976 (although far less than this were actually delivered) and five Bell Model 412s which were ordered in 1982.

In respect of other equipment for the Army - and bearing in mind that orders had already been placed for AMX-13 light tanks and V-150 APCs prior to 1979, as the initial modernisation drive got under way - Indonesia ordered a large number of AMX-VCI MICVs in 1979 and lesser quantities of 'Commando Ranger' APCs and 'Commando Scout' armoured cars in 1983. These orders were certainly intended to maintain the Army's limited armoured capability through the replacement of ageing and/or inoperable kit (for example, British 'Saladin' and 'Ferret' reconnaissance vehicles and Soviet BTR-40 and -50 APCs). They must, however, also be viewed in the context of the need to develop the Army's combat capabilities for internal security operations

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[80] The 'Hawks' were ostensibly procured to replace ageing T-33s in this role. They may, however, have been primarily procured with a view to their utility for counter-insurgency operations in East Timor (this will be explored more fully in the next chapter).

The designation of these various aircraft for particular training roles is outlined in Captain H.A. Josephs, RAN (Ret), "Indonesia: Complex requirements and a huge task", (The Armed Forces of the Asia-Pacific Region, No 15), Pacific Defence Reporter, March 1985, p.22.

(hence the internal security dimension was influential here too).

The last area in which modernisation was required - and one in which significant expansion also occurred - was the vital one of the defence of maritime national interests. Indonesia's archipelagic nature had long been a defining feature of its strategic thinking. The impacts of the Dutch blockade during the independence struggle and of the Outer Islands rebellions in the 1950s had highlighted the vulnerabilities of its physical make-up,[81] and had led, eventually, to the development of Indonesia's 'wawasan nusantara' (archipelagic principle) by which it was intended that the waters linking Indonesia's disparate land mass should be considered an integral part of the state.[82] Hence, to ensure Indonesia's security it was essential not only to defend the maritime approaches to the archipelago but also the waters of the archipelago itself. These territorial waters, of course, were also important for Indonesia's security (broadly defined) in the context of maritime resources - particularly oil and natural gas, but fisheries too.

The prevailing regional strategic environment in the wake of the communist victories in Indo-China heightened Indonesia's concerns about its maritime security [83] and "provided the [initial] motivation to begin rebuilding the Navy" which mostly consisted of ageing Soviet vessels and four more recent vintage secondhand US frigates.[84] Significantly, and in a similar vein to the experiences of the other ASEAN states, the arrival of large numbers of Vietnamese refugees from

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[81] See FEER, 6 January, 1983, pp14-15. The experience of Dutch and Royal Navy aircraft carriers passing through the archipelago in the 1960s was also influential. See Ibid., p.15.

[82] The concept of 'wawasan nusantara' was "incorporated into ABRI doctrine in 1969 and into national doctrine in 1973." Lowry, Armed Forces of Indonesia, p.8. Dupont traces its evolution from the 'Juanda Declaration' in 1957 and its direct forerunner 'Wawasan Nusantara Bahari' which was enunciated in 1966. See Dupont, op. cit., p.287.

[83] There were concerns, Crouch notes, about the potential for conflict in the area around the Natuna Islands in the South China Sea. See FEER, 14 February, 1985, p.32.

[84] Lowry, Armed Forces of Indonesia, p.98.

1978-1981 seemed to accent Indonesia's maritime security vulnerabilities.[85]

The pressing need for naval modernisation - and, ultimately, for expansion - was intensified by Indonesia's declaration in 1980 of a 200-mile EEZ. This declaration was, in essence, an attempt to provide a mechanism through which Indonesia could ensure its access to vital maritime resources. As such, however, it clearly required the means to uphold it which, in the first instance, appeared to indicate the capability to not just patrol the zone but possibly to defend it too.[86] Furthermore, the recognition of Indonesia's long-standing claims to be an 'archipelagic state' at the 1982 UNCLOS, which both expanded its territorial waters and gave it rights and obligations with regard to the passage of ships through sealanes in the archipelago, only reinforced this need.[87]

The various developments pertaining to maritime law meant, in effect, that Indonesia had to have the capability not only to defend itself from seaborne external attack and subversion, but also to "enforce" national and international laws on the "use and exploitation of the seas."[88] During the Second Cold War period it can be observed that Indonesia acquired a

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[85] See FEER, 6 January, 1983, p.15.

[86] Indonesia's declaration of an EEZ, it was feared, could pose the possibility of conflict because of the existence of overlapping boundaries with other regional states. Specifically, it was thought that there could be conflict with Vietnam "as its definition of an economic zone ... [was] not accepted by Indonesia and encompasse[d] economic waters which Jakarta ha[d] already contracted out for oil exploration." FEER, 1 April, 1980, p.53. These concerns were short-lived, however, dissipating once a process of negotiation got under way between the two states.

[87] For details of the implications of the archipelagic principle recognised at the Convention, see FEER, 6 January, 1983, pp.12-14. The Convention was not ratified by Indonesia itself until 1985 and only finally took effect in November 1994.

To some extent Mak is correct in arguing that as UNCLOS was predated by Indonesia's own concept of 'wawasan nusantara', it had less significance for Indonesian naval planning than for some of the other ASEAN states; particularly as Indonesia had already declared its EEZ. Mak, op. cit, p.65. What it did mean, however, was that now the principle had been recognised internationally the onus was on Indonesia to develop the capability to at last really enforce the principle which it had not hitherto sought to do.

[88] Lowry, Indonesian Defence Policy, p.67.

substantial number of weapons which facilitated the modernisation and development of both these capabilities.

To facilitate resource protection and law enforcement - especially in the seas in the eastern part of the archipelago which were particularly prone to illegal fishing[89] - Indonesia ordered a number of Lurssen 57m patrol craft in 1982 and Boeing jetfoils in 1983. The second-hand ex-RN (Royal Navy) 'Tribal' class frigates ordered in 1984 were also intended to perform a patrol function, although they could play a role in the defence against external threats too as they enabled the Navy to carry out ship-based ASW operations through their ability to carry 'Wasp' helicopters.[90]

The virtual impossibility of acquiring and deploying a sufficient number of patrol vessels to adequately cover Indonesia's vast territorial waters - a fact which only highlights the "central paradox" of Indonesian strategy and illustrates why that strategy has not depended solely upon conventional warfare capabilities[91] - meant that it was necessary for Indonesia to acquire maritime patrol and reconnaissance aircraft to augment the Navy's warships. For the purpose of short-range maritime surveillance, therefore, six additional 'Nomad Searchmasters' were ordered in 1980 (Indonesia had already received six of these aircraft - transferred from the Australian Defence Force - in the mid-1970s). For more extended patrols, and specifically to monitor shipping - especially warships - passing through the main archipelagic sea lanes linking the Java Sea and the

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[89] It was also in these waters where the majority of the Vietnamese refugees, and other illegal immigrants, arrived. See FEER, 6 April, 1979, p.33. Dupont notes that since the re-organisation of the Navy in the mid-1980s the Eastern Fleet has been focussed on "non-conventional military threats and law enforcement", with the Western Fleet being "a traditional sea-warfare group." Dupont, op. cit., p.280.

[90] The 'Tribals' were even more versatile as with their two 4.5" guns they could also provide "naval gunfire support of troops ashore": a useful ability given ABRI's desire to be able to mount effective amphibious landings. A. W. Glazebrook, "Indonesia builds for its needs", Pacific Defence Reporter, October 1986, p.17.

[91] "While difficult to conquer because of the strategic depth afforded by size, terrain and archipelagic nature, ... [Indonesia] is also difficult to defend ... for those very same reasons." Dupont, op. cit., p.277. The Indonesian response to this problem, Dupont notes, has been for certain areas to be accorded critical strategic importance: for example, the South China Sea and the Sulawesi Sea. Ibid. A list of such "sensitive areas" is provided in The Policy Of The State Defence And Security Of The Republic Of Indonesia 1995, [no publication details provided], p.33.

Indian Ocean (Sunda , Bali and Lombok), the Air Force's limited maritime reconnaissance capability was expanded with the acquisition of three B737-200 maritime reconnaissance planes in the period 1982-1984 and two C-130H-MP aircraft in 1982.

The acquisition of these aircraft, with their ability to monitor the movements of foreign warships, can also be seen in the context of Indonesia's efforts to develop its capabilities for conventional maritime warfare. At the heart of these efforts was the attempt to establish an effective capacity for ASW operations. In this regard Indonesia was not only responding to the widespread increase in concern about the passage of Soviet submarines through regional waters, but was specifically concerned about the passage of all submarines through the archipelago (whether Australian, American or Soviet) given their symbolic - if not actual - threat to Indonesia's maritime security.[92]

To develop an effective ASW capability, a capability which at the start of the Second Cold War was only minimal, Indonesia first ordered 10 'Wasp' helicopters in 1981. These helicopters, the first ASW ones to be operated by the naval air arm, were almost entirely shore-based at first - and thus of limited utility - as only one of the recently delivered 'Fatahillah' class frigates was capable of operating a helicopter. Ship-based ASW operations were only really developed with the later acquisitions of the 'Tribal' class frigates and of the Dutch Type 12s.[93]

It was these Type 12 frigates, however, five of which were acquired between 1985 and 1989, which dramatically improved the Navy's capacity for ASW. In addition to being able to operate the 'Wasps', they also had more advanced sonars than the 'Tribals'. The Type 12s - fairly advanced by regional standards - could thus both monitor the passage of submarines through vital straits and deny it too if required.[94]

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[92] This point is partially derived from Dupont's discussion of post-Cold War maritime security concerns. Dupont, op. cit., p.288.

[93] The three much larger 'Super Puma' ASW helecopters acquired between 1985 and 1989 could not be operated from either of these types.

The Type 12s also represented a major advance in the Navy's surface warfare capabilities as their weapons fit included 'Harpoon' SSMs.

Finally, in terms of the development of maritime defence capabilities, Indonesia also ordered vessels which were essential for the often neglected area of mine clearance - the two 'Alkmaar' class minhunters in 1985 - and a training frigate in 1981 (?) probably in order to prepare for the future anticipated expansion of the frigate force. The training frigate, when it arrived in 1984, could also be seen as an economical stop-gap measure to improve the Navy's then limited capacity for modern warfare as in the event of "hostilities" it could be utilised for "ASW, escort and trooping."[95]

Malaysia

Moving on to the Malaysian experience of the influence of the requirements of policy and strategy, it is evident that it shares some important similarities - as well as displays differences - with that of Indonesia. Most notable, in terms of shared experiences, are some of the same overlaps between the influence of strategic requirements and of the internal security dimension and a common concern about maritime national interests; geographic features again being an important determinant. Malaysian arms acquisitions were also unaffected by an action-reaction process of possible threats and low level competition - despite the existence of a number of territorial disputes which could have given rise to concerns about the prevailing military balance with other states.[96] The impact of military developments within the complex (for example, the increased presence of foreign submarines in

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[94] See Glazebrook, op. cit., p.16.

[95] Josephs, op. cit., p.20.

[96] The most obvious example here, of course, would be the dispute with the Philippines over the East Malaysian state of Sabah. Tim Huxley contends, however, that there is little evidence of a possible Philippine threat to Sabah leading to anything more than "contingency plans". Huxley, The ASEAN States' Defence Policies, 1975-1981, p.17. Moreover, given the Philippines' reliance on the US for external defence, the Philippine Armed Forces' conventional capabilities were very limited.

regional waters and the associated development of ASW capabilities), however, cannot be completely discounted.[97]

Despite these similarities, though, it appears harder to construct a suitable framework for discussing the influence of such requirements on Malaysian arms acquisitions than it was for Indonesia. Furthermore, the influence of such requirements can, at best, seem rather short-term and intermittent because of the rather unsystematic character of Malaysia's arms acquisitions: a character which was itself a function of the stop-go nature of the modernisation and expansion programme during the Second Cold War period. This stop-go nature was distinguished by the dearth of major acquisitions between the end of the first phase of PERISTA in 1983 (many of the planned developments in which were either deferred or scaled down on cost grounds after the economic downturn which began in 1981) and the signing of the Anglo-Malaysian MoU in 1988. Those purchases which were made during this period - with the exception of the 'Wasp' helicopters - were confined "to piecemeal acquisitions of essential support equipment, such as small transport aircraft and helicopters [for example, the HU-16Bs ordered in 1985]."[98] Nevertheless, it is possible to discern - during the bouts of acquisition and the interregnum between them - where the aspects of capability and national interest did have an impact on arms procurement.

In contrast to Indonesia, the need to maintain existing capabilities actually resulted in only a limited number of acquisitions, although these are significant in the context of Malaysia's overall acquisitions. The main reason for this

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[97] Malaysia also shared the same sort of concerns displayed by Indonesia (albeit not generated by regional leadership anxities) about the introduction into the region of F-16s. One of the reasons for the inclusion of 'Tornado' aircraft on the priority equipment list outlined in the 1988 MoU (Memorandum of Understanding) with Britain - although the order never eventuated - was that unfavourable comparisons were being made by Malaysian military officials with Malaysia's neighbours' air forces' inventories. See FEER, 24 November, 1988, p.23; and Acharya, Arms Proliferation Issues in ASEAN, p.254.

[98] FEER, 24 November, 1988, p.23. The unsystematic and piecemeal nature of Malaysian arms acquisition could also be ascribed to Malaysian defence policy as a whole. Malaysia, Stubbs contends, has no "fully fleshed out defence policy but rather a series of policy statements". Richard Stubbs, "Malaysian Defence Policy: Strategy versus Structure", Contemporary Southeast Asia, Vol.13, No.1, June 1991, p.53.

was that although Malyasia had embarked on an expansion of its conventional capabilities in the mid-late 1960s, this expansion had been on a much smaller scale than Indonesia's and thus there were not the same number of weapons which needed replacing.

During the 1970s, in fact, as part of Malaysia's move towards "self-reliance" in the aftermath of the withdrawal of British forces,[99] Malaysia coud be said to have still been *creating* a limited conventional war capability. The need for the creation of such a capability being reinforced by the regional instability engendered by the communist victories in Indo-China which saw "the MAF [Malaysian Armed Forces] beginning to examine conventional warfare concepts, organisation and structure".[100]

At the outset of the Second Cold War period, one of the most pressing needs was for a replacement for the RMAF's jet trainers - the 'Tebuans' (Canadian CL-41Gs).[101] In early May 1979 the Defence Minister announced that the RMAF would replace these trainers with new aircraft as the 'Tebuans' would reach the end of their life expectancy in two years.[102] The imperative for their replacement was made more acute by the third crash of the type since January at the end of the month, which threatened to lead to their permanent grounding and the dramatic curtailment of pilot training. The compulsion for an urgent stop-gap replacement - and a desire to evaluate potential long-term ones - led to an order for four F-5Fs in 1979. The Italian MB-339A was eventually selected as the replacement jet trainer and 12 of these aircraft were ordered in 1982.

The requirements for pilot training actually increased once the decision had been taken to acquire the A-4s which, once

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[99] Alagappa, op. cit., p.181.

[100] Mak, op. cit., p.128.

[101] The 'Tebuans' also constituted the RMAF's main counter-insurgency capability at this time, although it had already been decided that this capability would be expanded with the acquisition of the A-4s: the A-4s being intended to replace the 'Tebuan' "operational squadron" in this role. Ibid., p.185.

[102] See Straits Times, 16 May, 1979, p.13.

delivered, would more than double the RMAF's frontline combat aircraft. To cater for this expansion 44 Pilatus PC-7 'Turbo Trainers' were ordered in 1981, with their delivery both preceding and being contemporaneous with that of the 'Skyhawks'. The PC-7s were eventually intended to replace the RMAF's 'Bulldog' 102 trainers which had been obtained in the early 1970s.

A requirement for replacement equipment also had a partial influence on the decision in 1977 to acquire new armoured vehicles for the Army. Its existing 'Ferret' scout cars were thought to be soon nearing the end of their operational lives and the 'Commando' V-100 APCs acquired in 1971 were now somewhat dated having been superseded in production soon after Malaysia received them by the more advanced V-150 version.[103] More importantly, however, the decision to significantly increase - quantitatively and qualitatively - the Army's mechanised capability (reflected in the 1977 order for 'Commando' V-150s and the 1981 orders for 'Condor' APCs and 'Sibmas' armoured fire support vehicles) resulted from the ongoing build-up of the MAF's conventional capability and, especially, from the requirements of counter-insurgency operations (see Chapter IV).

The RMN (Royal Malysian Navy) had little need for replacement equipment to maintain its existing capability, particularly given the modernity of its principle combat element - the eight FAC (the four Swedish 'Spica-2' class vessels only being delivered in 1979). Instead, the small size and composition of the navy, given Malaysia's extensive maritime interests and the increasing focus on them, meant that the requirement was for it to be considerably expanded. The only example of the need for replacement equipment

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[103] A good deal of confusion surrounds the exact model of the 'Commando' APC which the new vehicles ordered in 1977 and subsequently were intended to replace. Alagappa, for instance, states that the new vehicles ordered in 1981 and 1982 under PERISTA were intended to replace 'Commando' **V-150s** (along with Panhard M3 APCs and, presumably, Panhard AML armoured cars which Malaysia also possessed). Alagappa, op. cit., p.184. As Malaysia had only just ordered a large number of 'Commando' V-150s in 1977 as part of the expansion of the Army's mechanised capability, he is obviously referring to the earlier **V-100** versions.

Many of the 'Ferrets', incidentally, were eventually modernised rather than replaced.

leading to the acquisition of new ships during the Second Cold War period was the purchase of four 'Lerici' class MCMVs (mine countermeasures vessels) ordered in 1981 to replace all the RMN's existing minesweepers.[104]

The gradual expansion of the RMN which had been underway prior to the start of the Second Cold War had, Mak contends, been necessitated by the formation of the Federation of Malaysia in 1963 and the need to protect resources; particularly oil and gas which Malaysia had "begun exploiting ... in the late 1970s."[105] These two aspects were also emphasised in PERISTA which, amongst other capabilities, stressed the need for the MAF to have the capability to "secure the lines of communication between penisular Malaysia and Sabah and Sarawak, and to protect Malaysia's offshore interests."[106]

The significance of these concerns was heightened in the early part of the Second Cold War period by a number of interconnected developments. First, like Indonesia, Malaysia was concerned about the implications of possible Vietnamese activity in the South China Sea, especially in the light of Malaysia first stating a claim in the Spratly islands with the publication of a new map of its continental shelf in 1979.[107] Secondly, Malaysia declared its own EEZ in 1980 to secure access to its vital maritime resources and also had its territorial waters expanded under the 1982 UNCLOS.[108]

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[104] The Defence Minister had announced in 1979 that the RMN's existing minesweepers (six British 'Ton' class vessels) were to be relaced 'soon'. See Straits Times, 16 May, 1979, p.13.

[105] J.N.Mak, "The Modernization of the Malaysian Armed Forces", Contemporary Southeast Asia, Vol.19, No.1, June 1997, p.35.

[106] Alagappa, op. cit., p.184.

[107] See Stubbs, op. cit., p.46.

[108] In reference to the latter which had duly recognised Indonesia's 'archipelagic principle', Tim Huxley notes that Malaysia was concerned about the "implications" of this principle "for uninterrupted sea communication between peninsular Malaysia and the Borneo states." Huxley, The ASEAN States' Defence Policies, 1975-81, p.25. It might be possible, therefore, that Malaysia did take account of Indonesia's naval expansion in planning its own.

Thirdly, there was an increased incidence of piracy and illegal immigration.[109]

Of all these developments, it would appear to be the need to protect maritime resources which had the greatest effect on the RMN's expansion and on the type of ships and other weapons procured. This view is shared by Tim Huxley who cites the opinion of a retired RMN official to the effect that:

> by 1981 the protection of Malaysia's EEZ in general and oil and natural gas drilling platforms in particular, had become the principal operational role, and reason for continuing expansion of the Malaysian navy.[110]

An expansion of the RMN was certainly required because its composition in 1979 was mostly unsuited to the extended, long-range, patrols which were necessary to protect the EEZ. With the exception of two British frigates, the only other vessels suited to patrolling were limited to coastal waters. The FAC were primarily designed for anti-ship operations and with their "limited durability in the open seas ... [were] unsuitable for patrolling and protecting offshore installations."[111] To establish the required capability, therefore, Malaysia ordered two West German FS-1500 frigates in 1981 (these also being able to defend the SLOCs between East and West Malaysia with their anti-ship - a number of MM-38 'Exocets' also being ordered - and ASW capacity) and two OPVs (offshore patrol vessels) in 1983.[112] In addition, to enhance the utility of the frigate force for extended operations and improve naval defence overall, two support ships were also ordered in 1981. One of these ships

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[109] See Straits Times, 21 January, 1980, p.13.

[110] Huxley, The ASEAN States' Defence Policies, 1975-81, p.25. The importance of the EEZ was, it has been suggested, even greater in the wake of the economic downturn after 1981: "the oil and gas potential of the economic zone is of critical importance for Malaysia ... [to help] achieve a rapid economic turnaround". FEER, 29 September, 1983, p.40.

[111] Acharya, Arms Proliferation Issues in ASEAN, p.263.

[112] The initial plan had been to purchase two additional units of each type although this had to be scaled-down because of economic constraints.

was a "multi-purpose command support ship" and the other one was an "ammunition-carrying ship."[113]

To further improve maritime security capabilities, for both the protection of the EEZ and guarding the coastline against illegal immigration, the decision was also taken to form a maritme reconnaissance squadron for the RMAF, with three C-130H-MP aircraft being ordered in 1979.[114] The order for the two RF-5Es in 1980, it has been suggested, could also be viewed in this context.[115]

The importance of maritime national interests, and an indication of the enduring significance of this for Malaysian arms acquisitions, was such that the only acquisition of major weapons which occurred during the interregnum between 1983 and 1988 - except for the purchase of a single IPTN NAS-332 'Super Puma' ordered in 1987 for evaluation - was that of six 'Wasp' ASW helicopters ordered in 1987. These first six helicopters provided the basis for the formation of the RMN's air arm which was established in 1989 at Lumut on the west coast of Peninsular Malaysia - near the vital Strait of Malacca - for the purpose of "surveillance duties and anti-submarine operations."[116] The 'Wasps' could also be deployed on the two FS-1500 frigates, and on the British 'Mermaid' class frigate, to improve their capacity for ASW operations. A further six 'Wasps' were subsequently ordered in 1988, which thus doubled the RMN's air arm's stength.

Procuring these helicopters certainly seemed to fit in with the growing importance attached by Malaysia to ASW. An importance which reflected the aforementioned general concern within the region about the presence of foreign submarines. In 1985, in fact, Malaysia had requested

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[113] Alagappa, op. cit., p.185.

[114] See Straits Times, 11 May, 1979, p.9 and 13 June, 1979, p.10.

[115] See Acharya, Arms Proliferation Issues in ASEAN, p.258. Acharya also suggests that a squadron of the PC-7s provided a maritime surveillance capability too. Ibid. There is no other evidence, however, to support this contention about the PC-7s. All the PC-7s were either deployed to flying training squadrons or employed in a forward air control role.

[116] Straits Times, 9 May, 1990, p.19.

Australian assistance in training its naval personnel for ASW, with the Malaysian Defence Minister saying that such training was required "to equip the ... RMN with the expertise to counter intrusion of foreign submarines into its waters."[117]

Many of the items of equipment listed under the Anglo-Malaysian MoU in 1988 were also indicative of the importance attached to maritime security (as well as the continued need for modernisation): an importance which was reinforced by the skirmish between Vietnam and China in the Spratly Islands in March.[118] None of the items under the MoU - many of which were ultimately dropped on cost grounds - were ordered and delivered before the end of 1989, though, and are thus outside the scope of this study. Apart from the additional 'Wasps', the only major weapons ordered and delivered in the 1988-1989 period were nine FH-70 artillery pieces and these actually represented a long intended purchase of medium artillery first outlined in PERISTA and subsequently postponed from the Fourth to the Fifth Malaysia Plans.[119]

Thailand

For Thailand, as was noted at the beginning of the chapter, the influence of all these aspects can be seen in the context of the clearly identifiable threat posed by Vietnam which, in any case, marginalised the impact of the less intense form of the action-reaction process. Thus, when equipment was procured to maintain existing capabilities through replacement and modernisation , or to protect national interests, it has been discussed in the preceding chapter on external threat. The exception to this is the acquisition of training aircraft and helicopters which, although obviously related to the expansion of the RTAF brought about in response to concerns about Vietnamese and Soviet air force

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117 "ASEAN Notes", Pacific Defence Reporter, August 1985, p.20. This did not mean, however, that "there *were* [emphasis added] frequent intrusions". Ibid.

118 For details, see FEER, 13 October, 1988, pp.85-86; 24 November, 1988, pp.23-24; and 8 June, 1989, p.30

119 See Alagappa, op. cit., p.189. Stubbs describes this order - although it was eventually only for 15 and not 30 pieces - as "a Euro-purchase outside the MOU". Stubbs, op. cit., p.53.

capabilities, seems more suited to inclusion here. These aircraft and helicopters were not actually a reaction to any external stimulant and their acquisition fits in with the general requisite to preserve and develop training capabilities which had been much in evidence in terms of the other states.

To meet the continued requirement for flying training, and the need to expand this in tandem with the expansion of the RTAF's combat strength, Thailand ordered a range of aircraft to fulfil the need for planes at all stages of the training process: T-33As were orderd in 1982 and 1988 for advanced jet training; F-5Bs in 1982 for operational conversion; T-37B/Cs in 1979 for basic jet training; and 'Fantrainers' in 1983 for primary training. The requirement for pilot training was evident also in the orders for TH-300C helicopters in 1986 and 1987 for the RTA, which were probably meant to replace the ageing TH-55As in this role.

Burma

Precisely the same point about context can also be applied to Burma. In this case, though, it is the internal security dimension which is of the greatest significance. Thus, Burma's need to maintain its air force's training and counter-insurgency capability through the replacement of its elderly AT-33As and T-37s was overwhelmingly determined by the pressure of the internal security dimension. It is to that pressure which we must turn next.

The pressure of the requirements of defence policy and strategy has influenced each state's arms acquisitions in one way or another. Although in the cases of Burma and Thailand its impact appears rather minimal because of the need to see it in the context of more influential pressures, its relevance is still discernible nonetheless in both states' orders for a variety of training aircraft. The paramount reason for the pressure's general applicability is that the three aspects it contains (military capability, potential threats and national interests) are more or less continous features of all the various states' defence equations: national interests, of course, are

exceptionally enduring even though they may be liable to shifts in emphasis.

The pressure's impact on arms acquisitions was greatest in Singapore. This resulted from the city state's strategic culture, its sense of vulnerability and its overwhelming reliance on hardware. It was also significant for Malaysian and Indonesian arms acquisitions where the geographic make-up of both states meant a premium was placed on maritime capabilities, especially in the light of the increased importance attached to maritime territory and resources which emerged in the Second Cold War period. For Vietnam, the need to acquire major weapons to pursue its military campaign in Cambodia, in fulfilment of national interests which extended beyond its borders, meant that the pressure took on a rather unique, and essentially one-dimensional, form.

Chapter IV The Internal Security Dimension

Having more or less thoroughly explored the SE Asian arms dynamic's external dimension, it is now time to turn our attention more fully (acknowledging the nexus between the two provided by aspects of the requirements of defence policy and strategy) to the internal one.

In contrast with the case of external threats, where the action-reaction process derived from the superpower 'arms dynamic' provided a clear general analytical approach as a starting-point, it is far less evident that the domestic structure model can perform the same function here. This is despite the fact that the internal security dimension as an individual pressure was identified with the domestic structure model sub-set in the introduction. Indeed, most elements of this model have little or no utility for an analysis of secondary arms dynamics, such as the SE Asian one, consisting of states which are either part- or non-producers.

Although Buzan recognises that there are elements of the domestic structure model which do have general applicability (mainly the role of "organizational pressures from the military establishment ...and the domestic insecurity logic of autism"),[1] these elements appear to have been either inapplicable, or of marginal relevance, to the states under consideration here.[2] Of more pertinence to our analysis is the point he makes in his concluding discussion on the relationship between arms production and the 'arms dynamic': namely, that the role of domestic structure will differ from primary to secondary arms dynamics and that the abscence of the 'institutionalisation' of R & D and production factors means that *different internal factors* will come into play.[3]

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1 Buzan, An Introduction to Strategic Studies, p.104.

2 The 'domestic insecurity logic of autism' has already been considered as part of the complex linkage of internal and external security concerns, and been found to be wanting in many respects. The non-existent, or at best marginal, influence on arms acquisitions of military pressure as an independent factor will be discussed in the conclusion. This is not to say, however, that the military did not have an input into the identification of threats and the drawing up of defence policies and strategies - as a componenet of the bureaucratic politics process - and thus an important influence on the means of responding to, or furthering, them.

3 Buzan, An Introduction to Strategic Studies, p.130.

Viewed in the context of the SE Asian 'arms dynamic' during the Second Cold War, it is readily observable that the most important different internal factor which might have influenced arms acquisitions was that of internal military security threats which was one of those domestic (or non-interactive) factors referred to earlier. In spite of the reorientation of many of the states' security thinking towards external concerns and away from internal ones, there were still instances in which the existence of specific, tangible, internal security threats necessitated a military response. As already noted in the context of external threat assessment, of course, arms procurement was not just influenced by actual threats but also potential threats, and thus an assessment of the impact of the internal security threat factor needs to include the idea of potential internal military threats, or contingencies, too.

In terms of weak, or developing, states, these actual and potential internal military security threats usually took the form of insurgencies: insurgencies which were motivated and sustained by a variety of forces (for example, communism; ethnic-nationalism; and religion). Generally speaking, such insurgencies usually remained at the so-called 'guerilla phase' and did not progress to the stage of mobile, conventional, warfare (or a Maoist 'war of movement').[4] The military nature of such insurgencies, however, has meant that the idea that they can actually influence the acquisition of major weapons - in effect, that the existence of such internal threats could constitute the internal security dimension of the SE Asian 'arms dynamic' - could be called into question.

Indeed, it might be suggested that the greater the focus on the internal security dimension (in terms of the threat posed by insurgencies) in a state, the less influence this pressure or factor will have on major weapons acquisitions. The point here is that the appropriate military response to such threats would not be a large, conventionally armed, force, but something smaller and less heavily armed. The need for major weapons, therefore, would be obviated. Nicole Ball,

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4 For a classic discussion of these stages in terms of communist insurgency, see Sir Robert Thompson, Defeating Communist Insurgency, (London: Chatto & Windus, 1966), Chapter 3.

for example, contends that in the case of such internal threats the purchase of advanced weapons systems is unlikely to have much (if any) utility and that counter-insurgency operations can best be waged by well trained, and lightly equipped, infantry.[5] In the SE Asian context, Ball's contention is supported, and applied to the utility of such threats as an influence on major weapons procurement, by Karp. After recognising the importance of "domestic insurgencies" for SE Asian states, he argues that "they represent a poor guide to military procurement", particularly as the "conduct of counter-insurgency warfare with major weapons was largely discredited by the US failure in Vietnam."[6]

Significantly, however, for the purposes of determining whether or not internal security threats such as insurgencies can constitute the internal security dimension and provide a general analytical approach at the same time, Karp immediately follows his contention with the statement that: "Propeller aircraft and armoured cars are the largest items routinely deployed against insurgencies today."[7] The implication here, which is also evident in Ball's reference to 'advanced weapons', is that although counter-insurgency operations may not require the use of large numbers of technologically advanced weapons, the appropiate military response to insurgencies does not preclude the need for certain types of major, low-tech, weapons. Successful

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5 See Ball, op. cit., pp.82-83. It is noteworthy in this respect that she cites counter-insurgency operations in Burma as an example of the effectiveness of infantry units. Ball's general point has also been well made by Thompson, who states that the "requirement is for a small, elite, highly disciplined, lightly equipped and aggressive army, with a supporting air force and navy of sufficient capability to make the army highly mobile". Thompson, Defeating Communist Insurgency, p.62. The point about the role of the air force, especially, and the need for mobility, is also highly significant in the context of the discussion here.

6 Karp, op. cit., p.340. It is worth noting the argument put forward by Kolko, though, that the US was not actually seeking to pursue a counter-insurgency strategy based on the use of major weaponry but, rather, was just using the Vietnamese experience as a way of 'testing' its strategic doctrines and military hardware for a possible confrontation with the Soviet Union. Gabriel Kolko, Vietnam. Anatomy of War 1940-1975, (London: Allen & Unwin, 1986), p.188.

7 Karp, op. cit., p.340. Helicopters (both combat and transport) could also be added to this list.

counter-insurgency operations may, in fact, actually require the acquisition and utilisation of such weapons.[8]

It would seem, therefore, that it is actually in relation to quantity and technological level that doubts are raised about the influence of insurgencies on arms acquisitions, rather than in relation to the idea *per se*. Indeed, the point is well made by Nutter that internal threat assessment is not irrelevent, but is of less relevance in determining high-tech hardware acquisitions than external military threat assessment.[9]

If limited acquisitions of low-tech weapons in a few major categories can be influenced by specific internal security threats, then it would not be unreasonable to suggest that concerns about the potential emergence of such threats may also influence arms acquistions in those states prone to such threats. This would appear to be particularly likely in those states which are characterised by high levels of ethnic and religious diversity and which are geographically spread over a large area: the metropolitan centre (including major military facilities) may thus be some distance away from areas of potential unrest. In these cases, arms acquisitions would not just be in the areas discussed above, but also in those areas relating to the creation and development of air- and sealift capabilities.

The only other different internal factor which appears to lend itself to a brief examination, could be described as a 'structural' factor: one which relates to both the nature of the state (weak) and to that of the international system (hierachical).

Developing, or Third World, states will, like others in the international system, seek to develop their power capabilities (including military strength) in order to improve their position in the hierachy and enhance their autonomy and security. In

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8 Thompson, in noting the importance of the air force in counter-isurgency operations (in both transport and tactical support roles), argues that the versatile nature of the helicopter means that it "is one of the greatest modern assets to a government faced with insurgency." Thompson, Defeating Communist Insurgency, p.106. He also goes on to recognise that in instances where insurgents or their supplies are being moved by sea, the acquisition of "small patrol vessels" can be useful. Ibid., p.108.

9 Nutter, op. cit., p.30.

the case of Third World states, however, their desire to improve their position mainly reflects the "primary objective" of their ruling elites which is "to reduce the deep sense of insecurity from which Third World states and regimes suffer domestically and internationally."[10] Power, therefore, Ayoob contends, is seen not just as an "end in itself but as an instrument to ease their security predicament."[11] Acquiring and enhancing a military capability, therefore, could be seen as a partial response to a condition of internal insecurity.

The validity of this limited interpretation of the structural factor in the case of the SE Asian 'arms dynamic' during the Second Cold War rests on the extent of the insecurity, or weakness, of the SE Asian states under consideration and the extent to which they are both aware of an international hierachy of military strength and try to improve their position in it.

On both counts, however, the argument is against the structural factor playing any significant role at all. As was argued in the chapter on external threat assessment, several of the states were somewhat less weak during this period than before and, in the case of the weakest, Burma, its virtual opting out from the international system meant its weakness had essentially been internalised. Moreover, the idea that the SE Asian states would acquire arms to further their security through improving their position in the international hierachy can largely been deemed irrelevant.[12] To the extent that they do take account of an international - military - hierachy, then it is almost solely in terms of weapons technology and thus it is the technological imperative which is at work.

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[10] Ayoob, The Third World Security Predicament, pp.2-3.

[11] Ibid., p.4.

[12] Mr. Daljit Singh, a Senior Fellow at the Institute of Southeast Asian Studies in Singapore and a former official in Singapore's Ministry of Foreign Affairs, for example, contends that Singapore would probably consider that idea irrelevant, as would the other ASEAN members. Arms acquisitions, he contends, occur because of the requirements of individual security, modernisation and the need to keep abreast of technology. Correspondence, September, 1997. It is an idea which is also absent from the literature.

In view of the lack of relevance of this structural aspect as another different internal factor which could be a component part of the internal security dimension of the SE Asian 'arms dynamic', an assessment of the significance of this dimension for that dynamic necessarily revolves around the impact of specific internal security threats posed by domestic insurgencies and the potential development thereof.

Contrary to previous practice, where the initial discussion was on those states in which the particular pressure was of greatest relevance and significance, it is useful here to do the opposite and immediately identify and discuss those states in which the internal security dimension was of little or no relevance. To do so reinforces the notion that arms acquisitions in SE Asia during the Second Cold War generally owed less to domestic factors such as insurgencies and more to external ones; notwithstanding the fact that the internal security dimension was of considerable importance in terms of one or two individual states.

For Singapore, Vietnam and Thailand, albeit for different reasons, it is clearly evident that the internal security dimension had little or no relevance for arms acquisitions.

Singapore and Vietnam

In the case of Singapore, the complete absence of either a specific or potential domestic insurgency in the Republic during the Second Cold War totally negates the role of the internal security dimension in arms acquisitions.[13] There is no linkage between any of the acquisitions of major weapons for the SAF and the requirement for counter-insurgency operations in the Republic.

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13 This is not to say that the threat of (communist) insurgency was entirely absent. Indeed, Singapore was indirectly threatened by the then prevailing CPM (Communist Party of Malaya) insurgency in Malaysia as the aim of the CPM was to overthrow both the Malaysian and Singaporean governments. In Singapore, however, the CPM was unable to get beyond the stage of limited subversion in the 1970s, and in the 1980s its focus was on building up (or rebuilding) its organisational and support networks. See Lau Teik Soon, "National Threat Perceptions of Singapore", in Morrison, op. cit., p.119. Moreover, the CPM insurgency in Malaysia itself began to tail-off from the early 1980s, making even the indirect threat it posed an extremely remote one.

Vietnam, on the other hand, did face specific threats posed by domestic insurgency: most notably that by Montagnard tribal groups in the Central Highlands operating under the umbrella of FULRO (Front Unifie Liberation des Races Opprimes - United Front for the Liberation of Oppressed Races).[14] The nature of this threat and the Vietnamese government's response to it, however, suggests that the internal security dimension had no impact on arms acquisitions.

The threat posed by FULRO, which was the largest and the most active of the insurgent groups, was chiefly confined to its own locale and limited in its extent. Its activities primarily revolved around acts of sabotage and ambushes, though there were reports of open military engagements in the Highlands involving large numbers of guerillas.[15]

The generally limited nature of the military threat posed by FULRO meant that the primary responsibility for dealing with it was vested in the forces operating under the auspices of the Ministry of the Interior. According primary responsibility to the Ministry's forces also reflected the policy of the government that the best counter-insurgency strategy to pursue was not a military one, but a "counterorganizational" one aimed at dividing and gradually demolishing the insurgent movement.[16] The employment of the PAVN, Pike notes, was essentially restricted to responding to actual "guerilla attacks",[17] with the pattern of operations by the PAVN generally consisting of "military sweeps or mop-up campaigns, often involving battalion-size units and

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[14] A variety of other insurgent groups were also in existence (for example, the National United Front for the Liberation of Vietnam - NUFLVN). These groups, however, had limitations in their numbers, the duration of their activity or the range of their operations. The NUFLVN, for example, was reported to have focussed on "political works" and sought to avoid any "military engagement". FEER, 18 November, 1987, p.30.

[15] See Pike, PAVN, p.80. These reports mentioned figures of up to 1000 fighters, but Pike contends these "probably are exaggerated." Ibid.

[16] Ibid., p.82.

[17] Ibid., p.81.

sometimes employing helicopters to attack resistance centers in the remote areas."[18]

The restricted role played by the PAVN in countering the insurgency (bearing in mind too the physical nature of the area of operations), plus the very limited nature of the military threat posed by the insurgents, meant it was very unlikely that Vietnam would have requested any major weapons from the Soviet Union specifically to deal with it. It is also unlikely that the Soviet Union would have supplied weapons specifically for that purpose in any case, given the overriding need to equip PAVN units for conducting operations in Cambodia and for countering the threat from China.

This is not to say, however, that major weapons supplied by the Soviet Union to the PAVN had no potential application in countering the insurgency: Pike's point about the employment of helicopters may be relevant in this context. There is a possibility that some of the Mi-8 utility transports acquired in 1979-1980 (along with those already in the VPAF's inventory) could have been employed in the extensive operations against FULRO in the Central Highlands along the border with Cambodia from late 1980 to early 1981 when the Vietnamese government was acutely concerned by reports of links between FULRO and the Khmer Rouge.[19] The Khmer Rouge link is the crucial factor here, however. If any helicopters were employed in these operations they were probably diverted from operations in Cambodia itself.[20]

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[18] Ibid., p.79. The generally restricted role of the PAVN is also acknowledged by Thayer, who notes that over "several years, VPA [Vietnam People's Army] main force regular divisions made periodic sweeps over the remote hinterland in an effort to wear FULRO units down." Thayer, The Vietnam People's Army, p.12.

[19] See FEER, 30 October, 1981, pp. 9-10, and 8 October, 1982, p.14.

[20] With regard to the Mi-24s acquired in 1984-85 - an acquisition which was clearly influenced by the operational requirements of the PAVN in Cambodia - there was little likelihood that they would even have been diverted to short-term counter-insurgency operations in Vietnam. By that time FULRO was regarded by the Vietnamese military as more or less a spent force. Thayer cites the comments of General Tran Cong Man to this effect, who contended in an interview in 1985 that FULRO's "activities are inconsiderable. Now they are without food and face starvation." Thayer, The Vietnam People's Army, p.12.

Thailand

For Thailand, there are parallels with Vietnam, though the magnitude of the insurgency threat and the military response to it were both of a rather different order. The counter-insurgency strategy pursued by Thailand for most of the 1979-1989 period also emphasised the primacy of a 'political' approach. Military operations for much of this period were conducted on a selective, though more intense basis, by conventional forces employing limited elements of major weaponry and, gradually, the main responsibility for counter-insurgency was given to paramilitary forces. Finally, if for Vietnam its operations in Cambodia represented one of its most pressing tasks, then Thailand's most pressing task was, of course, the need to respond to the threat posed by the forces which Vietnam had deployed there. The internal security dimension, therefore, had almost no impact on arms acquisitions by Thailand.

Interestingly, however, an analysis of a slightly different historical period would have reached a rather different conclusion. From the mid-1970s until 1979, Thai national security planning was very much preoccupied with internal elements and, especially, the growing CPT insurgency. This concern was certainly influential for arms acquisitions with Thailand acquiring major weapons specifically for counter-insurgency operations. In 1979, Thailand was reported to have begun receiving both 'Scorpion' light tanks and LAV-150 'Commando' APCs for this purpose.[21]

The year 1979, though, as it turned out, marked a watershed in the CPT insurgency as activity peaked in February 1979 and then went into steady decline until its effective end in 1986/1987. Moreover, the following year, 1980, the government's overall counter-insurgency approach underwent a change of emphasis and there was also a change in the RTA's tactics.

Somewhat paradoxically for Thai defence thinking, Vietnam's invasion of Cambodia (when added to its existing influence over Laos) acted as a catalyst for a series of developments

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21 See FEER, 1 June, 1979, p.15.

which seriously weakened the CPT's position in the north and north-east of Thailand. In an actual reversal of Thai concerns about internal-external linkages,[22] 1979 saw Laos expel the CPT from its bases there; Vietnam expel it from bases in Cambodia; and China begin to cut off its aid from the CPT. These problems compounded the growing difficulties the CPT was facing due to internal divisions arising from ideological differences.

The exogenous and endogenous changes which were, ultimately, to weaken the CPT fundamentally, occurred at a time when the results of the Thai government's earlier concern about the pressing nature of the insurgency and the concomitant need to rethink its counter-insurgency strategy became evident in the Order of the Prime Minister's Office No. 66/2523. This Order refocussed the strategy towards the 'political', with military operations essentially being of secondary importance and of a 'supportive' nature.[23]

Almost simultaneously, and influenced not only by the change in overall strategy but also by the local situation and the need to 'economise' in terms of troop deployments, the army in southern Thailand was changing its tactics for dealing with the CPT and the CPM.[24] Instead of extended, large-scale, operations (often in conjunction with Malaysian forces), the new tactical approach was to use long-range patrols who

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22 The Thais had traditionally been concerned that the CPT insurgency was supported, and could be strengthened, by links with external communist states who provided the CPT with propaganda and *materiel* support. These concerns were acute in the aftermath of the Soviet-Vietnamese Treaty of Friendship and Co-operation and Vietnam's subsequent invasion of Cambodia, when it was thought that both states could support an intensified insurgency leading to the possible loss of the 16 north-eastern provinces. See Sukhumbhand Paribatra, "Thailand", in Chin, Defence Spending in Southeast Asia, p.79.

23 See Kusuma Snitwongse, "Thai government responses to armed communist and separatist movements", in Chandran Jeshurun (ed.), Governments and Rebellions in Southeast Asia, (Singapore: Institute of Southeast Asian Studies, 1985), p.260.

24 The CPM had extensive base areas in southern Thailand, mainly in the Betong salient, with many of its members originating from Thailand. See Leonard C. Sebastian, "Ending an Armed Struggle Without Surrender: The Demise of the Communist Party of Malaya (1979-89) and the Aftermath", Contemporary Southeast Asia, Vol.13, No.3, December 1991, pp. 278-279.

could identify targets which would then be attacked by "mobile strike forces".[25]

This tactic of identifying and then attacking communist 'base areas' in strength was also employed in the north when, in 1981, a large campaign was mounted against three companies of insurgents who were hindering the development of a vital road (itself an important component of the development side of the counter-insurgency strategy). Following the identification of the communists' base areas, helicopter gunships carried out defence suppression before an 'insertion force' was landed by transport helicopters. Artillery was then used to bombard subsequent guerilla strong points before the troops advanced, with any remaining 'pockets of resistance' being attacked by aircraft.[26]

The campaign proved to be the largest of its type - it was not repeated in the remaining duration of the insurgency, in either the north or the south - and it certainly entailed the most extensive use of major weapons in a counter-insurgency context in Thailand in this period. The equipment employed in this operation, though, was essentially of Vietnam war era vintage (UH-1 helicopters and Cessna 'Bird Dog' counter-insurgency aircraft) and was certainly not recently acquired. A continued need for transport helicopters in subsequent counter-insurgency operations may partly have influenced the orders for new and replacement UH-1s in 1982 and 1984 for RTA aviation, though a need for these to move troops in the border area near Cambodia is also obvious.

The evidently limited relevance and significance of the internal security dimension as an individual pressure is further illustrated by the marked decline in the level of CPT insurgency after 1981 and the reduced role of Thai regular forces in countering it. By the end of 1981 the RTA had declared that the insurgency (especially in the north) was 'coming to an end' and that the primary responsibility for counter-insurgency operations would be handed over to the paramilitary 'Ranger' forces.[27] Indeed, at the end of 1981 it

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25 FEER, 20 June, 1980, p.18.

26 See FEER, 8 May, 1981, pp.26-28.

was announced by the Assistant Army Commander-in-Chief, General Arthit, that 80% of regular army units involved in counter-insurgency operations in three army regions had been replaced by Rangers.[28] The RTA was clearly anxious to direct its attention towards the defence of Thailand's eastern border and back to its primary (military) responsibility - conventional war.[29]

The discussion now must necessarily shift to those remaining states in which the internal security dimension, whether manifested in specific or potential domestic insurgencies, is relevant, and assess its significance for arms acquisitions by those states.

Burma

For the Burmese army (and, indeed, the air force and navy too - both of which were tasked with counter-insurgency operations), in view of the absence of an external dimension in terms of either threats or strategic requirements, conventional war was very much a peripheral consideration. The army's primary role during the Second Cold War period was counter-insurgency and its structure and equipment was

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[27] See FEER, 9 October, 1981, p.23.

Ranger units consisted of lightly armed civilian volunteers who were tasked with guerilla-style operations against the CPT insurgents. They were recruited from villages in communist areas and returned to their villages after receiving basic weapons training. The initial development of Ranger units occurred in the late 1970s in response to increased fears about the external threat posed by a communist Indo-China, but the direct threat resulting from the Vietnamese invasion of Cambodia accelerated it substantially. Details from FEER, 18 December, 1981, p.15.

The desire to reduce, or limit, the role of the regular army in counter-insurgency operations had, arguably, already been evident in the case of Muslim separatists in the south. Here, a 400-strong police task force had been established in 1980 to deal with increased unrest generated by the Pattani United Liberation Organisation. See FEER, 9 October, 1981, p.23. It is debateable, though, as to whether or not the separatist campaign actually necessitated a conventional military response at all as it almost wholly consisted of acts of subversion and never really reached the stage of insurgency.

[28] See FEER, 18 December, 1981, p.15.

[29] One senior officer was quoted as saying that: "The army is trained for a conventional war and is not exactly fit for a protracted guerilla war". Ibid. The RTA retained a limited counter-insurgency role, in support of Ranger units operating against the CPT, until 1986. It conducted its last counter-insurgency operations, against the remnants of the CPM in the south, in 1987. See FEER, 28 May, 1987, p.24.

wholly directed towards the conduct of counter-insurgency operations. Indeed, Tin Maung Maung Than makes this point with reference to the Tatmadaw (the Burmese armed forces) as a whole: "The organization, deployment and equipment of the tatmadaw indicate a posture dedicated to low intensity conflict for COIN [counter-insurgency] warfare." [30]

This focus on counter-insurgency during the Second Cold War did not, of course, represent a new departure for the Burmese armed forces. Instead, it represented a continuation of past practice. The Burmese government had faced a combination of insurgencies by the CPB (Communist Party of Burma) and various ethnic groups, almost since the time of independence in 1948.[31] These insurgencies remained a pressing concern during the 1979-1989 period,[32] despite intensive counter-insurgency operations in the 1960s and early 1970s which had seen the government effectively drive the insurgents (especially the CPB) out of the highly sensitive Irrawaddy Delta areas and into the hills in the north and east.[33]

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[30] Tin Maung Maung Than, "Burma's National Security and Defence Posture", Contemporary Southeast Asia, Vol.11, No.1, June 1989, p.47. Taylor contends that the Burmese military's force structure and equipment was conditioned by economic factors, the nature of the opponents faced and by the type of terrain in which they had to operate; all of which "led to the development of relatively small and lightly equipped armed forces .... [devoid of] expensive and technologically sophisticated equipment." Robert H. Taylor, "Burma: Defence Expenditure and Threat Perceptions", in Chin, Defence Spending in Southeast Asia, p.263.

[31] The deep-seated nature, and considerable extent, of insurgency in Burma is encapsulated in one of Martin Smith's chapter titles: 'Insurgency as a Way of Life'. This chapter details the origins of insurgency in Burma and the reasons for its sustained nature. Martin Smith, Burma: Insurgency and the Politics of Ethnicity, (London: Zed Books, 1991), Chapter 5. Smith's impressive work provides details on all the insurgent groups, along with the waxing and waning of their campaigns throughout the post-independence period.

[32] In public, however, the Burmese government actually sought to play down, or even ignore, the insurgencies it faced with the Defence Ministry frequently under-reporting the strength of some of the ethnic insurgents. See FEER, 29 May, 1981, p.20. Moreover, Martin Smith notes that only in the aftermath of the military's takeover in September 1988 was the extent of the insurgencies openly acknowledged, as was the severity of the problems they posed. Smith, op. cit., p.18.

[33] The basis of this campaign was the so-called 'Four Cuts' strategy which aimed "to cut the four main links (food, funds, intelligence and recruits) between insurgents, their families and local villagers." Smith, op.cit., p.259. The strategy focussed on the creation of secure areas through the establishment of 'strategic hamlets' (the idea

The priority accorded to the continued threat of insurgency, and the ever-present need to mount extensive counter-insurgency operations, suggests that - within the context of the Tatmadaw's traditional force structure and limited equipment inventory - the internal security dimension as an individual pressure or factor would be both relevant and significant in the case of Burma. The more so, perhaps, given the Tatmadaw's willingness to employ major weapons in several of the counter-insurgency operations it mounted in the 1960s and 1970s. Smith, for example, notes that the Tatmadaw used air support to cope with CPB "human tidal-wave tactics" in the defence of Kunlong in 1970, and aerial bombing of Mong Yang as part of its successful attempt to recapture it in 1973.[34]

Paradoxically, however, the very success of the Tatmadaw's counter-insurgency operations in the 1970s made the subsequent use of the limited major weaponry it possessed less efficacious. Moreover, the fact that the Tatmadaw had such a very limited inventory,[35] combined with the difficulties in keeping even this equipment operational and the protracted paucity of funding available for arms procurement, all meant that the use of major weapons in counter-insurgency operations during the Second Cold War period was very restricted. This is not to say that the internal security dimension was irrelevant or insignificant (quite the contrary in fact), but, rather, that it only led to very minimal arms acquisitions and many of these were clearly intended to perform more than one function.

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developed by Thompson, as Smith duly notes), following on from which the Tatmadaw would then go on the offensive. Ibid., pp.259-260.

[34] Smith, op. cit., pp.254-255. Tin Maung Maung Than also notes the army's use (albeit limited) of artillery. See Tin Maung Maung Than, op. cit., p.49.

[35] For a detailed analysis of the Tatmadaw's inventory prior to 1988, see the relevant sections in Selth's chapters on the army, air force and navy. Andrew Selth, Transforming the Tatmadaw: The Burmese Armed Forces since 1988, (Canberra Papers on Strategy and Defence No.113), (Canberra: Strategic and Defence Studies Centre, 1996), Chapters 3, 4, and 5. Analysis of the Burma Air Force's inventory prior to 1988 can also be found in a subsequent article by the same author. Andrew Selth, "The Myanmar Air Force Since 1988: Expansion and Modernization", Contemporary Southeast Asia, Vol.19, No.4, March 1998, pp.389-395.

The success in pushing the insurgents out of the plains in the 1970s meant that counter-insurgency operations in the 1980s were largely conducted in the remote, hill, terrain of the north and north-east, and were generally characterised by low-intensity infantry operations as part of the government's overall strategy of "gradual attrition".[36] The nature of such operations rendered the Tatmadaw's armour and artillery either redundant or virtually redundant,[37] whilst when it did seek to employ limited air support in an attack on the Karen National Liberation Army in 1979, it reportedly had one of its AT-33A 'Shooting Stars' 'crippled' by ground fire.[38]

The effective loss of this single AT-33A can be seen as highly symbolic. First, it reduced the already limited number of ground attack aircraft the air force possessed (a limitation which was exacerbated by the serviceability problems the air force faced)[39] and made the Tatmadaw reluctant to lose any more. Secondly, and inter-related, it reinforced the already evident need for additional, and more modern, counter-insurgency aircraft; particularly in the light of the then concerns about the CPB's increased strength and the re-establishment of the Shan State Army in northern Shan state.[40] Both of these developments necessitated increased

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[36] Smith, op. cit., p.99. The government was compelled to adopt such tactics, he contends, because of a realisation that the scale of the insurgencies (both in terms of the numbers of insurgents involved and their armaments) was such that anything else was beyond the existing capabilities of the Tatmadaw. Ibid., p.99 and p.307.

[37] Tin Maung Maung Than notes the restrictions the area of operations placed on the army's use of artillery: "mobility limitations and logistical difficulties associated with deploying artillery in the monsoon forests and hilly terrain where insurgent enclaves are situated ... prevented the army from fully utilizing the firepower of mass artillery assaults." Tin Maung Maung Than, op. cit., p.49.

[38] See FEER, 2 March, 1979, p.28.

[39] The air force's problems with maintenance, due to the lack of spare parts, have been widely commented upon. Clare Hollingworth, writing in 1985, noted that of "16 combat aircraft, only eight could, with luck, take off", and that the number of helicopters which were grounded in four squadrons equalled half. Clare Hollingworth, "Burma's uncertain future", (The Armed Forces of the Asia-Pacific Region No 14), Pacific Defence Reporter, February, 1985, p.18. See also William Ashton, "Air Force gets arms boost", Asia-Pacific Defence Reporter, November, 1991, p.47; and Selth, Transforming the Tatmadaw, p.74.

[40] See FEER, 15 June, 1979, p.37; 4 January, 1980, p.13; and 25 July, 1980, p.28.

counter-insurgency operations at a time when the army's manpower was already stretched.

The Burmese government's response to this need for additional, and more advanced, counter-insurgency aircraft (in tandem with its requirement for more modern training aircraft) was to order a number of SIAI-Marchetti SF-260M and Pilatus PC-7 training aircraft. Both of these types were designed for dual-use, having the capacity to be adapted for counter-insurgency operations through the fitment of a variety of underwing ordnance.

Although the majority of these new aircraft had been delivered by 1981, it is notable that they were not utilised in the major operations against the KNU (Karen National Union) during the dry season offensive in 1984 when it was observed that the government's forces' capabilities were seriously hampered by the apparent lack of an "air-strike capacity".[41] It seems probable, therefore, that despite the "ingenuity" of the air force's technicians,[42] they were either facing difficulties in adapting the SF-260s and PC-7s for a ground attack role, or, that the relevant fitments and weapons had not yet been delivered.[43] Indeed, it may only have been during Ne Win's visit to Europe in 1984 (primarily to obtain small arms) that orders were placed for the ordnance which was eventually to be fitted.

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[41] FEER, 5 April, 1984, p.26. The reports of the fighting highlight the almost First World War-like nature of the operations. Government troops used 'trench-warfare tactics' in an attempt to dislodge the Karens from Maw Po Kay, after they had subjected the Karen insurgents to considerable, but ineffective, artillery and mortar fire. This analogy with the First World War is also employed by Smith in describing the ongoing struggles for Maw Po Kay from 1984-1989. Smith, op.cit., p.398.

The air force did employ some of its UH-1s for transport and casevac (casualty evacuation), however, which was significant because their use had been restricted after at least two (and possibly three according to Smith - Smith, op. cit., p.395) were shot down in 1983. It thus demonstrated that the government was prepared to risk the posssible loss of further aircraft from its limited inventory.

[42] Selth, Transforming the Tatmadaw, p.35.

[43] Clare Hollingworth has noted the general problems the air force faced in receiving equipment in the mid-1980s due to officials' reluctance to sign papers to release it from the docks at Rangoon. See Hollingworth, op. cit., p.17.

This visit to Europe has been attributed with considerable importance as it seemed to indicate a clear move by the government (and Ne Win personally) to develop the Tatmadaw for an 'upgraded' offensive against the KNU: one which would move away from the "force of manpower" with its attendant heavy casualties.[44]

The imperative for this enhanced campaign undoubtedly influenced the decision to opt for the uprated PC-9s, rather than additional PC-7s, and, arguably, led to the onset of a search for more firepower for the artillery. The ineffectiveness of the artillery barrages by the army's M-101 105mm howitzers during the battles for Maw Po Kay, in which it evidently lacked the necessary "punch" to dislodge the insurgents from their well dug in positions, indicated the need for heavier calibre guns and/or MRLs (multiple rocket launchers) "in the face of [continued] enemy intransigence".[45]

Although the army did mount a renewed offensive against the KNU during the 1985-1986 dry season, it was not until the 1986-1987 offensive against the CPB and its ethnic insurgent allies in the NDF (National Democratic Front) that the first reports of the use of aircraft for several years occurred.[46] This offensive also saw the increased use of artillery by the army.

The intensity of these operations, the greatest for a number of years, reflected the Burmese government's heightened concern about the insurgencies resulting from the dangerous military alliance between the CPB and the NDF (albeit the KNU withdrew shortly afterwards) which occurred after a meeting in March 1986. This alliance saw all the various insurgents united in common cause against the government and meant:

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[44] FEER, 27 December, 1984 - 3 January, 1985, p.32. Hollingworth notes Ne Win's desire for a "personal victory" over General Bo Mya, the Karen leader. Hollingworth, op. cit., p.19.

[45] Tin Maung Maung Than, op. cit., p.49 and p.54.

[46] See FEER, 16 April, 1987, p.27, which reported that the "fixed-wing aircraft used were apparently Swiss-built, propeller-driven trainers which had been modified for battle." These aircraft were used in the ground attack role to support operations by the army.

that for the first time in nearly 40 years of insurgency all the main armed opposition groups and well over 30,000 rebel troops were allied against the 190,000 strong *Tatmadaw*. By any reckoning it was a highly favourable ratio for fighting a guerilla war.[47]

Given the difficulties of pursuing a 'war of attrition' against such odds, subsequent counter-insurgency operations witnessed the increased use of major weapons (MRLs were reportedly used for the first time during the 1988-1989 dry season offensive against the Karens' fortified bases along the Thai-Burmese border).[48]

The nature of these counter-insurgency operations, which saw the increased use of major weapons, set a pattern for the remainder of the Second Cold War period and beyond. Soon after the State Law and Order Restoration Council (or SLORC) came to power in 1988, they were to embark on a major expansion and re-armament of the Tatmadaw. This was to enable it to go on the offensive against the ethnic insurgents (the CPB insurgency coming to an end after mutinies in mid-1989) in order to ensure the regime's survival by 'encouraging' the insurgents to enter into ceasefire agreements and, ultimately, shifting the military balance "firmly and permanently in the Tatmadaw's favour."[49]

Malaysia

An assessment of the influence of the internal security dimension on Malaysia's arms acquisitions is rather less straightforward than it was in the case of either Thailand or Burma. One of the reasons for this is that the Malaysian experience shows similarities, and displays differences, with both of these states.

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47 Smith, op. cit., p.357.

48 See FEER, 22 February, 1990, p.21. It is not clear whether these were the Soviet BM-21s acquired in 1987, or the US M40A1s which were acquired at that time.

49 Selth, Transforming the Tatmadaw, p.131.

Malaysia, like Thailand, faced a specific threat from communist insurgency in the early stages of the Second Cold War period which was to gradually decline and, ultimately, disappear by the end of it. In this instance the threat was posed by the CPM and its offshoots - the CPM-Marxist-Leninist and CPM- Revolutionary Faction - in Peninsular Malaysia, and by the small People's Army of North Kalimantan in Sarawak. Unlike the Thais, however, particularly after the change in their counter-insurgency tactics in 1980, the Malaysians placed greater emphasis in their operations on the use of large numbers of troops and the employment of major weapons (the parallels with the Burmese experience are evident here).

Furthermore, and again in contrast to the Thai case, the Vietnamese invasion and subsequent occupation of Cambodia, though important in the context of Malaysia's overall arms procurement, did not lead to a *complete* re-orientation towards conventional warfare: the Malaysian armed forces continued to play a prominent role in countering the CPM insurgency. The invasion did, however, lead to a change in 'emphasis', which shifted to conventional warfare (a clear departure from the Burmese experience).

Moreover, in terms of the added complexity of the Malaysian experience, and this is hinted at in the above comments about 'emphasis', it is difficult at times to disentangle the external and internal dimensions of Malaysian defence planning and procurement. Indeed, and this has already been alluded to, there is an overlap between the impact of the internal security dimension on arms acquisitions; that of the requirements of defence policy and strategy; and the effects of the Vietnamese invasion of Cambodia. In effect, the internal security dimension must be seen in conjunction with these other pressures and not in isolation.

It can be argued, though, that many of Malaysia's arms acquisitions in the early part of the Second Cold War period were *primarily* motivated by the requirements of counter-insurgency operations: a view which is supported by the fact that the rapid arms build-up in the early years was halted not only by economic difficulties but also by the decline in CPM

activity.[50] This motivation was, however, ultimately of only transitory, as opposed to lasting, relevance and significance.

The Malaysian approach to counter-insurgency operations in the wake of the upsurge in CPM activity in 1975-1976 was evident in the large-scale joint operations conducted with the Thais in 1977 ('Big Star' and 'Sacred Ray') and in a combined exercise with the Thais in early 1978 which included air strikes, battalion sized troop movements and naval patrols.[51] These large-scale operations had proved very successful in dislodging the CPM from its bases in the border area and in forcing the insurgents to move frequently and had, as it subsequently emerged, the effect of bringing about a marked decline in the CPM's level of activity.

The Vietnamese invasion of Cambodia in December 1978, however, appeared to portend a resurgence of CPM activity from the perspective of both the CPM itself and the Malaysian government. The CPM (and its offshoots) believed that the situation in Indo-China presented the "right climate to escalate their activities",[52] especially at a time when it was faced with the loss of support from China and needed to demonstrate its continued viability. This view was 'anticipated' by the government and its anticipation was reflected in the Malaysian armed forces' conduct of more or less continuous 'search and destroy' operations throughout 1979.[53] The thrust of the Malaysian armed forces' counter-insurgency strategy was to have 'mobile stike forces' (employing the army's APCs and air force helicopters) harrying the insurgents in order to keep them on the move and, when concentrations of insurgents were found, attacking them with artillery and ground attack aircraft.[54]

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[50] I am grateful to Dr. Leonard Sebastian and Mr. Daljit Singh (both Fellows at the Institute of Southeast Asian Studies) for confirming this view in discussions at the Institute during my visit to Singapore in May 1998.

[51] See FEER, 31 March, 1978, pp. 18-19.

[52] FEER, 8 June, 1979, p.21.

[53] Evidence of the CPM's attempt to step up its activity, and of the validity of the Malaysian government's concerns and responses, was provided in June 1979 when the army successfully detected a CPM attempt to construct a large new base near Ipoh in the state of Perak and destroyed it. Ibid.

Simultaneously, of course, the Vietnamese invasion of Cambodia also heightened the perception of external threat and gave greater impetus to the ongoing attempt to expand the armed forces' conventional warfare capabilities. It also gave a new, and worrying, dimension to the traditional linkage between internal and external security concerns.

The invasion, in the Malaysian government's mind, was undoubtedly linked with an upsurge in the number of refugees arriving on the east coast of Peninsular Malaysia from Vietnam. These refugees (who were mainly ethnic-Chinese) were thought to constitute a limited security problem, in addition to the general difficulties they posed, because of the potential for them to lend support to the CPM - itself primarily composed of ethnic-Chinese.[55]

The need to equip the MAF for more intensive counter-insurgency warfare therefore, in conjunction with ongoing moves to develop their conventional capabilities and the specific ramifications of the Vietnamese invasion of Cambodia, was certainly evinced in Malaysia's arms acquisitions during the early part of the Second Cold War.

In order to better equip the army for operations against the CPM - at a time when many of its brigades were conducting mobile operations to "cut off escape" by the insurgents[56] and when its existing Panhard M-3s and 'Ferrets' were virtually obsolescent - orders were placed in 1981 for 'Condor' APCs and 'Sibmas' fire support vehicles. This order was the result of the 1977 plan to acquire new APCs and fire support vehicles for the army which had been motivated by the very need for such "high intensity counter-insurgency operations."[57]

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[54] The Far Eastern Economic Review cites a Malaysian security official in 1980 as saying that the use of artillery, helicopters and fighter bombers can 'demoralise' large areas at a time and force the CPM to move. FEER, 20 June, 1980, p.18.

[55] See Richardson, ASEAN and Indo-Chinese Refugees, pp.104-106.

[56] FEER, 6 March, 1981, p.27.

[57] Huxley, The ASEAN States' Defence Policies, 1975-81, p.28. The need for such operations was seen in the context of the Third Malaysia Plan which clearly stated the government's intention to intensify operations against the CPM and accordingly to "expand and strengthen ... [the] security forces considerably." Third Malaysia Plan, 1976-1980, (Kuala Lumpur: Government Press, 1976), p.101.

The lengthy delay between the initial decision and firm orders being placed resulted from both an extensive trials programme for all the contending vehicles and, in the case of the 'Sibmas' tender, controversy over whether or not the tendering process had been rigged in such a way that the fire support vehicle specification could only be met by the Belgian vehicle.[58]

In addition to enhancing the army's capacity for counter-insurgency operations, the acquisition of these armoured vehicles also helped the army to develop its capacity for conventional warfare. Indeed, Harold Crouch, writing in the Far Eastern Economic Review, contends that the new APCs (along with the 'Stormers' and the 'Scorpion' light tanks ordered in 1982) were intended not only "to supplement the light armoured personnel carriers [currently] used in counter-insurgency ... [but also] to create a conventional capability."[59]

These acquisitions are, therefore, symptomatic of Malaysian defence thinking at this time which was centred on the need to develop the MAF to conduct both counter-insurgency operations (the traditional focus) and to be able to engage in conventional warfare (an area of neglect). In other words, the armed forces were not being *completely* refocussed on, or re-oriented towards, conventional warfare, but were instead being developed to perform two roles.[60] Illustrative of the dual purpose nature of the role which it was hoped the MAF would be able to play were the comments made in 1982 by the Deputy Defence Minister, Abang Abu Bakar Mustapha, cited by Crouch: "The armed forces need both capabilities; we have not given priority to the conventional aspect in the past and are now trying to make up for it."[61]

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[58] See Straits Times, 26 November, 1981, p.15, and 28 November, 1981, p.14.

[59] FEER, 20 October, 1983, p.48.

[60] Mak, on the other hand, implies that they were more or less being completely refocussed. He expresses the view that the fact that Malayisa had "broken the back of the CPM insurgency" by the 1970s, meant that (in terms of land warfare, in particular) it could focus on conventional threats. Mak, ASEAN Defence Reorientation, p.27.

In practical terms, though, it was the army's counter-insurgency role which still remained pre-eminent. In 1981, for example, the army's 12 infantry brigades were still predominantly engaged in counter-insurgency operations,[62] and even in 1983 Crouch noted that the six infantry brigades located in the north and centre of Peninsular Malaysia were still tasked with counter-insurgency with the army continuing to retain the primary responsibility for such operations and the now expanded PPF (Police Field Force) only assisting.[63]

The priority accorded to counter-insurgency operations at this time was also evident in the RMAF's role and - with some qualification - weapons acquisitions. Much like the Burmese Air Force, the RMAF was essentially subordinate to the army with its principal task remaining the provision of "communication and air-lift support for the army".[64] In addition to this support the RMAF was also expected to provide "limited close air support for infantry against insurgents."[65] The RMAF was not, however, unaffected by the increased attention being paid to conventional warfare and something of the tension between current priorities and possible future requirements was evinced in the debate over its most important acquisition - the A-4 'Skyhawks'.

The decision to procure 'Skyhawks' was taken in 1978 as part of a plan to expand the air force: a decision which reflected the then priority accorded to counter-insurgency in general.

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61 FEER, 20 October, 1983, p.52. The same point was made earlier by the Deputy Chief of Staff, Maj-Gen Datuk Zain Mahmoud Hashim, speaking at the time of the large 'Gonzales Two' exercise: "It is known that we are very good at jungle fighting. But we need to know how to go against a bigger enemy." Cited, Straits Times, 13 February, 1980, p.12.

62 Only when there was no activity by the CPM could they engage in conventional warfare exercises. See FEER, 6 March, 1981, p.27.

63 See FEER, 20 October, 1983, p.52.

64 Acharya, Arms Proliferation Issues in ASEAN, p.249. In his analysis of the relationship between all the three services in Malaysia, Mak notes that "as a result of history and strategic demands, [the army] has always been the dominant service in the MAF." Mak, Modernization of the Malaysian Armed Forces, p.30. For an overview of the relationship between the army and the air force from the 1960s to the early 1980s, see Ibid., pp.31-35 *passim*.

65 Mak, Modernization of the Malaysian Armed Forces, p.33.

The 'Skyhawks'- short-range, primarily ground attack aircraft - seemed the most appropiate option at the time in view of the unavailability of the then preferred A-7 'Corsairs' due to restrictions on their foreign military sale.[66]

In 1981, however, having placed an order for 88 second-hand 'Skyhawks' the year before, the deal was put on hold whilst the RMAF re-evaluated the option of new A-7s which were now available.[67] An important component of the decision to postpone the 'Skyhawk' deal was a debate about whether or not the air force now needed a more advanced aircraft, with a greater payload, given the changed external environment. In other words, did the RMAF's principal role remain counter-insurgeny for which the A-4 was ideally suited. The eventual decision to press ahead with the 'Skyhawk' purchase seemed to owe more to the high cost and maintenance complexity of the A-7s, than to any final decision about the RMAF's main role and thus on the most appropriate aircraft to purchase.

The continued importance attached to the RMAF's traditional role was evident though in the order for more 'Alouette III' helicopters in 1981 (?) as these were intended to supplement those the air force was then using in a liaison role in support of army operations against the CPM. The importance of the traditional role was, arguably, also evident in the fact that there appeared to be a continuing need for the RMAF to possess a ground attack capability at this time. With the 'Tebuans' which had performed this role hitherto no longer operational, and the 'Skyhawks' not expected to be operational until the mid-1980s, the order for the MB-339A jet trainers in 1982 seems to have been a way of ensuring that the air force could provide air support in the interim, if required. The MB-339As, in common with many jet trainers on offer, were also capable of being adapted to perform a light attack role.

An order for three C-130H-MP 'Hercules' aircraft in 1979 represented a special case of the conjunction of internal and external defence requirements, and of the impact of the

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66 See FEER, 16 October, 1981, pp.24-25.

67 See Straits Times, 20 September, 1981, p.5. The original A-7s under consideration had been second-hand ex-US Air Force and Navy models.

Cambodian invasion. These acquisitions have been seen as part of the air force's ongoing "expansion programme"[68] and the particular importance attached to the South China Sea off Peninsular Malaysia's east coast in the wake of the concerns about Vietnam. More obviously, however, the decision to procure these aircraft was influenced by the security concerns posed by the refugee problem. The maritime patrol aircraft were needed to monitor refugee movements in the South China Sea and to assist the navy in intercepting their boats so that they could be towed out to sea before they could land on Malaysian shores.[69]

The influence of the internal security dimension as an individual pressure did not extend to any naval acquisitions (the counter-insurgency operations conducted by the RMN employing the patrol vessels it had acquired earlier), nor did it extend beyond the early part of the Second Cold War period.

The last significant incidence of CPM activity in Malaysia occurred in June 1984[70] and the first mass surrenders of CPM insurgents to the Thais occurred in 1986, which was to mark the beginning of the end of the insurgency.[71] By this time the army's role had been reduced, and its counter-insurgency training and deployment accordingly (the latter to areas along the border with Thailand), with the PFF actually bearing primary responsibility for any cross-border operations into Thailand which did occur. The army's role was now limited to that of a 'blocking force, preventing CPM insurgents retreating into Malaysia in the wake of operations by the Thais.[72]

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68 Straits Times, 13 June, 1979, p.10.

69 Richardson observes that the Malaysian navy began "regular patrols in off-shore waters" to effect such a policy, around November 1978. Richardson, ASEAN and Indo-Chinese Refugees p.105

70 This incident saw the entry of a small group of insurgents into a road maintenance camp for the East-West highway near the border with Thailand, although no one was injured in the attack. See FEER, 23 May, 1985, p.53.

71 The CPM finally gave up the armed struggle in December 1989 after signing agreements with the Malaysian and Thai governments. For details, see Sebastian, op. cit., pp.284-285.

72 See FEER, 23 May, 1985, p.51.

Somewhat paradoxically, the decline in the CPM insurgency in the mid-1980s coincided with a refocussing by the government on the internal aspect of security as concerns about the external threat posed by Vietnam abated and, Alagappa contends, renewed concerns about the CPM's links with China emerged.[73] The priority for national security policy now became the promotion of political stability and the pursuit of socio-economic development.[74] This refocussing was also influenced by increasing concerns that the tensions between KL and the state government of Sabah (in the aftermath of the 1985 elections which saw the Partai Bersatu Sabah take control of the state) could signal an upsurge in centre-periphery tensions. The nature of these concerns about internal security were such that they reinforced the internal security dimension's increasing irrelevance as an influence on arms acquisitions. Indeed, Alagappa notes that: "Malaysia's approach to preserve its national security was to de-emphasize the military dimension and to lay greater dimension on the development of national reslience and on diplomacy."[75]

Indonesia

Finally, in terms of assessing the relevance and significance of the internal security dimension as an individual pressure influencing arms acquisitions by each state, we come to Indonesia. Within the context of the absence of any immediate external threat concerns (especially any arising from the situation in Cambodia), and acknowledging the evident inter-linkages which occur with Indonesia's strategic requirements, the internal security dimension is relevant and highly significant for Indonesian arms acquisitions during the Second Cold War. Indeed, the internal security dimension appears to be particularly significant given the relatively low levels of major weapons acquired by Indonesia overall during the period.

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73 Alagappa, op. cit., p.187.

74 Ibid.

75 Ibid.

A cursory examination might, however, in the first instance, suggest otherwise. Although Indonesia has long been pre-occupied with the internal element of the comprehensive security equation,[76] the nature of the problem (which obviously conditions the response) has tended to be seen as often being at a level below that of insurgency. Even when insurgencies have existed then, amongst broadly based 'security operations', the use of major weapons has been eschewed where possible and low-intensity counter-insurgency operations have instead been conducted.[77] Not only, therefore, may the internal security dimension not actually be a pressing concern at all, but, if it was, then the response may not necessitate any acquisitions of major weapons: Indonesia replicating the later Thai experience rather than that of Malaysia.

The above comments, however, are written at a certain level of abstraction. They take no account of the actualities of the Second Cold War period which, despite the very limited press coverage and almost complete absence of official comments, saw Indonesia facing a major insurgency problem in East Timor. In addition to the problem in East Timor, there was also a more long-standing - though much less intensive - insurgency in Irian Jaya and, in the early part of the period, the remnants of one in Aceh too. The insurgency in East Timor especially created a need to employ and acquire major weapons. Moreover, these comments tend to obscure the idea that the internal security dimension contains both actual and *potential* insurgencies. Indonesia's experience of past

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[76] For example, writing in 1993, Lowry stated that: "Internal security is historically and currently the most pressing threat and will remain so for some years to come." Lowry, Indonesian Defence Policy, p.16. The importance of the internal element is clearly reflected in much of Indonesia's defence and security thinking and its overall concepts and doctrines of 'Wawasan Nusantara'; 'Ketahanan Nasional' (National Resilience); and 'Sishankamrata'. See The Policy Of The State Defence And Security Of The Republic Of Indonesia 1995, pp.12-14.

[77] For details of the broad range of security operations which the Indonesian military uses to combat 'armed movements', and the need to refrain from using major weapons, see Dorodjatun Kuntjoro-Jakti and T.A.M. Simatupang, "The Indonesian Experience in Facing Non-armed and Armed Movements: Lessons from the Past and Glimpses of the Future", in Kusuma Snitwongse and Sukhumbhand Paribatra (eds.), Durable Stability in Southeast Asia, (Singapore: Institute of Southeast Asian Studies, 1987), pp.100-102. Included in the 'combat operations' which are conducted, are so-called "blitzkreig operations by mobile military units selected from their regions and central command". Ibid., p.101.

insurgencies,[78] combined with the impact of those actually in existence during the Second Cold War, has meant that Indonesian defence policy has also taken account of the need for ABRI to be able to respond to any future insurgencies in the archipelago. The internal security dimension operates at both levels, therefore, which tends to reinforce its significance.

There is an additional internal element in terms of the Indonesian experience which fits in with the general pattern of internal security concerns and of strategic requirements, but goes beyond the internal security dimension as defined in this study. It is certainly uniquely Indonesian in terms of the 'arms dynamic' during the Second Cold War in SE Asia, and thus does not have the more general applicability which would be required if it was to constitute one of the other different internal factors referred to at the beginning. This additional element could perhaps best be described as the 'civilian' dimension. In effect, several of the major weapons in the categories of transport aircraft (in particular) and warships (rather less so) were acquired specifically to fulfil the requirements of government policy outside the realm of defence, or, to enable ABRI to assist in fulfilling these requirements.[79]

The East Timor experience (the invasion, its aftermath, and subsequent operations against Fretilin insurgents[80]), though not overtly acknowledged officially, appears to have had a profound influence not only upon elements of Indonesia's

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[78] Most notable are those which occurred in the Outer Islands in the 1950s and early 1960s, for example, the insurgency in the Maluku Islands. For a brief history of the RMS (Republic of South Moluccas) see Ibid., p.110, and for a tabular representation of the movement's characteristics and the government's responses see Abdurrahman Wahid and Dorodjatun Kuntjoro-Jakti, "Government responses to armed communist and separatist movements in Indonesia: Islamic and military perspectives", in Jeshurun, Governments and Rebellions in Southeast Asia, Table 1, pp.174-175.

[79] This is not to say that other states would not utilise military equipment for civilian purposes, in cases of emergency especially (for example, in disaster relief), but that there is no evidence that any transport aircraft or landing ships were purposely acquired with a view to fulfilling non-military roles; even in terms of an overtly dual-purpose capability.

[80] Revolutionary Front for an Independent East Timor. The armed wing of Fretilin is actually called 'Falantil', but for the purposes of this study Fretilin will be used as the umbrella term for the insurgent movement.

force structure, but also upon arms acquisitions. Taylor, in Indonesia's Forgotten War, may overstate his case somewhat, but he clearly draws attention to the link between operational requirements there and Indonesian arms acquisitions.[81] This link is also implicit in general analyses of the impact of the East Timor experience on ABRI, in which it has been noted that the invasion in December 1975 showed up weaknesses in both amphibious landing and counter-insurgency capabilities and "suggested that there was a need for better training and equipment for the Indonesian armed forces."[82]

The influence of East Timor, and by definition the internal security dimension, on Indonesia's arms acquisitions during the Second Cold War essentially took two distinct, but inter-related, forms. First, it created the need for major weapons to conduct counter-insurgency operations in East Timor itself. Secondly, it encouraged the development of a mobile strike

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[81] John G. Taylor, Indonesia's Forgotten War. The Hidden History of East Timor, (London: Zed Books, 1991).

Taylor's contention is that many (or most, it seems) of the major weapons acquired by Indonesia from 1977 to the late 1980s were acquired to meet the particular requirements of the counter-insurgency campaign in East Timor. In discussing the acquisitions in 1978 of A-4 'Skyhawks' and 'Hawk' T-53s, and the production of 'Pumas' in 1979 (NB his dates for the 'Skyhawks' and 'Pumas' are actually incorrect), for example, he contends that these acquisitions "all met particular military needs at specific moments in the campaign." Ibid., p.175. Moreover, with regard to US arms sales in particular, he argues that these peaked in line with offensives in 1978-79, 1981-82, and that sales in 1982-84 had utility for the 1983-84 offensive. Ibid., p.169.

There are, it must be noted, a number of flaws in his analysis; not least of which is his almost mono-causal explanation for all arms acquisitions by Indonesia. Notable in this regard is the fact that he includes the 1986 order for F-16s in his analysis of the linkage between US arms sales and offensives in East Timor. The Indonesian decision to acquire the F-16s, however, and the Americans eventual willingness to supply them, clearly lay outside the realm of the internal security dimension. Additionally, there are several errors with regard to the dates of orders/production licences and the identity of suppliers: for example, the first 16 A-4s were second-hand Israeli (rather than US) aircraft and were only ordered in 1979.

His discussion, however, of the role which major weapons played in many of the counter-insurgency operations mounted by ABRI, and the descriptions of some of these operations which he cites, highlights the evidence that the requirements of conducting such operations did influence **some** arms acquisitions.

[82] Glazebrook, op. cit., p.15. Lowry also states that: "the poor performance of Indonesian forces in the annexation of East Timor in December 1975 and in subsequent internal security operations created an awareness of the need to rejuvenate the armed forces." Lowry, Indonesian Defence Policy, p.42.

force able to respond to potential insurgencies resulting from centre-periphery tensions and other contingencies associated with the requirements of strategy (mostly the possibility of lower level external threats). The importance of both these forms more or less coincides with the period when Indonesia's acquisitions were at their peak (1979-1983), although the latter obviously had the potential for a longer term influence as the situation on the ground (and thus operational requirements) changed.

ABRI's attempts to overcome Fretilin resistance in the aftermath of the invasion had seen it employ major weapons extensively. Lowry describes their use as being something akin to the US practice in Vietnam with ABRI carrying out aerial bombardment and strafing, artillery barrages, and armoured patrols (where practicable).[83] Despite this, however, Fretilin's capacity for resistance, combined with the still limited inventory actually available to ABRI,[84] meant that by 1979 Indonesia still faced a considerable insurgency and had not established more than nominal control in parts of East Timor.

The fact that ABRI' s troops were effectively at full stretch in East Timor[85] and were having to be rotated frequently in order to prevent damaging losses of morale from occurring, in conjunction with the not unrelated reliance on the use of major weapons, meant that if Indonesia was to contain the insurgency then it required an expanded inventory to prosecute its counter-insurgency campaign.[86]

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[83] Lowry, The Armed Forces of Indonesia, p.153.

[84] Acquisitions had been made to enable ABRI to prosecute its campaign more effectively: for example, the 16 OV-10F 'Broncos' acquired in 1976-77.

[85] This was made worse by the continuing situation in Irian Jaya which saw ABRI having to respond to increased activity by the OPM (Organisasi Papua Merdeka - Free Papua Organisation) in 1978. The OPM mounted a series of attacks on Indonesian troops and government offices in 1977 and 1978 which led to ABRI having to conduct extensive operations (including aerial bombing) against the OPM, especially in the area of the border with Papua New Guinea. See FEER, 22 June, 1979, pp.31-32.

[86] This campaign subsequently took shape in the period from 1979-1985 when a series of large-scale offensives by ABRI occurred. These were aimed initially at destroying Fretilin's "mainforce" units and, subsequently, at eliminating any guerilla resistance at all. Lowry, The Armed Forces of Indonesia, p.154. Much more detail of the various operations is provided by Taylor; particularly from the perspective of the

In particular, there appears to have been a pressing need for additional ground attack aircraft to augment the OV-10Fs which were more or less continuously engaged in bombing and strafing missions to dislodge Fretilin insurgents from their base areas and attack concentrations of Fretilin forces. The need to augment the OV-10Fs was also motivated by the possibility that a number of them might have to be diverted to operations in Irian Jaya, where they had been used "extensively" after the OPM offensive in 1977.[87] It was largely in response to this need that Indonesia ordered the ex-Israeli 'Skyhawks' in 1979 and, quite possibly, the ex-US Navy ones in 1981: these aircraft effectively replacing the obsolescent CA-27 'Avon Sabres' which had hitherto been tasked with providing an additional ground attack capability.[88]

The question of whether or not the various batches of'Hawk' T-53s ordered between 1980 and 1983 (in addition to those acquired in 1978) were procured specifically with a view to their employment in counter-insurgency operations in East Timor, is both contentious and difficult to determine categorically.[89] There are, of course, no official reports of their use in East Timor during the operations in the early to mid-1980s - their acquisition being justified in terms of the need to provide a replacement jet trainer for the T-33s - although the use of 'Hawks' in some of these operations has

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insurgents inolved and the East Timorese civilians affected. Interestingly, Lowry does not make reference to Taylor's work at all, although he does refer to James Dunn's "Timor: A People Betrayed" (Milton, Qld.: Jacaranda Press, 1983).

87 Lowry, The Armed Forces of Indonesia, p.237. This possibility may have been realised after an uprising by the OPM in February 1984.

88 Taylor notes that the A-4s were observed in operations in late 1983 (prior to a major series of operations which began in 1984) with OV-10Fs flying to the eastern sector assisted by "Skyhawks flying from Baucau and specializing in incendiary, cluster and anti-personnel bombs." Taylor, op. cit., p.149.

89 Allegations that this was the intended purpose of these acquisitions have continued to be made in discussions about the subsequent supply of 'Hawks' to Indonesia. Until fairly recently the official British position was that there was no clear evidence to support these allegations (or, presumably, to deny them either). In 1997, however, at the time the new British government approved the latest sale of 'Hawks' to Indonesia, the official position seemed more clear-cut. One senior minister was quoted as stating that: "There is no evidence that the aircraft is being used in East Timor .... Our Intelligence on that is very clear". C-reuters@clari.net Thursday, 17 July 1997.

been alleged by eyewitnesses. The 'Hawk' can clearly be configured for a ground attack role, however, which is one of the features which attracts buyers (much like the utility of the 'Skyhawk'), and Lowry notes that the squadron to which they were assigned - 15 Squadron based at Iswahyudi, Central Java - "can be employed in the ground support role."[90]

The need to upgrade the army's firepower for operations in East Timor, as well as its general requirements (again taking into account the growing obsolescence of much of its inventory), may also have influenced the decision to acquire AMX-VCI MICVs (mechanised infantry combat vehicles) in 1979 and the order for a large quantity of higher calibre M-101 howitzers in 1981.

The equipment requirements of operations in East Timor did not just include enhanced firepower, but also enhanced mobility: mobility in terms of the movement of forces to East Timor (the strategic level) and in terms of the operational requirements of counter-insurgency operations (the tactical level). There are significant links between the two, of course, as well as with the more general strategic requirement for the establishment of a mobile strike force.

The movement of troops and equipment to East Timor, especially prior to major counter-insurgency offensives when a rapid build-up was required, necessitated additional transport aircraft. In this regard the diversion of the L-130-70 to the air force in 1980 is significant, as is the order for five C-130H-30s in 1979, plus two more C-130s in 1981. The order for four 'Tacoma' LSTs in 1979 and a further two in 1981 can also be seen in this context, though their acquisition is clearly also very closely related to the development of a mobile strike force and to the increasing obsolescence of the very old US LSTs in the navy's inventory. It may even be possible that the LSTs were acquired with a view to their use in amphibious landings conducted as part of the overall counter-insurgency campaign, which was a tactic employed in the years following the invasion.[91]

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[90] Lowry, The Armed Forces of Indonesia, p.239.

[91] See Taylor's account of the counter-insurgency campaign in July 1978. Taylor, op. cit., p.86.

The desire to strengthen the Navy's capacity for amphibious landings - also a crucial component of the efficacy of the mobile strike force - would also have influenced the order in 1981 for AMX-10P/AMX-10 PAC 90 MICVs for the Marines, especially given the need to begin the replacement of ageing PT-76s and BTR-50Ps. The order for the transport version of the 'Super Puma' in 1983 can also be seen in this light as the naval 'Super Puma' was able to operate from the South Korean LSTs.

At the tactical level of Army operations, helicopters were extensively used to facilitate rapid troop movements with troops often being landed subsequent to aerial bombardment and artillery barrages in order to mop-up any remaining resistance.[92] Additionally, helicopters were also employed in logistics support and Casevac/Medevac (casualty/medical evacuation) roles. The use of helicopters for general troop movement was also evident in operations in Irian Jaya, and thus ABRI had an ongoing requirement for transport helicopters which was met by the local production of 'Pumas'.

The need for mobility, strategic in particular, was certainly essential for the functioning of the PPRC (Pasukan Pemukul Reaksi Cepat - Rapid Reaction Strike Force) established in 1984. Thus the development of the Air Force and Navy's transport assets must be seen in this context too. The establishment of this strike force was outlined in RENSTRA II (Rencana Sasaran Strategi - Defence-Security Strategic Plan) 1979/80-1983/84 which referred to the development of a "compact strike force with a highly reactive capability which can be deployed within a short span of time".[93] The PPRC was intended:

> to provide a rapid conventional-force reaction to sudden low-level external threats and internal

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[92] To continue Lowry's Vietnam analogy referred to above, these movements were analogous to what Thompson describes as the US' 'eagle' flights during operations in Vietnam. Thompson, Defeating Communist Insurgency, p.106.

[93] RENSTRA II, cited Dorodjatun Kuntjoro-Jakti and T.A.M. Simatupang, "Indonesia: Defence Expenditures in the Period of the New Order, 1967-85", in Chin, Defence Spending in SE Asia, p.115.

security disturbances. After this initial reaction, forces can be built up and national resources mobilised as required.[94]

The strike force would thus be able to supply a backup to the territorial forces' locally deployed strike forces.[95]

Troop transport requirements during the Second Cold War period were not confined to counter-insurgency operations in East Timor or Irian Jaya, nor, indeed, to the establishment of a mobile stike force. There was also the need to be able to move troops in order to respond to lower level internal security problems. For example, in the wake of anti-Chinese riots in Solo and Semarang in November 1980, C-130s were used to fly in some 500 troop reinforcements.[96]

If this point about internal security problems of a lesser magnitude than insurgency is taken a stage further, to the need for acquisitions of certain categories of major weapons to specifically promote national development policies, or to enable ABRI to assist in the furthering of such policies, we come finally to a uniquely Indonesian influence on arms acquisitions.

Most obviously, a number of the transport aircraft acquired by Indonesia (the six C-160F 'Transalls') were deliberately procured to help the implementation of the 'transmigration' programme which aimed at alleviating population pressures in the more densely populated islands, such as Java and Bali, by moving people to more sparsely populated areas (for

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[94] Lowry, Armed Forces of Indonesia, p.113. Lowry describes the composition of the PPRC as follows: "The PPRC is built around one of the Kostrad divisions. The nominated division headquarters provides the task force headquarters, and the the force comprises one airborne brigade from the division, one marine battalion landing team (BTP) and naval escort, Air Force air transport for one airborne battalion, and offensive air support with air defence provided by Kohanudnas." Ibid. Kohanudnas [Komando Pertahanan Udara Nasional] is the National Air Defence Command.

[95] See General Murdani's comments on the conceptual origins of the PPRC made on his assumption of the post of ABRI Commander-in-Chief, cited in Bilveer Singh, ABRI And The Security Of Southeast Asia. The Role And Thinking Of General L. Benny Moerdani, (Singapore: Singapore Institute of International Affairs, 1994), pp.148-149.

[96] See FEER, 5 December, 1980, p.10.

example, Irian Jaya, Kalimantan, and East Timor).[97] This point is recognised, and extended to the navy's acquisition of LSTs, in Josephs' analysis of the armed forces commitments to the transmigration programme. These "commitments bear strong influence on defence equipment spending, particularly on heavy lift capacity such as ships for the Military Sealift Command and transport aircraft for the Air Force": capacity which can be utilised to transport people and building materials.[98]

It is also evident that, particularly in the case of the navy's sealift capacity, such equipment was clearly intended to provide additional resources for the promotion of national development as and when required. The military sealift "units strength may also be used to help meet general sea transportation needs, especially those related to national development."[99] This, of course, is entirely in keeping with ABRI's role in Indonesia generally, which links it inextricably with the development of Indonesia as a whole.

The influence of the internal security dimension - the need to respond militarily to existing and/or potential insurgencies - on arms acquisitions, was understandably not as widespread as that of the requirements of policy and strategy. In addition to the fact that there were inherent limitations to its influence in terms of the technological level of weapons acquired, the extent of its influence was obviously constrained by prevailing circumstances. Insurgencies were, by and large, not automatically a constant feature of the states's defence planning and thus the impact they had on arms acquisitions waxed and waned like the insurgencies themselves. This was

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[97] It is readily apparent from the choice of some of the places for relocation that there is an important security function inherent in the policy of transmigration too. The policy has been related to the idea of 'territorial management' and the creation of a national - Indonesian - identity. Taylor cites the comments in 1985 of General Murdani and Minister of Transmigration, Martono, to this effect. Taylor, op. cit., pp.191-192.

[98] Josephs, op. cit., p.17.

[99] The Policy Of The State Defence And Security Of The Republic Of Indonesia 1995, p.29

most evident in the case of Malaysia. Where they were more intractable, or where the potential for new ones to emerge existed, as in Burma and Indonesia, the impact of the internal security dimension was highly significant and much less transient. For states such as Singapore which faced no threat of insurgency, or Thailand and Vietnam which faced more pressing external threats (and pursued a limited and mainly non-military response to prevailing insurgencies), the internal security dimension had no influence on arms acquisitions at all.

Chapter V Technology and the Role of Extra-Regional Powers

The final two pressures or factors to exert a significant influence on arms acquisitions by the various SE Asian states, are those of technological progression and the role of extra-regional powers. By extra-regional, it is meant that they are outside the geographical area of SE Asia and are not members of the SE Asian security complex, though they may have an influence on that complex as a result of the inter-linkages between the regional and international complexes during the Second Cold War.[1]

Both of these pressures have already been evident in relation to some of the other ones discussed previously (notably external threat assessment and the requirements of defence policy and strategy) so they are not completely unknown quantities. What was not much in evidence hitherto with regard to the other pressures was any suggestion that they could have the opposite effect. In other words, that they could actually militate against states acquiring arms. This is an idea which emerges for the first time in any discussion of the role of technology and of extra-regional powers: an idea which suggests a certain interconnectedness between them and one which is a function of the secondary nature of the SE Asian 'arms dynamic'.

In secondary arms dynamics especially, the two pressures are inextricably linked as the major extra-regional powers (predominantly the United States and the Soviet Union) set the global standard of technological progression in military equipment and act as the major suppliers of weapons. When the superpowers are engaged in a more intense phase of competition - as during the Second Cold War - then the revolution in military technology accelerates and those states

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[1] In terms of the theory of arms dynamics, or races, it can be difficult at times to determine whether the participants' allies are either 'internal' or 'external', with Gray recognising the impossibility of a "general answer". Gray, The Arms Race Phenomenon, p.73. "Allies may, by their own behavior, stimulate the arms programme of the adversary. Also, allies might successfully generate demands for arms that are additional to those believed to be essential by the principals. In these ways the actions of allies should be viewed as being external to the ... system. Allied contributions may also be substitutes for armaments that would otherwise have to be found by the principals - to that extent it is reasonable to view them as being internal to the system." Ibid.

which are part- or non-producers find it harder to keep up with the leaders and concomitantly become more dependent on them to do so.[2] As Buzan contends:

> Since the pace of advance is itself pushed by military rivalry among the top-rank powers, the technological consequences of superpower rivalry are quickly imposed on the rest of the international system. .... States that cannot afford modern weapons, but see their security needs as requiring them, may have to make political arrangements with a supplier state in which allegiance, bases, or economic assets are traded for arms aid.[3]

Simultaneously, a more intense period of superpower competition can lead to a greater willingness on the part of the superpowers to supply friendly states with more advanced weapons than they would have done otherwise: "Competition between them can become so intense that they may even find it difficult to reserve all of their latest innovations for their own armed forces."[4] Even in times of less intense competition, the superpowers, and other suppliers, will facilitate the spread of advanced military technology through the process of 'diffusion' (as was noted in Chapter I) in accordance with their general desire to increase their influence in the international system.[5] The process of diffusion may, therefore, be most

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[2] The "intensification of the race in military technology" evident during this period was encapsulated in 'Star Wars', the United States' Strategic Defense Initiative. Thee, op. cit., p.9.

[3] Buzan, An Introduction to Strategic Studies, p.39. The idea of a dependent relationship is not unique to secondary arms dynamics, however. Stephanie Neuman contends that even some of the major non-superpower producers of arms were dependent on the United States and the Soviet Union for some major weapons and certainly "for access to technical innovations". Stephanie G. Neuman, "Arms, Aid and the Superpowers", Foreign Affairs, Vol.66, No.5, Summer 1988, p.1058. For a discussion of the wider aspects of the 'dependent militarization' of Third World states, see Michael Barnett and Alexander Wendt, "The Systemic Sources of Dependent Militarization", in Brian L. Job (ed.), The Insecurity Dilemma. National Security of Third World States, (Boulder and London: Lynne Reinner, 1992).

[4] Buzan, An Introduction to Strategic Studies, p.38.

[5] Diffusion will also be encouraged by other factors including, for example, the desire to maintain a favourable balance of payments position through the export of weapons and, crucially, the need for domestic arms industries to develop export markets in

evident where a close security relationship exists between supplier and recipient states.

The impact of the security relationship between supplier and recipient states on arms acquisitions, however, goes beyond just the degree to which it enables the latter to keep up with the process of technological progression. The relationship can have a more fundamental impact on many aspects of secondary arms dynamic's states' acquisitions (as well as on their defence capabilities more generally, of course).[6] Indeed, this has already been indicated in elements of our previous discussion about Thai and Vietnamese arms acquisitions. In addition, therefore, to setting the standards of technological progression and facilitating the ability of part- or non-producer states to keep up to some extent, the role of the extra-regional powers can encompass a number of other important aspects. These aspects are: the direct supply of weapons through grant aid; the provision of favourable credit terms and/or payments arrangements for weapons purchases; the influencing of client states' preferences for weapons; and the supply of weapons in order that the recipient states can play a role in the extra-regional powers' defence strategies (in addition to their more general place in the extra-regional powers' foreign policies).

The fact that an extra-regional power may supply weapons so as to enable a recipient state to participate directly or indirectly in its defence strategy brings us back to the idea that the role of extra-regional powers may militate against arms acquisitions. If the supply of weapons can be in the interests of the supplier's own defence strategy then so too, on occasion, can arms transfer restraint. Stephanie Neuman notes, for example, that the superpowers were often reluctant to supply unlimited quantities of weapons in the early stages of conflicts between Third World states for fear that this could have negative consequences - including acting as a catalyst for direct confrontation between the superpowers - and generally

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order to extend their production runs and achieve greater economies of scale. See ibid., pp.40-41.

6 In terms of the assistance which the superpowers provided to Third World states during the Cold War, Ball recognises that it enabled "most countries to build up and maintain a larger and/or better equipped force than would have been possible using only domestic resources." Ball, op. cit., p.291.

restricted the supply of leading edge weapons which might 'destabilise' a region.[7]

The wide ranging influence which extra-regional powers can exert on arms acquisitions is clearly distinctive in secondary arms dynamics and obviously not part of the superpower derived 'arms dynamic'. The working of the technological imperative model in secondary dynamics, however, shares some similarities with the superpower dynamic and also displays differences from it.

In the superpower derived 'arms dynamic', the technological imperative model revolved around the extent to which a demand for weapons development and acquisition resulted from the mechanics of the linkage between civilian and military technological advances and the desire to keep up with (or preferably lead) the process of military technological change in the context of the uncertainty engendered by the anarchic international system. Although states in secondary arms dynamics cannot participate in the creation of the military technological revolution (let alone expect to lead it), they are unable to escape from the effects of the systemic advances in military technology as members of the hierachical, competitive, self-help international system. As Buzan states: "all countries are caught in a worldwide pattern of military forms and standards determined by the doctrines, styles and technologies of the major arms producers."[8] What this means for states in practical terms, therefore, is that technological change becomes an abiding condition of defence planning for all states. The ways in which defence planners will respond to it, however, will differ according to the level of productive capacity the state possesses. Thus, expecting technological change, defence planners:

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7 See Neuman, Military Assistance in Recent Wars, pp.31-33. For a more extensive analysis of the arms transfer restraint exercised by the superpowers during the Cold War period, see Michael T. Klare, "US policy on arms transfers to the Third World", and Joachim Krause, "Soviet arms transfer restraint", in Thomas Ohlson (ed.), Arms Transfer Limitations and Third World Security, (Oxford: SIPRI/Oxford University Press, 1988). The earlier SIPRI study in the 1970s on the arms trade - The Arms Trade With The Third World - noted that in the case of other suppliers such as Britain and France where (excepting arms supplies to their former colonies) arms exports were predominantly motivated by economic considerations, then no such restraint was exercised.

8 Buzan, An Introduction to Strategic Studies, pp.107-108.

have little alternative but to institutionalize the process of change within the state, either in terms of permanently organized R & D, or in terms of regular imports of up-to-date weapons from better-equipped producer states.[9]

The regularity with which states in secondary arms dynamics will be able to acquire up-to-date weapons, and thus participate in the systemic progression in military technology, will be conditioned by the policies of the extra-regional powers who supply them and by their ability to come up with the wherewithal to pay for them (especially if no financial assistance is forthcoming from the suppliers). Without such assistance, the exponential increases in the cost of state-of-the-art weapons can prohibit their acquisition by many developing states.

Taking into account these various points about the way in which the technological imperative can have an impact on arms acquisitions in secondary arms dynamics, it is possible to suggest three ways in which it may have been apparent in the SE Asian dynamic during the Second Cold War period.

In the first place, it may have been apparent in the desire by some or all of the states to keep up in some - possibly limited - way with the general process of military technological change through irregular acquisitions of selected high-tech equipment. This equipment would be selected with reference to the utility of the myriad military technological developments for their own particular circumstances. In the main, it would not appear to have been necessary for the SE Asian states to have sought to acquire the full panoply of advanced equipment available as they did not face the same sort of sophisticated combat scenarios (for instance, the extensive use of electronic warfare systems in ground attack operations) as the technological leaders.

High-tech equipment would also be selected with reference to the acquisitions of other states in the regional complex. As we

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9 Ibid., p.110. Buzan makes this point in reference to the way in which the technological imperative can influence the domestic structure model.

saw in the context of the requirements of defence policy and strategy, acquisitions of advanced weapons systems by neighbouring states often provided an illustration of the prevailing state of technology indicating an objective need for modernisation (although it is difficult to disentangle this from an action-reaction phenomenon). Certainly there was evidence in the SE Asian 'arms dynamic' that there was a degree of technology induced action-reaction. The idea of a technology induced action-reaction process was also seen in terms of prestige. When a new and advanced weapons system was introduced into the region, on occasion this was thought to signal a change in the "balance of prestige between nations" and led to a "countervailing purchase".[10]

Secondly, in the need for the states to respond to the problem of obsolescent equipment: a problem which results from both the very process of technological progression and from the fact that military equipment obviously has a finite life span. In terms of the former it is a truism that technological advance leads to technological redundancy:

> Permanent technical progress implies a permanent process of obsolescence. The continuous development of new weapons, incorporating improved firepower, mobility, or communication, necessitates the continuous replacement of *existing* [emphasis added] weapons.[11]

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[10] Karp, op. cit., p.341. Karp discusses this primarily in the context of the "sequential orders" for F-16s in the mid-1980s, although he also contends that such a "procurement pattern [was] visible in ship-to-ship missiles, surface-to-surface missiles, 155mm artillery, ASW ... frigates and jet trainers." Ibid.

[11] Kaldor and Eide, op. cit., p.10. In other words, as soon as an existing weapon is no longer operationally effective because of its inability to match a new one, it is obsolescent. This point was one of the many which was drawn to my attention on the nature of obsolescence, and the responses to it, in correspondence and discussions over the last two years with Mr. Howard Lang, an avionics and weapons systems engineer at British Aerospace, Warton, Lancashire.

It is worth noting, however, that just because a weapon is 'operationally obsolescent' this does not preclude it from being deployed in a different operational role. Many 'Canberra' bombers, for example, were successfully employed as reconnaissance aircraft after they were no longer operationally effective in their designated role

One way of obviating, or at least mitigating, this problem (without actually having to acquire new weapons) and of ameliorating the costs of keeping up with the general process of technological progression, is for states to refurbish and upgrade wepaons which have become operationally obsolescent.[12] For a modern combat aircraft, for example, minor modifications and the addition of newer technology can occur throughout its lifetime although it will usually only have one major upgrade at its mid-life point. The scope for refurbishment or upgrading is ultimately limited by the predicted service lifetime of the weapons system which is an unavoidable problem.

Thirdly, and inter-related to the role of extra-regional powers, in the efforts of part-producer states to develop their productive capacity: to move to a higher stage of production. These efforts will be motivated by the wish to be able to carry out their own modernisation of existing weapons and by the desire to reduce their expenditure on increasingly costly imports of advanced weapons. The desire for greater self-reliance will also be engendered in some cases by the policy of states to reduce their dependence on extra-regional powers for arms supplies for wider political and strategic reasons. Paradoxically, perhaps, for in the long-term it may be detrimental to their arms exports, attempts by recipient states to develop their productive capacities will be facilitated by the willingness of supplier states to agree to a variety of 'offset deals' which may entail offering the recipients licensed production opportunities or technology transfer arrangements. This willingness, Brzoska and Ohlson recognise, will be apparent when the arms market is fairly stagnant and there is consequently increased competition among supplier states: a situation which was evident in the mid-1980s.[13]

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[12] Karp contends that refurbishment, or upgrading, is considerably cheaper than acquiring new weapons "typically [being] one-fith to one-half the cost." Karp, op. cit., p.356. It still has its drawbacks, however, as it "cannot overcome the inherent limitations of a weapons platform" and an extension of life requires "accepting continuously restrictive operating parameters." Ibid.

[13] See Brzoska and Ohlson, op. cit., pp.130-131. They also note that the development of productive capacity, and the attendant decrease in the imports of arms, can be a function of a "substitution cycle" which occurs as states' incomes grow: "direct imports of weapons are increasingly ... supplemented by imports of support equipment and

This chapter will seek to analyse the multifarious ways in which the pressures of the technological imperative and the role of extra-regional powers influenced the various states' arms acquisitions (bearing in mind that some of these aspects have already been discussed in the context of other pressures). Much as in the case of the requirements of defence policy and strategy it is apparent - given the secondary nature of the SE Asian'arms dynamic' and the inescapable nature of the technological imperative - that these pressures will be of relevance to all the states under consideration. Again, however, they will differ in the degree to which they influence arms acquisitions according to the various states' circumstances. In particular, they will differ according to the scope of their relationships and dependence on extra-regional powers; their desire to keep up with technological developments; and their efforts to develop their defence industry (if, indeed, they have one). From these criteria it is possible to determine in which states these pressures were of particular significance (Vietnam, Thailand and Singapore), of some significance (Indonesia), and of marginal significance (Malaysia and Burma).

Vietnam

For Vietnam, the impact of these two pressures on its arms acquisitions during the Second Cold War period can be seen wholly in terms of its strategic relationship with the Soviet Union. In the absence of a domestic defence industry producing anything other than small arms, and in view of the chronic economic problems which it suffered from, the relationship was one in which Vietnam was almost entirely dependent on the Soviet Union for the supply of major weapons and other military equipment - all of which is thought to have been provided as grant aid.[14] The nature of the

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arms production technology and, finally, imports are substituted by growing domestic production". Ibid., p.132.

[14] Pike estimated that in 1979, for example, 97% of Vietnam's "military hardware" was supplied by the Soviet Union, with East Germany (2%) and Poland and Czechoslovakia (1%) accounting for the remainder. Douglas Pike, "The USSR and Vietnam: Into The Swamp", Asian Survey, Vol.XIX, No.12, December 1979, p.1165. According to the 1985 edition of "Soviet Military Power" published by the US government, the USSR provided a total of US$5bn in military aid to Vietnam between 1979 and 1984. Cited Denis Warner, "Vietnam, the double-edged sword in

relationship also meant that the provision of weapons to Vietnam was often determined by the specific requirements of Soviet strategy. To the extent that the technological imperative had any effect then this must also be seen in the context of Vietnam's dependence upon its Soviet patron. Vietnam's ability to keep up with the process of technological progression, and to avoid the problems of obsolescence, was contingent on the Soviet Union's willingness to allow it to do so by making either the latest, or at least more modern, weapons available to it.

The existence of a patron-client relationship between the Soviet Union and Vietnam was not new to the Second Cold War period. It did, however, reach its apogee in the wake of the signing of the Soviet-Vietnamese Treaty of Friendship and Co-operation in November 1978 and the Chinese invasion of northern Vietnam in February 1979.

The origins of the relationship lay in the Soviet Union's support for the Democratic Republic of Vietnam's (DRV) struggle against the Republic of Vietnam in the 1960s and early 1970s, and in the USSR's calculations as to the likely utility of a relationship with a re-unified - communist - Vietnam for ensuring a strategic configuration in SE Asia which was highly favourable to it. The foundations for the future relationship were laid in 1971 when, as Thompson notes, there was a coalescence of North Vietnamese and Soviet thinking. At this point in their struggle the North Vietnamese recognised that they would effectively have to choose the USSR over China as their major military backer in order to ensure the receipt of the weapons required to defeat the South in an invasion: whilst, for its part, the Soviet Union recognised that the defeat of the Americans in Vietnam would create "a vacuum which she could fill ... thereby completing her encirclement and containment of China."[15] The upshot of these decisions was that the Soviet

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South-East Asia", Pacific Defence Reporter, June 1985, p.15. McGregor contends that much of this aid would have to be "free, simply because Vietnam could not possibly afford to equip and supply its large armed forces." McGregor, op. cit., p.68. He does not, however, discount the possibility of "partial payment either by barter or in labour" although he concludes that this was more likely to have gone towards shoring-up Vietnam's "balance of payments deficit in non-military trade with the Soviet bloc." Ibid. This point about barter payments in primary products was also made in a paper presented to the NZ Institute of International Affairs in Hamilton, New Zealand, in April 1998 by an Australian diplomat formerly in Vietnam.

Union supplied huge quantities of weaponry to the DRV during 1971, including advanced weapon systems (for example, SA-7 SAMs) which it had not supplied hitherto.[16]

In the aftermath of the DRV's victory in 1975 and the establishment of the Socialist Republic of Vietnam, the pattern of Soviet-Vietnamese relations which was to characterise the Second Cold War period began to clearly emerge. Soviet military (and economic) aid was provided to an increasingly dependent Vietnam because of the role which the latter could play in assisting the USSR to achieve its strategic ambitions in SE Asia. These strategic ambitions included countering China; establishing a military presence in the South China Sea and Indian and Pacific Oceans; and founding a legitimate claim to be involved in regional affairs.[17] The 1978 treaty, and the developments which ensued thereafter, represented the culmination of Soviet desires and Vietnamese dependence.

The Treaty of Friendship and Co-operation has been described as representing the fulfilment of long-standing Soviet ambitions of bringing Vietnam "into a military alliance against China"[18]: China being one of the Soviet Union's "core" security interests.[19] By implication, therefore, deterring Chinese aggression against allies like Vietnam was also a component of that core.[20] In this respect it would be accurate to contend that there were perceived to be mutual benefits accruing from the treaty, with it effectively symbolising "a convergence of strategic interests between Moscow and Hanoi".[21] Indeed, from Hanoi's point of view, the treaty with the Soviet Union was meant to provide what Chanda has termed an "insurance

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[15] Thompson, Peace Is Not At Hand, pp.93-94.

[16] Ibid., p.94.

[17] See Pike, Vietnam and the Soviet Union, pp.180-181.

[18] Nayan Chanda, Brother Enemy. The War After The War, (New York: Collier Books, 1986), p.321.

[19] Rajan Menon, Soviet Power And The Third World, (New Haven: Yale University Press, 1986), p.98.

[20] See ibid.

[21] Ibid., p.224.

guarantee" against any potential Chinese aggression in response to Vietnam's impending invasion of Cambodia.[22]

The Chinese invasion of northern Vietnam in February 1979 appeared to belie the idea that the Soviet Union would act as the guarantor of Vietnam's security under the Treaty of Friendship and Co-operation. The Soviet response to the invasion, Pike contends, was certainly a "guarded" one:

> Throughout the seventeen days of the invasion the USSR took only minimal action and carefully labeled each act to avoid ambiguity. Moscow did nothing that could be interpreted as being militarily hostile toward China. .... At no time during the seventeen days did the USSR make any move in the direction of China. .... It did [however] immediately generate a crash program of military assistance to Vietnam. A special airlift flew in needed light cargo - such as medicines - and some heavy cargo in small amounts, chiefly for show. The war was over before new supplies could make any significant contribution, but they did demonstrate Soviet support.[23]

The Soviet Union's minimalist response to the invasion, Pike continues, was based on two calculations. First, the Chinese invasion had only limited objectives and did not threaten Vietnam's survival. Indeed, the Chinese decision to limit both the duration and extent of their invasion was influenced by their desire to prevent the Soviets from feeling any compulsion to become directly involved (in this sense the USSR did act as a guarantor of Vietnam's security). Secondly, given the limited objectives of the Chinese the PAVN would be more than capable of dealing with it (especially with some Soviet logistical support).[24]

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[22] Chanda, op. cit., p.321.

[23] Pike, PAVN, p.76. The Soviet Union also demonstrated its support for Vietnam by mounting reconnaissance flights over the Sino-Vietnamese border area during the fighting. The Japanese Defence Agency reported that two Soviet Tu-95 'Bear' aircraft were thought to have been pursuing such a mission on 21st February. See SWB, 22 February 1979 FE/6049/A3/22.

[24] See Pike, PAVN, pp.76-77. For an analysis of the objectives and calculations which underlay China's invasion, and an account of it, see Jencks, op. cit., pp.139-146.

The Soviet Union's limited response, moreover, indicated the 'ambiguity' contained within Article 6 of the Treaty of Friendship and Co-operation which was the one which effectively specified what would happen in the event of an attack upon Vietnam. This 'ambiguity', Pike contends, was "deliberate on the part of the USSR."[25] Article 6 stated that:

> In case either party is attacked or threatened with attack the two parties signatory to the treaty should immediately consult each other with a view to eliminating the threat, and shall take appropiate and effective measures to safeguard the peace and security of the two countries.[26]

The wording here is significant because it did not commit the Soviet Union to provide "immediate military aid" as did treaties with North Korea and Mongolia.[27]

It is possible, however, that such a phrase was included in a 'secret protocol' signed at the same time as the main treaty: a protocol which, significantly, was also thought to have seen Vietnam grant permission for Soviet forces to use Vietnamese air and naval facilities.[28] In effect, therefore, the treaty contained an important quid pro quo. In return for Soviet military assistance - and obviously we are most concerned with the issue of arms transfers - Vietnam agreed to provide the USSR with access to its military facilities. The Soviet Union could then use these facilities to fulfil its wider strategic ambitions in SE Asia.

In the aftermath of the Chinese invasion in February 1979 the quid pro quo contained within the treaty effectively became operative and there was a massive injection of Soviet arms into Vietnam during the period 1979-1981. Fearful of further and potentially more threatening Chinese military action

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[25] Pike, Vietnam and the Soviet Union, p.185.

[26] Cited ibid.

[27] Pike, Vietnam and the Soviet Union, p.186.

[28] Ibid.

against it, Vietnam urgently required substantial quantities of major weapons to build up all three branches of its armed forces so that they could hope to counter the PLA's clear quantitative superiority.[29] Furthermore, the Vietnamese now acquiesced to Soviet requests for access for its forces to the major Vietnamese facilities at Da Nang and Cam Ranh Bay, no doubt in the hope too that a Soviet military presence would act as an effective deterrent to further Chinese aggression. The first Soviet warships to visit Cam Ranh Bay, Chanda observes, including a cruiser and a frigate, arrived on 27th March, 1979 and thereafter there was a steady increase in the number of ships and aircraft which operated from Vietnam.[30] It should be noted that there was an extensive debate over the exact nature of the presence of Soviet forces at Cam Ranh Bay during the Second Cold War and, concomitantly, over the arrangements the Vietnamese had made to permit them to use it. In essence, the debate revolved around whether it was a Vietnamese or a Soviet 'base'.[31] Irrespective of the most

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[29] In June 1979 the Far Eastern Economic Review reported that: "Vietnamese officials are convinced that renewed fighting with the Chinese is both inevitable and imminent." The expectation was that next time the Chinese would mount a two-pronged attack through Laos and amphibious landings near Thanh Hoa in an attempt to cut-off the north of the country before reinforcements from the south could arrive. FEER, 15 June, 1979, p.12. Vietnam's concerns about the maritime dimension were heightened in September when China conducted a large combined air and naval exercise near Hainan Island and the Paracel islands at the same time as it was reactivating naval bases in north Hainan. See FEER, 21 September, 1979, p.13.

[30] Chanda, op. cit., pp.397-398.

[31] Chanda, basing his argument on the views of US analysts, contends that the "Soviet buildup in Vietnam began not on the basis of any open-ended commitment or 'leasing' of Vietnamese facilities, but as a result of specific accords reached during periodic consultations held between Moscow and Hanoi officials." Ibid., p.397. The official Vietnamese position, which was clearly reiterated in 1988 in the wake of Soviet President Gorbachev's call for a mutual US-Soviet withdrawal from their respective bases in the Philippines and Vietnam, was that Cam Ranh Bay was a Vietnamese base. "It is well known to everyone that Cam Ranh is a sovereign seaport of Vietnam, and that Vietnam has permitted the Soviet naval fleet to use Cam Ranh to supply it with material and technical aid." SWB, 20 September 1988 FE/0261 A2/1.

In his discussion of the extent to which the USSR used arms transfers to Third World states to secure the use of military installations, Menon makes a clear distinction between *bases* and *facilities*. The former is "an installation that supports the operations of a military force and serves as its point of origin .... the right of access for a specified period [being] ... secured by a treaty between the host state and the lessee"; whilst the latter are signified by "noncontractual, less extensive, and ad hoc

appropiate epithet to attach to Cam Ranh Bay, it was evident by the mid-1980s that it was extensively utilised by Soviet forces giving them a significant strategic presence in the South China Sea and its environs.

> Cam Ranh is now the centre of the largest concentration of Soviet naval units outside the USSR. Approximately 30 units - including surface combatants, conventional and nuclear-powered submarines and naval auxiliaries operate in the South China Sea. The adjacent air base supports long-range naval reconnaissance, strike and tactical fighter aircraft.[32]

The early importance attached to Vietnam by the Soviet Union as a "forward-deployment air and naval base"[33] for its military forces, meant that Soviet arms transfers to Vietnam were for two (inter-related) purposes. First, to enable the Vietnamese to strengthen their forces for any future confrontation with China. Secondly, to enable the Vietnamese to "protect Soviet air and naval capabilities based in Vietnam."[34]

In the aftermath of the Chinese invasion the priority for Vietnam was to better equip those PAVN units responsible for the defence of the northern part of the country (near the border area and in and around Hanoi and Haiphong) as part of the preparations for an expected greater war with China.[35] To this end, Vietnam acquired some 200 T-62 MBTs in 1979; unknown (but presumably considerable) quantities of T-55 MBTs and BTR-60P APCs during the period 1979-1981; and 300 (?) 152mm howitzers during the same period. The heavy artillery pieces were almost certainly intended for PAVN units

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privileges" in which "access" is limited in some way. Menon, op. cit., pp.228-229. Menon notes, however, that the distinction between the two can 'collapse' in such cases as Vietnam where the USSR had "exclusive, regular and long-term access to ports and shore installations for repairs, training, storage, communications, and reconnaissance." Ibid., p.229.

[32] "Soviet Military Power 1985" cited Warner, op. cit., p.15. Vietnam also acted as an important base for Soviet signals intelligence gathering activities. Ibid.

[33] Pike, Vietnam and the Soviet Union, p.191.

[34] Ibid., p.197.

[35] See FEER, 20 April, 1979, p.19.

deployed along the border in view of the frequent artillery barrages mounted by the Chinese on Vietnam's northern provinces of Ha Tuyen and Lang Son (invariably in response to Vietnamese activity along the Thai-Cambodian border).[36]

Despite the fact that the PLA did not employ air power during its February invasion - although it had amassed somewhere in the region of 700-1000 aircraft in the vicinty of the border[37] - the Vietnamese appear to have placed a premium on the role of air power in any subsequent conflict with China.[38] Accordingly, therefore, Vietnam acquired very large numbers of combat aircraft (including MiG-17s; MiG-19s; MiG-21s; Su-7s; and, possibly, Su-22s) between 1979 and 1981: aircraft which could provide both an interceptor and a ground attack capability.

The ground-based components of Vietnam's air defences were not neglected either in the wake of the Chinese attack. This was indicative of both the importance which Vietnam attached to having a strong, comprehensive air defence capability and, Pike contends, of the Soviet Union's wish to supply Vietnam with air defence systems so that it could afford better protection to Soviet air and naval assets based there.[39] In the 12 months or so following the invasion, therefore, Vietnam received several SA-3 and SA-6 SAM systems and missiles (almost certainly with their attendant radars). These new systems were intended to supplement Vietnam's existing SAM network (both in the border area and in other strategic locations)[40] and to provide protection for those installations which were used by Soviet forces:

reading for 40

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[36] See Pike, PAVN, pp.74-75.

[37] See Jencks, op. cit., p.142. The Chinese did not employ air power, Jencks contends, because of their desire to "limit the scope of the war". Ibid.

[38] Pike makes this point in reference to the contents of PAVN military journals. See Pike, PAVN, pp.255-256.

[39] See Pike, Vietnam and the Soviet Union, p.197. The background to the importance attached by Vietnam to its air defences can be seen in the mid-1960s when North Vietnam deployed Russian supplied air defence equipment (including MiG fighters and SAMs) to defend Hanoi and Haiphong against American bombing. Moreover, North Vietnam's air defences had proved to be inadequate in December 1972 when they were virtually overwhelmed by American bombers. See Thompson, Peace Is Not At Hand, pp.92 and 135.

> The USSR has ... installed second-generation air defence systems to protect its major air fields at Hanoi and the naval installation at Cam Ranh Bay. Advanced missile systems reportedly have been installed at Haiphong, Huong Khe, Vinh, Da Nang, Nha Trang, and Bien Hoa.[41]

In tandem with the supply of SA-6 SAM systems the Soviet Union most likely supplied an appropiate number of ZSU-23-4 'Shilka' self-propelled AA guns, Soviet practice being to deploy four ZSU-23-4s with each battery of four SA-6 SAM launchers (that is, one for each launcher).[42] As Vietnam received at least two batteries of SA-6s it would not be unreasonable to assume, therefore, that it also received at least eight ZSU-23-4s (though this cannot be confirmed). The 'Shilkas' were designed to operate in conjunction with the SA-6s in order to prevent any attacking aircraft from getting through by flying low under the SA-6s' cover.[43]

Nowhere in the post-invasion period was the impact of Soviet arms transfers more dramatic than on Vietnam's naval and maritime capabilities. These expanded enormously in the years immediately following the invasion and, significantly, continued to expand with Soviet assistance up to the mid-

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[40] This network had itself been strengthened considerably prior to the Chinese invasion with deliveries of large numbers of SA-2 SAM systems and missiles. Some of these were delivered or deployed a matter of days before the invasion occurred as part of Vietnam's last minute defensive preparations. See FEER, 16 February, 1979, p.10. In view of Chinese claims to have put up to seven Vietnamese SAM sites out of action (the Chinese also claiming to have captured a number of 'SA-6' missiles) during the fighting, it is possible that some of the SA-3 systems, in particular, which Vietnam received actually went to plug gaps in the border defence network. See SWB, 8 March 1979 FE/6061/A3/15.

[41] Pike, Vietnam and the Soviet Union, p.197. In his earlier article, Pike also referred to the fact that Soviet 'Badger' bombers at Vietnamese air fields were protected by a "new air defence system employing the SAM-3." Pike, The USSR And Vietnam, p.1166.

[42] See Christopher F. Foss, Armoured Fighting Vehicles of the World, (Shepperton: Ian Allan, 1982), p.200.

[43] The effectiveness of the SA-6-'Shilka' combination was, it has been widely recognised, amply demonstrated during the 1973 Yom Kippur war. See, for example, R. G. Lee et al., Land Warfare, Brassey's New Battlefield Weapons Systems and Technology Series into the 21st Century. Volume 5, Guided Weapons, (3rd ed.), (London: Brassey's, 1998), p.206.

1980s which was some time after supplies in other areas had more or less dried up. As with the other arms transfers, the supply of warships was meant to fulfil two purposes: first, to enable the PAVN Navy to defend both mainland Vietnam and Vietnamese claimed offshore islands in the South China Sea against any Chinese amphibious attack, and secondly, to enable the Vietnamese to perform "certain naval functions that primarily serve the USSR, such as naval surveillance".[44] More generally, the build-up of the Vietnamese navy - especially its ASW capability - can be seen as fitting in with the overall importance attached to maritime strategy by the Soviet Union under Admiral Gorshkov and, perhaps, analogous to the example of Cuba.[45]

During the period 1979-1983 the Vietnamese received a large number of fast attack and patrol craft directly transferred from the Soviet navy. These included eight of the 'Osa-II' class - "the most modern type in the Soviet navy" at the time[46] - and some 48 (?) SS-N-2B SSMs to arm them with. The Vietnamese also received three 'Polnochny' class LSMs (landing ship, medium) from the Soviet navy which were probably assigned to the PAVN Navy's 'Kiet Brigade' which was tasked with the defence of "offshore islands and ... troop transport duties."[47] For airborne ASW operations, and maritime patrol, the Vietnamese were provided with both Ka-25 helicopters and Be-12 'Chaikas'. The 'Chaikas' may eventually have been armed with AS-7 anti-submarine missiles delivered between 1983 and 1985. Post-1983, the Vietnamese were provided with additional FACs - this time 'Turya' class hydrofoils - and three more 'Petya II' frigates for ASW (two already having been provided in 1978).

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[44] Pike, PAVN, p.257.

[45] The argument here is that a strong Vietnamese navy (like Cuban naval forces in the Caribbean) would divert the attentions of US' forces in times of tension. See Wettern, op. cit., p.14. For a brief overview of Soviet maritime strategy under Gorshkov see Bryan Ranft, "Admiral of the Fleet S. G. Gorshkov", in Geoffrey Till, Maritime Strategy And The Nuclear Age, (2nd ed.), (London: Macmillan, 1984), pp.68-74.

[46] Douglas Pike, "Vietnam, a modern Sparta", (The Armed Forces of the Asia-Pacific Region, No 2), Pacific Defence Reporter, April 1983, p.35.

[47] Pike, PAVN, p.112.

In terms of the extent to which these transfers of Soviet arms in all the various categories facilitated the PAVN's ability to keep up with the process of military technological progression, the 'Osa-II' fast attack craft were a notable exception. Generally, and this has been widely commented upon, Vietnam did not receive state-of-the-art equipment.[48] The majority of the weapons which the Soviet Union transferred to the PAVN were of an older vintage and were either no longer in frontline service with the Soviet armed forces, or, were in the process of being replaced. In other words, they were cast-offs. It is interesting to note in this regard that although Vietnam was an important 'socialist country' in the USSR's overall Third World strategy, it did not receive the same sorts of leading-edge weapons (for example, MiG-23s, T-72/80s, and SA-5/8s) which were transferred to "major customers" such as Iraq and Syria.[49] When very advanced weapons were apparently supplied - notably the MiG-23s - these actually remained under "tight Soviet control."[50]

After 1984 there were very few supplies of major weapons to Vietnam. By 1984, in fact, the Soviet-Vietnamese strategic relationship was beginning to unravel as the USSR increasingly sought to normalise its relationship with China. It was notable that in the trail of the Vietnamese Defence Minister Van Tien Dung's visit to Moscow in July in order to seek further Soviet military aid in view of Chinese pressure along the northern border, there was "no indication that the Soviets ... started to send any extra military hardware".[51] By 1985, moreover, the Vietnamese no longer feared a major Chinese attack as the PRC had apparently decided that they

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[48] See Chanda, op. cit., p.397; McGregor, op. cit., p.68; Neuman, Military Assistance in Recent Wars, p.33; and Sauvageot, op. cit., p.34. One of the reasons for this may have been that the Soviets actually played down technology in the conduct of war, and especially in 'local wars' in the Third World. The experience of these having led Soviet theorists to the conclusion "that a technological advantage in weaponry does not automatically bring victory." Menon, op. cit., p.64. It was also apparent in any case that even the older equipment which the USSR provided still surpassed the technological level of much of that possessed by the PLA (an observation which McGregor makes too).

[49] Menon, op. cit., p.191.

[50] Neuman, Military Assistance in Recent Wars, p.33. This point has also been made by Menon in respect of other Third World client states. See Menon, op. cit., p.194.

[51] FEER, 2 August, 1984, p.24. This was despite the new Soviet President Chernenko's condemnation of Chinese border attacks.

could not afford to mount a major offensive against Vietnam, particularly in view of the difficulty of establishing military (especially air) superiority.[52]

Nowhere was the apparent end of the strategic relationship more evident - and thus of the influence of the Soviet Union on Vietnamese arms acquistions - than at the time of the various clashes between Vietnam and China in and around the disputed Spratly Islands in 1988.[53] Although the Vietnamese apparently "did not ask for Soviet military support" after the March attack, "Vietnamese leaders nevertheless were 'shocked' by what they viewed as Soviet complacency."[54] Soviet support was limited to "providing satellite and signals intelligence on Chinese ship movements."[55] The last major weapons to be provided may have been two 'Matka' class FAC in 1989. A year later, **all** Soviet military assistance to Vietnam was ended.

Thailand

For Thailand, the two pressures of technological progression and the role of extra-regional powers have to be seen in the context of the external threat posed by Vietnam. In effect, therefore, they are supplementary pressures: the primary impetus for the expansion and modernisation of the Thai armed forces during the Second Cold War period being provided by Vietnamese activity in Cambodia.

The later importance of China notwithstanding, the two pressures are inextricably linked for Thailand in terms of its long-standing security relationship with the United States.[56]

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[52] See FEER, 30 May, 1985, p.15.

[53] The most notable of these was on the 14th March when Vietnamese vessels were attacked by the Chinese. See SWB, 17 March 1988 FE/0102 A3/1.

[54] FEER, 9 June, 1988, pp.16-17.

[55] Ibid., p.17. The Soviets may also have provided assistance in the sense of helping to keep the PAVN Navy operational by providing spares for its FACs and Patrol Craft (and reactivating some of the older frigates): other parts of the PAVN not faring so well in terms of the provision of spares. See Clare Hollingworth, "To forestall economic collapse, Vietnam will pull out of Cambodia", Pacific Defence Reporter, May 1988, p.14.

Indeed, this relationship can be attributed with having a special impact on Thai arms procurement - it predisposed the Thais towards the acquisition of advanced American weapons. This predisposition was a consequence of the socialisation of many senior Thai military officers into American strategic culture as a result of joint operations during the Vietnam war era, plus joint exercises and participation in US training and education programmes over many years.[57] Sukhumbhand Paribatra goes as far as to say that Thailand's focus on conventional warfare, derived from the US influence on Thai doctrine and training, has meant "that the RTG's [Royal Thai Government's] arms procurement decisions have [had] an American -influenced logic of their own, independent of the Thais' threat perceptions."[58] Mak makes essentially the same point about the Thais being "biased towards conventional, high-tech equipment" as a result of American influence, but argues that during the 1980s there was a dovetailing of "[t]he 'Vietnamese threat' with the in-built biases of the Thai military."[59]

Just as Vietnam's need for extra-regional power support to ensure its security in advance of its invasion of Cambodia led to it developing close ties with the Soviet Union, Vietnam's invasion meant Thailand required external "sources of

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[56] The foundations of this relationship lay in the provisions of the 1954 Manila Pact establishing the South-East Asia Treaty Organisation and in the 1962 Rusk-Thanat Communique. For details of these, and the interpretations of them, see Randolph, op. cit., pp.29-30 and 41-42. The 1962 communique, Randolph contends, was very important as it "constituted on a *de facto* basis, an indirect bilateral defence agreement between Thailand and the United States." Ibid., p.42.

For an overview of the US-Thai security relationship during the Cold War - particularly its development aspect - see Robert J. Muscat, Thailand and the United States: development, security, and foreign aid, (New York: Columbia University Press, 1990), pp.20-30.

[57] A comparison could be made here - one not meant to be deliberately unflattering - with the American influence on the development of the Army of the Republic of Vietnam during the 1960s. See Kolko, op. cit., pp.234-235.

[58] Sukhumbhand Paribatra, op. cit., p.105.

[59] Mak, ASEAN Defence Reorientation, p.83. Tim Huxley contends that the Thais used the Vietnamese invasion of Cambodia as a "justification" for obtaining advanced weapons: weapons which had a "symbolic significance" of their own for Thailand. Huxley, The ASEAN States' Defence Policies, 1975-81, p.31 The Vietnamese invasion, therefore, could be regarded as providing both a need and a pretext for Thailand to acquire advanced, conventional weapons.

countervailing power" to ensure its security after it.[60] For Thailand, the crucial - if not the most immediately forthcoming - source of external military support was the United States. The Vietnamese invasion, therefore, effectively revitalised the Thai-US security relationship which had been more or less moribund since the Thais had requested the withdrawal of US forces from Thailand in the aftermath of the second Indo-China war.

In the wake of Vietnam's invasion of Cambodia Thailand sought a firm statement from the US that an attack on Thailand would constitute an attack on America's "vital interests", rather than the mere reaffirmation of the continued existence of the Manila Pact (and presumably the Rusk-Thant communique too).[61] Thailand, however, did not want US forces redeployed to Thai bases but, instead, US assistance in enabling it to defend itself. Indeed, it was this self-help approach which was to be at the centre of the Thai-US security relationship during the Second Cold War. Concomitantly - and in addition to the indirect influence which the US still exerted on Thai arms procurement - the main US influence on Thai arms acquisitions during this period was exerted through the provision of increased Foreign Military Sales (FMS) credits which assisted Thailand in procuring the weapons it required, and through expediting the delivery of weapons to Thailand at times of crisis.[62]

Initially, at least, and certainly in comparison with that provided to strategically important states in the Middle East in the wake of the fall of the Shah of Iran, for instance, US security assistance to Thailand seemed rather limited. In response to Prime Minister Kriangsak's visit to the US in

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[60] Michael Leifer, ASEAN And The Security Of South-East Asia, (London: Routledge, 1989), p.11.

[61] FEER, 7 March, 1980, p.27.

[62] FMS credits are extended by the Department of Defense to foreign governments for the purchase of US government or commercial defence articles, services and design and construction services. States can also receive defence materiel and services on a grant aid basis under the US Military Assistance Program (MAP). See Foreign Military Sales, Foreign Construction Sales and Military Assistance Facts As Of September 30, 1994, (Deputy for Financial Mangement Comptroller, Defense Security Assistance Agency), pp.iv-v. For an overview of the institutional framework of US arms transfer programmes in the 1980s, see Brzoska and Ohlson, op. cit., pp.49-52.

February 1979 there was a "modest" increase in FMS credits from US$30m to $36m and the agreement to expedite equipment which Thailand had already ordered.[63] Significantly, however, as we have already seen, the Americans turned down the Thais request for advanced weapons such as the M60A3 MBT and the F-16A. The rationale for refusing to supply these weapons to Thailand - particularly the F-16As - appeared to be based on calculations about their utility to Thailand and, arguably, about Thailand's place in overall US strategic calculations.

The supply of F-16As to Thailand, it was thought, would be of limited utility because of the RTAF's lack of absorptive capacity for such advanced aircraft. It would also be detrimental for Thai development projects (deemed to be of considerable importance because of the ongoing CPT insurgency) as the expenses incurred in purchasing them would require the diversion of funds away from development expenditure.[64] Moreover, the introduction of such advanced weapons into the SE Asian region would go against US arms transfer controls outlined under PD-13. Even after the virtual abandonment of Carter's arms transfer controls in 1980 there were still clear American efforts to limit, or restrict, the supplies of advanced weapons to regional states during the 1980s in order to avoid a destabilising arms race in SE Asia.[65]

In global terms, at the beginning of the Second Cold War period, SE Asia - and, therefore, Thailand - also seemed to be of marginal importance to the United States and certainly very much secondary to the Middle East. It was notable in this respect that in 1979 the US was prepared to supply Israel with weapons such as M60A3 tanks and 'Sidewinder' AIM-9L air-to-air missiles which "were among the most advanced weapons in the US inventory"[66], with Saudi Arabia and Egypt also obtaining M60s.[67] The supply of advanced weapons to

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[63] Randolph, op. cit., p.215.

[64] See FEER, 2 February, 1984, p.32.

[65] Discussion with Dr. Leonard Sebastian and Mr. Daljit Singh at the Institute of Southeast Asian Studies, May 1998.

[66] Spear, op. cit., p.147.

such vital states, at the same time as continuing efforts to maintain a ceiling on arms transfers, meant "that the burden of the ceiling policy fell upon arms transfers to those countries considered less strategically important and to whom arms transfers could be refused or delayed without necessarily harming US interests."[68]

In June 1980 (as we have already seen) the US responded with some urgency to the first major Vietnamese incursion into Thai territory by expediting the delivery of a number of weapons including scarce M48A5s MBTs. The higher level of priority accorded to Thailand which was implied by these deliveries can be seen in the context of the generally more robust American policy towards the challenge posed by the Soviet Union in the wake of the invasion of Afghanistan - a policy which was encapsulated for the Persian Gulf region in the so-called 'Carter doctrine' of January 1980.[69]

Although, as Randolph notes, the incoming Reagan administration in 1981 did not actually herald a fundamental change in US policy towards SE Asia in general, and Thailand in particular, it did display a firmer commitment to SE Asian security and to assisting Thailand.[70] The US arms transfer policy (as outlined in July 1981) now rested on the "same philosophy as the US rearmament programme did: basic US interests ... were challenged by the USSR and this threatened stability in many regions vital to the USA."[71] In terms of SE Asia, the subsequent US defence review of 1982 made it clear that the region faced the combined threat of:

> Vietnamese expansionism directed against Thailand and the Soviet naval threat to the lines of communication for US forces from the West Coast of

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[67] See ibid., pp.146 and 148.

[68] Ibid., p.151.

[69] This doctrine was aimed at challenging the Soviet Union and protecting US strategic interests in the Gulf in the aftermath of the invasion of Afghanistan. It saw renewed emphasis attached to security assistance programmmes with an expansion of FMS credits in return for access to bases. See ibid., p.150.

[70] Randolph describes the change as a "perceptual one". Randolph, op. cit., p.223.

[71] Brzoska and Ohlson, op. cit., p.58.

the US through Japan, the Philippines and the Straits of Malacca to Diego Garcia in the Indian Ocean.[72]

From America's perspective the atmosphere of heightened tension in Indo-China in 1981 meant that Thailand (and the other ASEAN states) needed to have American commitment and credibility visibly demonstrated to them.[73] One way of doing this was to substantially increase Thailand's FMS credits. Accordingly, therefore, Thailand's FMS credits were increased from US$53.4m in 1981 to $74.7m in 1982 and up to $94m in 1984.[74] This increased FMS assistance meant that Thailand was more easily able to afford to acquire the US weapons it needed to build-up its armed forces - in line with the idea of the self-help approach - to the point at which they could buy valuable time for external support to arrive in the event of a major Vietnamese invasion.[75] The process of building up the Thai armed forces' capability to resist a Vietnamese attack, and demonstrating US commitment to Thailand, was also to be aided by the expansion of US-Thai military exercises which occurred after 1981.[76]

The pattern of increased US financial and training assistance in the build-up of the Thai armed forces, in response to the threat posed by Vietnam, was slowly matched by a reduction in America's reluctance to provide Thailand with advanced weapons. After initially refusing to supply Thailand with 'Redeye' SAMs the US agreed to supply these in 1982, and in response to the Vietnamese incursion in 1983 it was prepared to expedite deliveries of more 'Redeyes' plus new model M-198 155mm howitzers "drawn directly from United States military inventories."[77] Most notably, Thailand's December 1983 request for approval to purchase F-16As was conditionally approved by the US administration in 1984

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[72] FEER, 18 June, 1982, p.10.

[73] Randolph cites the comments of Michael Armacost, the Deputy Assistant Secretary of State for East Asian and Pacific Affairs, to this effect. Randolph, op. cit., p.224.

[74] See ibid., pp.224-225.

[75] Randolph cites Richard Armitage's comments to this effect. Ibid., p.225.

[76] See ibid., p.228.

[77] Ibid., p.226.

subject to a final review by Thailand of the other options available. Given that there was a need to demonstrate a clear commitment to Thailand (at a time when the Thais were increasingly regarding the sale as a symbol of the strength of the security relationship) and to help the RTAF counter an expanded and modernised VPAF, the Reagan administration was prepared to expand the list of "special exemptions" to the country ban on advanced fighter sales to include Thailand (along with Indonesia and Singapore).[78] Thailand's ability to afford the aircraft - a traditional US concern - was also assisted by the fact the the US was to provide easier FMS credit terms for Thailand. These would extend the grace period from five to ten years and the repayment period from seven to twenty years.[79] Final Congressional approval for the sale (as was discussed in the external threats chapter) was obtained in 1985 in a climate of increased tension along the Thai-Cambodian border.

The intensity of the cross-border fighting in 1985 - which had again seen the US expedite deliveries of equipment to Thailand - and the heightened sense of concern in the US about the Vietnamese threat to Thailand also led to the formalisation of American logistical assistance to Thailand in a memorandum of understanding signed between the Thai Prime Minister, Prem Tinsulanond, and the US Secretary of Defense, Casper Weinberger, in October that year. In essence, this formalised the "[b]ilateral logistical planning [which had] ... been undertaken with the objective of improving the Thai logistical system and aiding overall Thai armed forces modernization."[80] The memorandum also made sure that the Thais would have guaranteed ready access to American equipment in times of acute need as equipment ordered for delivery later could be dispatched at once:

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[78] Richardson, F-16As for Thailand, p.52. The decision was also motivated by the resistance shown by Thailand (and others) to the 'intermediate' export fighter, or FX, the US was offering and thus by the potential loss of sales to other suppliers. Thailand had a choice of either the F-16/J79 or the F-20 'Tigershark' export fighter. See Ibid.

[79] These easier credit terms were meant to help Thailand buy the 40 M48 MBTs which the US had made available to it in 1984. See FEER, 26 April, 1984, p.17. Richardson also notes the significance of these terms for Thailand's purchase of F-16As. Richardson, The F-16 for South-East Asia, p.18.

[80] Randolph, op. cit., p.228.

> Under the agreement, Thailand ... [became] one of only a handful of countries with access to the Special Defense Acquisition Fund (SDAF), which was established ... [in 1982] to create a stockpile of long-lead items in the US arsenal that [we]re commonly required by allied countries.[81]

As events turned out, however, Thailand did not have to make recourse to the Special Defense Acquisition Fund nor, indeed, to the US-Thai 'war reserve weapons stockpile' which was agreed upon in 1987.[82] By 1987, the short-term Vietnamese threat to Thailand had begun to diminish. More importantly, perhaps, the role of the US as an extra-regional power influencing Thailand's arms acquisitions had begun to diminish too, with China instead having a greater impact.[83] An important consequence of the greater influence of China was a lessening of the impact of the process of technological progression on Thai arms acquisitions.

Although a de facto military alliance between China and Thailand had been developing since the Vietnamese invasion of Cambodia, it was not until China provided a number of Type 69 MBTs and Type 59/1 130mm towed guns to Thailand as grant aid in the midst of the 1985 cross-border fighting, that it had any influence on Thai arms acquisitions at all. These weapons, although of only marginal practical utility, had a high symbolic value as a further demonstration of China's commitment to Thailand's security. They may also have been intended to act as samples of Chinese wares for the Chinese also mooted the possibility of a more major deal for MBTs, APCs and artillery pieces around this time.[84] Whilst this deal did not actually eventuate until 1987, it was clear that the Thais were not unreceptive to the idea of procuring Chinese

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[81] FEER, 17 October, 1985, p.42.

[82] For details of this see FEER, 24 April, 1986, pp.44-45 and 22 January, 1987, p.6.

[83] It was notable that after peaking in 1986 the US scrapped Thailand's FMS credits for 1987, although there was an increase in grant aid by way of a partial compensation. See FEER, 19 February, 1987, p.27.

[84] See FEER, 19 March, 1987, p.16.

arms as there had been a limited move towards the diversification of arms suppliers after 1982.[85]

The imperative for diversification was all too evident in the light of the circumstances prevailing in 1987 when Thailand was faced with a reduction in US security assistance at the same time as the defence budget was no longer increasing. In these circumstances (and in view of the attractiveness of the deal on offer), if Thailand was to proceed with the planned modernisation of the army it was necessary for it to take up the Chinese offer which had been made earlier. In 1987, therefore, Thailand reached an agreement to procure Chinese MBTs, APCs and MRLs. In accordance with China's desire to demonstrate its continuing commitment to Thailand and to further its own interests in SE Asia through its relationship with the latter, these weapons were provided at so-called "friendship" prices and included generous repayment terms.[86]

This arms deal with China not only represented a clear shift away from dependence on the US as a supplier, but also a marked departure from the previous high-tech focus of Thai arms procurement. The technological level of the Chinese arms was certainly lower than many of the weapons in the Thai armed forces inventory although, significantly, still "sufficient to meet Thailand's basic needs".[87] A second order for Chinese MBTs and APCs in 1988 suggested a reinforcement of these trends, although the United States still remained an important supplier of the advanced weapons systems (for example, the AH-1G helicopters and 'TOW-2' anti-tank missiles) which the Thai armed forces continued to have a predilection for.

Singapore

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[85] One motivating factor for this, it has been suggested, was that the younger officers who were moving into procurement positions wanted Thailand to become less dependent on the United States. See FEER, 19 February, 1987, p.27. It may also have been motivated by that almost perennial feature of Thai procurement - corruption.

[86] The Type 69-II MBTs were reported to have been provided at a fraction (one tenth) of their normal market price and Thailand was given a 10-year grace period before repayments were due to commence. See FEER 19 March, 1987, p.16.

[87] FEER, 8 December, 1988, p.34.

For Singapore, the need to keep up with the process of technological progression has effectively been incorporated into its defence strategy. It has been incorporated through the desire to have a technological edge over its regional rivals and to make up for its relatively limited manpower through a reliance on hardware. Singapore, in fact, can be regarded as something of a 'special case' in its desire to keep abreast of the latest military technology.[88]

Although it is almost an article of faith in Singapore that the SAF's employment of "modern equipment" improves its "defence capability", this did not mean that high-tech equipment was purchased "every year".[89] Singapore was also prepared to acquire less sophisticated, second-hand, kit with a view to enhancing its effectiveness through the acquisition of 'force multipliers' - "equipment enabling other systems to perform more effectively" (for example, the E-2Cs) - and through upgrades.[90] Indeed, Singapore had a policy of upgrading its weapons where it made sense to do so in order to extend their operational lives and, in some cases, improve their performance also. In so doing, it it was possible to defer expenditure on new, and more expensive, replacements. The most notable examples of this policy were the upgrading of the RSAF's A-4 'Skyhawks' into re-engined and more powerful 'Super Skyhawks', and the refurbishment of the AMX-13 light tanks.

The decision to upgrade the A-4s was taken in 1984 and was based on the rationale that it was more cost effective to further the modernisation of the RSAF through upgrading rather than by acquiring new aircraft: the cost of a new F-5 was in the region of US$10m whereas the cost of upgrading an A-4 was only US$3m. By fitting the old A-4 with a new General Electric F404 engine it was possible to increase its climb rate by 35% and its acceleration by 40%, making it comparable to the F-5. The first 'Super Skyhawk' went into service in March

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[88] Discussion with Dr. Leonard Sebastian and Mr. Daljit Singh at the Institute of Southeast Asian Studies, May 1998.

[89] Defence of Singapore, p.28.

[90] Karp, op. cit., p.349.

1989.[91] The refurbishment of the AMX-13s resulted from a 1984 study which was initiated by the fact that they were on the verge of obsolescence. This study found that upgrading an AMX-13 would cost less than a fifth of that of a new tank and work began on improvements to them in 1985. The refurbished AMX-13 SM1s were commissioned in June 1988 and were equipped with new diesel engines which increased both their speed and endurance.[92]

Singapore's ability to upgrade weapons such as the A-4 and the AMX-13 was facilitated by its defence industry: an industry which was itself part of the overall 'Total Defence' strategy of the island state. Under this strategy it was recognised that Singapore needed a "defence industrial capability to meet ordnance, maintenance and supply needs" in order that the SAF could be self-reliant in any extended campaign.[93] Moreover, Singpore's various defence industries - which operate under the umbrella of 'Singapore Technologies' - were "essential to the operation, maintenance, and upgrading of the military hardware in the armed forces."[94] In addition to helping to achieve a degree of self-reliance and facilitating upgrading (plus aiding the civil industrial sector)[95] the local defence industry helped Singapore keep up with the process of technological progression through its production of selective (and often specially tailored) weapons. This was most obviously apparent with the locally designed and produced FH-88 155mm howitzer which the Ministry of Defence decided to develop in 1983.[96]

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[91] See Straits Times, 1 April, 1988, p.25 and 2 March, 1989, p.2

[92] See Straits Times, 8 July, 1988, p.22.

[93] Defence of Singapore, p.21.

[94] Ibid., p.52. The various elements of Singapore Technologies are listed on p.53. For an analysis of the development and capabilities of Singapore's defence industry, see Michael Richardson, "Singapore's defence industry", Pacific Defence Reporter, May 1983, pp.69-75.

[95] In this respect, for example, Chin Kin Wah has observed that Singapore's defence companies "contribute to skills tansfer to the civilian sector". Chin, Singapore: Threat Perception and Defence Spending, p.215. More broadly, it has been noted that the SAF in general is "designed to have a synergetic relationship with the civilian economy, particularly in the operation and maintenance of high technology and in weapon production." FEER, 13 January, 1983, p.28.

The role of extra-regional powers had a minimal effect on Singapore's arms acquisitions during the Second Cold War period. Their influence was essentially confined to providing examples of leading edge technology and aids to the development of Singapore's defence industry on a commercial basis through arrangements for local assembly and technology transfer (such as occurred with the S-211s and 'Super Pumas', for example). Except for the FPDA (and this had no impact on Singapore's arms acquisitions),[97] Singapore had no formal arrangements with extra-regional powers in the way that Vietnam and Thailand had. Singapore, however, by virtue of its "de facto" security relationship with the US[98] - one based on American strategic calculations about Singapore's importance and Singapore's own foreign policy of involving Western powers in SE Asia - did receive at least favourable treatment in terms of US arms transfer policy. Though neither an 'allied' state, nor a recipient of US security assistance, Singapore was certainly a regional state which the US was willing to assist in developing its own defence capabilites and was prepared to allow to receive some of the most advanced technology (notably the E-2Cs and F-16As).

Indonesia

Indonesia - like Thailand and Singapore - clearly recognised the value of modern equipment for improving the efficacy of its combat forces and sought to modernise them through the replacement of obsolescent weapons. However, because of its strategic culture, the absence of any forseeable external military threat, and the lack of resources, it did not place the

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[96] For details of the thinking behind the decision to develop the FH-88 and on the requirements which it had to meet, see Straits Times, 24 November, 1988, p.16. The FH-88s represented a considerable improvement over the SAF's older M-114A1 and M-68 howitzers.

[97] Even the announcement in December 1986 of the eventual withdrawal of the New Zealand infantry battalion did not have an impact because Singapore was sufficiently strong by then to treat this decision with equanimity. See FEER, 8 January, 1987, pp.15-16.

[98] This term was used by the Far Eastern Economic Review in describing how Singapore's offer of facilities to the US in August 1989 'formalised' an existing relationship. FEER, 31 August, 1989, p.9. The arrangements under this existing relationship saw Singapore provide the "US Navy and Air Force [with] repair and staging rights." Ibid., p.10.

same sort of premium on keeping up with the process of technological progresion during the Second Cold War period. Instead, Indonesia adopted a minimalist approach only seeking to acquire selected items of high-tech equipment.

The selective acquisition of high-tech weapons, it was thought, would serve "as a means for the maintenance of the necessary military skills [within ABRI] as well as a means to monitor advances in technology."[99] Furthermore, by developing a nucleus of capability in some of the most advanced weapons, Indonesia would be fulfilling a perceived need for "contingency preparedness" in the event that circumstances should change and an external threat should emerge sooner than anticipated.[100] By having this nucleus of capability it would readily "permit expansion of the arsenal as needed later."[101] The most notable example of the application of this thinking was the decision to acquire a single squadron of F-16s. Indeed, Murdani has commented that these aircraft "were not really meant for operational defence of the country as much as they were to keep up with technology and train its people in high technology."[102] This thinking was also apparent to some extent in the orders for 'Rapier' AD missile systems (see Chapter III).

Another factor underlying the development of a nucleus of capability in certain crucial areas was Indonesia's desire to avoid a repetition of the experience in the 1960s when because of a shortage of ground crew (and pilots too) the expansion of the Air Force led to a reliance on Soviet technical support.[103]

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[99] Speech by General Murdani on his assumption of the post of Commander-in-Chief of ABRI, cited Singh, op. cit., p.146.

[100] FEER, 24 October, 1985, p.24.

[101] Ibid.

[102] Murdani's response to an interview question about Indonesian arms acquisitions. Singh, op. cit., pp.118-119. The F-16s significance in this respect was also evident in the fact that they were regarded "as a technological bridge towards the fourth generation of fighter aircraft." General Murdani, cited ibid., p.146.

The pattern of procuring selected high-tech equipment to enable personnel to keep up to date with the latest technology had also been evident in the order for two West German T-209 submarines for the navy in 1977. See FEER, 20 April, 1979, p.32.

[103] See FEER, 14 February, 1985, p.33 and 24 October, 1985, p.24.

Additionally, some of the problems associated with obtaining spare parts for Soviet supplied aircraft made Indonesia acutely aware of the perils of relying on a single supplier and meant that there was a policy thereafter to diversify sources of supply.[104]

The desire to diversify sources of supply was not confined to Indonesia, of course. What was unique, however, was that Indonesia took the desire to avoid dependence on supplier states to its logical conclusion (in line with the self-help approach to national security encapsulated in its strategy of national resilience) by seeking to become self-sufficient for arms acquisitions. In other words, Indonesia consciously sought to obviate the influence of extra-regional powers on its arms acquisitons: "[s]elf-sufficiency in the production and maintenance of defence weapons systems is a long held aspiration of defence policy designed to reduce the leverage external powers can exert."[105] Ideally,therefore, ABRI's equipment requirements were "mainly expected [to come] from national resources, particularly from the group of strategic industries."[106]

If self-sufficiency was the ideal, however, it still remained largely an aspiration during the Second Cold War. The limited capacity of the strategic industries to produce major weapons for ABRI meant that the bulk of Indonesia's weapons acquisitions had to be sourced from abroad. Where possible, though, Indonesia did seek to enter into agreements which would enable local assembly, offset arrangements and technology transfer to both help develop its own manufacturing capability and reduce costs.[107] The strategic

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[104] See Karp, op. cit., p.347. Karp also notes that this experience led Indonesia to keep "major arms purchases much smaller, tailoring purchases to clear requirements". Ibid.

[105] Lowry, Indonesian Defence Policy, p.19. In addition to the motivation provided by the experience with the USSR in the 1960s, the more recent case of the US refusing to supply weapons designed for the OV-10s "because of the East Timor issue" also exercised the minds of Indonesian defence planners. Ibid.

[106] General Murdani, cited Singh, op. cit., p.147.

[107] This was most apparent in the case of the F-16 purchase in which Indonesia earned 17% of the cost of the deal through an offset arrangement with the manufacturer General Dynamics. See FEER, 25 September, 1986, p.30.

industries could also provide for the "maintenance, refurbishment and upgrading" of weapons systems.[108]

Although the goal of self-sufficiency remained some way off during the Second Cold War period, the role of extra-regional powers still had a very limited influence on Indonesia's arms acquisitions. It was, however, discernible nonetheless. Rather like Singapore, Indonesia also had a close, long-standing, but informal, security relationship with the United States. The basis for this relationship, it has been contended, lay in the support the US provided to Suharto in crushing the PKI in the aftermath of the events of October 1965.[109] The security relationship between them, however, was far less public than that in the case of Singapore. It tended to be mainly kept quiet because of Indonesian sensibilities about it appearing to conflict with its support for the exclusion of extra-regional powers from SE Asia. In practical terms the security relationship saw the US provide Indonesia with FMS credits for the purchase of American military equipment, whilst Indonesia granted the right of passage for US ships and, especially important, SSBNs (submarine, strategic ballistic nuclear) through its waters.[110] Indonesia was able to utilise these FMS credits (of which it was the next largest recipient in the region after Thailand and the Philippines) to pay for the M-101 howitzers it ordered in 1981 and to meet some of the costs of the F-16 purchase.

Indonesia also received military aid under Australia's Defence Co-operation Programme which was established in the 1960s to aid regional states develop their defence capabilites. Under

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[108] Lowry, Armed Forces of Indonesia, p.37. For an extended analysis of the strategic industries and Indonesian defence production see A. Hasnan Habib, "Indonesia's Defence Industry: Its Role, Mission, and Set-Up", in Jeshurun, Arms And Defence In Southeast Asia.

[109] See Michael R. J. Vatikiotis, Indonesian Politics Under Suharto, (London: Routledge, 1993), p.19.

[110] See FEER, 20 January, 1983, p.23. Taylor notes the significance of the Ombai-Wetar straits for the US Navy's SSBNs in the context of US policy towards Indonesia after the invasion and annexation of East Timor. Taylor, op. cit., pp.168-169. Evidence of Indonesia's general "strategic importance" to the US can be found in the fact that despite its "poor human rights" record (human rights being an element of the arms transfer controls under PD-13) there was no reduction in Indonesia's security assistance or transfers during the Carter administration. Spear, op. cit., p.172.

this programme - which in Indonesia's case focussed on maritime patrol capabilities - Indonesia received six ex-RAN 'Attack' class patrol boats to help it protect its maritime resources.[111]

Malaysia and Burma

For Malaysia and, more especially, Burma, the pressures of technological progression and the role of extra-regional powers had little or no influence on the acquisition of major weapons. With the exception of Malaysia's acquisition of two Type FS-1500 frigates (and 'Exocet' SSMs to arm them with) which were important for its maritime strategy, there were no significant acquisitions of high-tech equipment by either state. By and large, therefore, and this was discussed in the context of the need to maintain existing capabilities, the extent of the influence of the process of technological progression was confined to replacement of obsolescent equipment. There was no major effort by either state to keep up with the general process or to develop defence industries which could facilitate upgrading and thus help to ameliorate the technological imperative.

Although a lack or resources was also a consideration, the primary reason for this state of affairs was that both states' arms acquisitions were heavily influenced by the internal security dimension. Thus, there was a focus on the acquistion of predominantly low-tech weaponry for counter-insurgency operations[112] - notably armoured vehicles in the case of Malaysia - rather than on the area of air defence, for example, which required advanced combat aircraft and missile systems.

With respect to Malaysian air defence capabilities, it is possible that in addition to the apparent lack of concern about any threat from the VPAF (though this in itself may have been affected by the following point) Australia's continuing

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111 During the 1980s Australia also helped with the development of a maintenance support system for the 'Nomads' which Indonesia had received as grant aid in the 1970s, and had also purchased six of in 1981-1982. See FEER, 10 February, 1983 p.15 and 21 July, 1983, p.40. The programme was effectively suspended in 1986 after friction over a critical article of Suharto and his family in an Australian newspaper.

112 This point is also made by Karp in respect of Malaysian arms purchases. Karp, op. cit., p.347.

contribution to Malaysia's air defences for much of the Second Cold War may have militated against Malaysian arms acquisitions in this area. Although the importance of the FPDA and the associated Australian presence in Malaysia was played down by many[113], it is arguable that the IADS operating under the FPDA "provided an air defence umbrella" for Malaysia and thus "made it less imperative for Malaysia to acquire significant air defence capabilities" of its own.[114] It is significant in this context, perhaps, that in 1988 - by which time the permanent RAAF presence at Butterworth had ended with the withdrawal of the remaining 'Mirages'[115]- Malaysia was considering the acquisition of weapons under the MoU with Britain to bolster its air defence system .

Apart from Malaysia's relationship with Australia, which had an essentially negative impact on Malaysian arms acquisitions during most of the period under consideration, no other external relationships influenced Malaysian arms acquisitions in the manner of the US relationship with Singapore and Indonesia. Malaysia was not considered strategically important to the United States and received little security assistance in the form of FMS credits, nor, until the 1988 MoU,

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[113] Alagappa, for example, contends that "Malaysia does not place much reliance on the FPDA". Alagappa, op. cit., p.186. And one source in Kuala Lumpur was reported as saying that the RAAF (Royal Australian Air Force) aircraft at Butterworth did "not do a great deal to ... enhance overall defence preparedness" (although they did enable Malaysia to focus its attention on the South China Sea). FEER, 7 June, 1984, p.28.

[114] Mak, ASEAN Defence Reorientation, p.135. The IADS based at Butterworth, and staffed by personnel from all five members of the FPDA, provided co-ordinated radar coverage of Malaysian and Singaporean air space and control of aircraft at Butterworth and Tengah in Singapore. The RAAF had two squadrons of 'Mirage' fighters (36 aircraft) based at Butterworth of which six-eight would be on rotational deployment to Singapore. See FEER, 12 May,1978, pp.20-21 and 7 November, 1980, p.20; and Michael O'Connor, To Live In Peace, (Carlton: Melbourne University Press, 1985), p.144.

[115] The permanent 'Mirage' deployment was replaced by the rotational deployment from Australia of F/A-18s and F-111s. See FEER, 10 March, 1988, pp.33-34 and The Defence of Australia 1987, (Canberra: Australian Government Publishing Service, 1987), p.7.

The idea of rotational deployment was first mooted in 1982 when it was becoming increasingly evident that it would not be possible to extend the presence of the ageing 'Mirages' in Malaysia much beyond 1985. See FEER, 20 August, 1982, pp.15-16 and Michael Richardson, "The RAAF's role in South-East Asia", Pacific Defence Reporter, October, 1982, pp.47-50.

did Malaysia's security relationship with Britain have any major influence on its arms acquisitions. Not surprisingly, given its self-imposed isolation from the international system, Burma's arms acquisitions were not influenced by external powers. The only way in which they had any impact at all, was in terms of whether or not they would actually agree to sell Burma the few weapons it did want.

In view of the secondary nature of the SE Asian 'arms dynamic' during the Second Cold War and the systemic impact of the process of technological progression on arms acquisitions, it is not surprising that both pressures had, at the very least, an underlying influence on all the states concerned. In the case of Malaysia and Burma this took shape in their need to maintain and improve capabilities through the replacement of obsolescent equipment (as was discussed in the context of the requirements of defence policy and strategy), rather than through any strong desire to acquire state-of-the-art weapons. They were also mainly unaffected by the wider impact that extra-regional powers had on the other states' arms acquisitions.

Because of the linkage between the regional and international security complexes which was brought about by Vietnam's invasion of Cambodia - and the wider competition between the superpowers that existed during the period and, indeed, shaped it - the arms acquisitions of those states which were considered of strategic importance to either of the superpowers clearly bear the imprint of external influence. This was most obvious in the instance of Vietnam. It was also obvious too in Thailand and, to a lesser extent, in Singapore and Indonesia. All these three states also show the way in which the technological imperative operated on arms acquisitions by leading them to acquire at least some advanced weapons; to upgrade existing weapons where practicable; and, in Singapore and Indonesia, to develop their own defence industries.

Finally, it was also apparent at times that both of these pressures could have a limiting effect too on arms acquisitions in one way or another. This could be the result of an external power's overall policy on arms transfers or a shift in policy

towards a particular state over time (as occurred with the Soviet Union and Vietnam), or, simply of the spiralling costs of the most advanced weapons.

Chapter VI Conclusion

The 'arms dynamic' in SE Asia during the Second Cold War period for the six selected states - Burma, Indonesia, Malaysia, Singapore, Thailand and Vietnam - contained a wide range of pressures or factors which accounted for the states' acquisitions of a variety of major weapons. These pressures were derived, analytically, from both the three explanatory models contained within Buzan's theory of the 'arms dynamic' - based on the experience of the superpowers - and from the work by SIPRI and others on the factors influencing arms acquisitions and defence expenditure in the developing world. The pressures examined comprised: external threat assessment; the requirements of defence policy and strategy; the internal security dimension; and technological progression and the role of extra-regional powers.

At the outset it was also suggested that the role of the military might exert an influence on the various states' arms acquisitions. Such a suggestion was based on two possible arguments. First, the military in each of the states would exert the same sort of 'organizational pressure' to which Buzan refers in his analysis of the domestic structure model and which Thee describes thus: "Pressures exist from the military to pursue every technological option, and hence for more and better arms".[1] Secondly, the political influence of the military in the various SE Asian states - whether as a component of the government or as a group which civilian governments felt obliged to indulge - would enable them to fulfil wish lists.

It was noted at the beginning of the chapter on the internal security dimension, however, that the role of the military was only of marginal importance as one of the individual pressures in the SE Asian 'arms dynamic'. Although a degree of organizational pressure undoubtedly existed - it would have been remarkable if it had not - this was always tempered by a realisation that the demands of national development took first priority and that any arms acquisitions should be affordable and appropriate to the prevailing strategic

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1 Thee, op. cit, pp.49-50. Indeed, as he notes with regard to the comments of Marvin L Goldberger, it is their role to do so. Ibid., p.50.

situation. This, for example, was virtually a guiding principle in Indonesia.

Indeed, in the case of Indonesia, it is highly significant that the period when arms acquisitions were at their greatest (1979-1982) coincided with the expansion of the economy fuelled by an increase in the revenues from oil exports.[2] The converse effect was also evident, of course, as arms acquisitions moderated after 1982 in the wake of a fall in oil export earnings which led to "current account deficits, government budget deficits, and increased foreign borrowing" for Indonesia.[3] The same sort of negative resource-based effects were also apparent in Malaysia after 1981 and in Singapore and Thailand (though to a lesser extent) in the mid-1980s. They were a perennial feature of Burma's situation and would have been of Vietnam's too had it not been for the military assistance which it received from the Soviet Union.

Irrespective of the impact on pressure from the military, it can be concluded that the availability of resources was highly significant in facilitating, or enabling, the acquisition of major weapons by many of the states. If the resources were not available, then acquisitions were either scaled-down (Thailand's purchase of F-16s); deferred (Malaysia's purchase of medium artillery); or cancelled altogether (Malaysia's acquisition of MBTs).

The availability or lack of resources inevitably affected the extent to which the military's political role influenced the acquisition of weapons too. This was certainly the case in Burma where, despite its control of the levers of political power, dire economic circumstances heavily circumscribed the Tatmadaw's arms acquisitions. The Indonesian experience has been considered above. Moreover, in the case of ABRI, it

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2 Harold Crouch, amongst others, drew attention to this correlation. See FEER, 14, February, 1985, p.33.

3 Andrew L. Ross, "Growth, Debt, and Military Spending in Southeast Asia", Contemporary Southeast Asia, Vol.11, No.4, March 1990, p.257. This had an obvious knock-on effect on military spending which decreased dramatically in 1983 and averaged an "annual rate [of decrease] of 3.4 per cent from 1982 to 1987." Ibid., p.258. The economic downturn in Indonesia would also have affected ABRI's 'off-budget' financing which had seen it obtain additional funding from military run business activities.

is doubtful that even in the light of its integral role in the Indonesian government it was able to use this to much effect as far as arms purchases were concerned. All major arms procurement decisions ultimately had to be sanctioned by President Suharto, who was by no means always predisposed to aid his former comrades and whose focus was on national development.[4] There is also no readily available evidence that the Thai military's extensive political role during most of the Second Cold War period enabled it to acquire weapons in excess of those which could be justified in terms of the overall requirements of defence policy and strategy in the light of the threat from Vietnam, or, which would result in an unacceptable burden being placed on the national budget. This is not to say, however, that elements of the Thai military were unable to influence the procurement of a certain *make* of weapon, once an overall capability requirement had been determined and agreed upon.

The idea that a civilian government may have felt obliged in some way to respond to the military's desire for new weapons because of the important role which the military - as an institution of the state - played in the promotion of national security, also lacks validity.[5] There is no evidence in Singapore's case that the government there felt the need to provide the SAF with new weapons to satisfy it as an institution,[6] whilst in Malaysia, it has been argued, the government successfully resisted pressure from the military for new arms under the 5th Malaysia Plan (1986-90) after it had been virtually starved of them since the economic downturn in the early 1980s.[7] The "emphasis in the 5MP",

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4 Discussion with Dr. Soedjati Djiwandono at the Centre for Strategic and International Studies, Jakarta, January 1996.

5 This idea is similar to Mak's argument on the role of ASEAN armed forces in defence modernisation. He contends that because of their role in "regime maintenance", governments have felt the need to, to some extent, respond to armed forces' aspirations during times of economic growth. Mak, ASEAN Defence Reorientation, p.21. He also makes the point, however, that it is hard to detect any general trends or correlation between military influence and defence expenditure and/or modernisation. Ibid., p.19.

6 Discussion with Dr. Leonard Sebastian and Mr. Daljit Singh at the Institute of Southeast Asian Studies, May 1998.

7 See Alagappa, op. cit., p.189.

Alagappa notes, was "on consolidation and the optimization of existing capabilities and facilities."[8]

Bearing in mind Thee's comment that the "stimulants" to arms races (he uses the term in its broad sense) "will tend to combine, interact and overlap, even if at times one motive force may predominate"[9], it was certainly apparent, though, that the other pressures were - to varying degrees - all influential in the SE Asian 'arms dynamic'.

Burma, by dint of its circumstances and its foreign policy, was certainly a special case. Its exclusion from the forces operating within the SE Asian security complex, combined with its self-imposed isolation from the international system, meant that the external influences on its arms acquisitions were almost entirely absent. This tendency was undoubtedly reinforced by its chronic weakness as a state which, given the prevalence of the internal military security threats posed by the various insurgent groups, meant it was preoccupied with the internal security dimension. Burma's very limited arms acquisitions (primarily artillery and counter-insurgency capable aircraft), therefore, were undoubtedly influenced by this pressure. The literally one-dimensional nature of the pressures leading Burma to acquire any arms at all also meant the one external influence which Burma was unable to isolate itself from - the process of technological obsolescence - must also be seen in the context of the internal security threat. In the absence of that threat, and given Burma's dire economic situation, it seems unlikely that it would have acquired any new weapons at all, even if its existing weapons were becoming inoperable.

In one respect, Indonesia shared an important similarity with Burma. It was the only other state in which the internal security dimension exerted a significant and ongoing influence on arms acquisitions. Indonesia - as a consequence of its geographic make-up and its formative experiences - was predisposed to focus on internal security. The existence of internal military security threats, most notably in East

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8 Ibid.

9 Thee, op. cit., p.101.

Timor but also in Irian Jaya too, reinforced this predisposition and necessitated the procurement of some major weapons (for example, armoured fighting vehicles, ground attack aircraft, transport helicopters and landing ships). Some of these weapons were required not only to prosecute counter-insurgency campaigns but, crucially, to enable ABRI to deploy its forces in the first place. The need for good air- and sealift capabilities was also regarded as essential in preparing ABRI to respond to any potential insurgencies which might arise, for responding to other types of internal security disturbance, and for its role in national development programmes such as transmigration.

In Indonesia's case there was certainly a considerable overlap between the influence of the internal security dimension and the requirements of defence policy and strategy on its arms acquisitions. After all, elements of the territorial forces and the central forces' Kostrad were equipped for the task of responding to both internal security threats and the sorts of low-level external threat which Indonesia anticipated it might have to deal with. The same point is also applicable to those weapons procured to develop the strategic mobility required of the Rapid Reaction Strike Force.

Where the influence of the requirements of defence policy and strategy was quite distinct, however, was in Indonesia's acquisition of warships and reconnaissance aircraft to protect the vast waters of the archipelago and their resources: in other words, to further a vital national interest. The general rise in the importance attached to maritime resources and security in the region during the Second Cold War was magnified in the case of Indonesia. This was due to the long-standing importance which it had attached to the maritime dimension in its security thinking and to the implications of the 1982 UNCLOS. The need to expand its capacity for protecting vital maritime interests also combined with the need to maintain existing naval capability by replacing many warships which had been acquired during a much earlier period of expansion. The same need to maintain an existing capability also influenced some air force acquisitions as Indonesia continued a modernisation programme which had begun in the mid-1970s.

Although Indonesia was keen to maintain and enhance existing capabilities by acquiring modern weapons, there was no widespread attempt to keep up with the process of technological progression. Instead, Indonesia acquired selected items of high-tech equipment in order to provide a nucleus of capability for ABRI which could be expanded if required. Significantly, the objective need for such acquisitions appeared to be signalled by developments within the region (or, rather, as they concerned its ASEAN neighbours). This demonstration effect was evident in Indonesia's purchase of air defence missiles and F-16 fighters. Such an effect seems to have been the only time when Indonesia's arms acquisitions displayed anything other than a largely autonomous characteristic. The impact of extra-regional powers, whilst observable, was fairly minimal.

The internal security dimension also had a marked, but short-term, influence on Malaysia's arms acquistions. Indeed, it appeared to be the predominant factor operating in the period 1979-1982 - when Malaysia's arms acquisitions were at their peak - as the MAF was equipped with new armoured vehicles and ground attack aircraft primarily for the purpose of conducting counter-insurgency operations against the CPM. Nonetheless, the influence of the internal security dimension also had to be seen in conjunction with the impact of the Vietnamese invasion of Cambodia. This heightened the perceived need for Malaysia to further its efforts to develop conventional warfare capabilities which it had already embarked on during the 1970s.

Overlapping with the ongoing desire to develop these conventional capabilities was an increasing focus on the maritime dimension of security which saw Malaysia take steps to create an effective capability to protect its territorial waters and maritime resources and led to the purchase of warships and maritime reconnaissance aircraft. It is highly significant in the context of the virtual suspension of arms acquisitions between 1983 and 1988 that the major weapons which were purchased (OPVs and ASW helicopters) were for the purposes of enhancing this maritime capability. The role of technological progression and of the extra-regional powers had even less effect than in the case of Indonesia, although in seeking to maintain and develop its counter-

insurgency and conventional warfare capabilities Malaysia also had to respond to the problem posed by the technological obsolescence and inoperability of some of its existing weapons (notably training aircraft).

Singapore's arms acquisitions during the Second Cold War displayed a much more constant pattern than Malyasia's. This was the result of the more or less continuous predominance of the requirements of defence policy and strategy on procurement decisions. Although Singapore's strategic requirements began to include more of a maritime dimension towards the end of the period, they were otherwise very fixed. The enduring characterisitics of its small size, limited regular manpower and sense of wariness of its larger neighbours (Malaysia especially) meant that Singapore's defence policy and strategy placed a premium on maintaining a forward defence capacity based around hardware which was often technologically advanced by regional standards.

During the Second Cold War, Singapore sought to further develop this forward defence capacity through the strenthening of its air defences (including acquisitions of fighters, AD missiles and guns, and AEW aircraft) and its ground forces capacity for mounting offensive operations into Malaysia (seen in the acquisitions of light tanks, APCs and transport helicopters). The moves to strengthen its air defences can also be seen in the context of Singapore's concerns about the potential threat posed by the growth in Soviet and Vietnamese air power. The Vietnamese invasion - and Vietnam's alliance with the Soviet Union - provided a general sense of unease for Singapore because of its negative impact on regional stability.

Other than the fact that the invasion and the alliance provided an impetus to Singapore's ongoing modernisation programme, there was no other instance of Singapore reacting to regional military threats or developments. Instead, Singapore's policy was highly proactive. Singapore was usually the first state to plan to acquire the latest technology, even if it was not the first to actually introduce it. The role of technological progression was very important for Singapore's arms acquisitions and was effectively incorporated into its strategy, the United States providing

ready access to the latest technology. Singapore, however, was also prepared to respond to this pressure through upgrading selected weapons: a policy which was certainly facilitated by its own defence industrial capabilities and which, in turn, helped further their development.

Thailand's arms acquisitions bore the overwhelming imprint of the pressure of external threat assessment. This is not to say that it did not combine and overlap with several others, but that it was the predominant one for most of this period. The Vietnamese invasion of Cambodia affected Thailand most of all. Thailand had long had traditional security concerns about the balance of power in Indo-China and the Vietnamese invasion meant that a dangerous force interface with Vietnam now existed too. Although Thailand did not expect a major Vietnamese invasion, the actions of the Vietnamese in their efforts to overcome Khmer resistance meant that Thailand's territorial integrity came to be threatened. The actions of the PAVN meant that the Thais often had to resort to force of arms to uphold the security of their borders.

What this meant, therefore, was that Vietnam's invasion of Cambodia provided an urgent impetus for the continuation and expansion of the modernisation programme which Thailand had already embarked upon. It also gave the programme a clear focus in terms of developing the most appropiate capabilities to respond to Vietnamese aggression. A clear pattern emerged of Thailand reacting to Vietnamese deployments in Cambodia and incursions into its territory. Given that the Thais were primarily reacting to incursions by Vietnamese ground forces (along with artillery bombardments), it is not surprising that the majority of the weapons which Thailand acquired (for example, MBTs, APCs, artillery, anti-tank missiles and transport helicopters) were to strengthen its land warfare capabilities. The Thais were also concerned about the growth in Vietnamese air power - and that of the Soviets in the region - and accordingly took steps to bolster their air defence capabilities too through the acquisition of SAMs and more fighter aircraft - notably the F-16s.

The F-16s, in particular, were symbolic of the Thai armed forces' predilection for high-tech weaponry and thus of the underlying influence of the desire to keep up with the latest technology. They were also symbolic of the willingness of the Americans to supply Thailand with highly sophisticated weapons. The willingness of the United States to supply advanced weapons to Thailand, to provide rapid deliveries of weapons at times of crisis, and to provide considerable financial assistance to enable Thailand to pay for some of its weapons, was also an important factor underlying Thailand's arms acquisitions. In the latter stages of the period, as the need for a diversification of arms suppliers grew, the influence of another extra-regional power - China - could also be seen.

The impact of other pressures such as Thailand's increasing concerns about maritime security (which led to the purchase of warships and maritime patrol aircraft) and the need to replace ageing equipment were also discernible. It is, however, necessary to see their effects in the context of Thailand's primary security concern - the threat from Vietnam.

Just two pressures dominated Vietnam's arms acquisitions - the requirements of defence policy and strategy and the role of extra-regional powers - and their influence was most marked in the period 1979-1981. Thereafter, their influence began to decline, indicating the extent to which the massive infusion of weapons during these early years had provided Vietnam with a sufficient capacity to meet its needs and of the changing policy of its patron, the Soviet Union. It was the Soviet Union, in fact, which had a crucial bearing on all Vietnam's arms acquisitions during the Second Cold War.

For Vietnam, the significance of the requirements of defence policy and strategy lay in its Cambodian campaign. The Vietnamese needed additional weapons (many having already been supplied for the purpose of mounting the invasion) to pursue their military campaign in Cambodia. This campaign was intended to crush resistance to the pro-Vietnamese regime which Hanoi had installed in Phnom Penh in fulfilment of its long-standing security policy towards Indo-China. To help its ally in this regard, the USSR supplied

Vietnam with a range of weapons including tanks, APCs, artillery, helicopters and transport aircraft. Although Vietnam's campaign in Cambodia did not ultimately end until 1989, after the last major offensive in 1985 no more weapons were acquired for this purpose. Moreover, Soviet policy had also shifted after 1982 towards encouraging Vietnam to disengage from Cambodia and thus no more weapons were forthcoming.

In identifying the weapons which were supplied for operations in Cambodia at the time of the build-up, it was difficult to disentangle some of them from those acquired in order to strengthen Vietnam's defences against an anticipated repeat attack by Vietnam's main external opponent - China. It was the wide-ranging threat posed by the PLA which influenced the remainder of Vietnam's arms acquisitions and in response to it Vietnam was provided with a large number of Soviet fighter aircraft, plus SAMs, warships, maritime patrol aircraft and ASW helicopters. Although the threat from China might suggest that it was the influence of external threat assessment which was clearly at work here, it has been argued that because the Vietnamese response to that threat was contingent on the Soviet Union's willingness to supply weapons, it was the influence of an extra-regional power which was of paramount importance. In effect, Vietnam was being supplied with such weapons because to do so was in accordance with - and furthered - Soviet strategy in the region. Once Soviet strategy began to change and move towards reaching an accomodation with China, despite the fact that the latter still remained at least a latent threat to Vietnam, the USSR was no longer so ready to arm Vietnam. In addition, the Soviet Union's worsening economic circumstances were also beginning to affect its largesse: it was the impending collapse of the USSR which ultimately brought about the end of all military assistance to Vietnam.

Given this summary of the main influences on the various states arms acquisitions during the Second Cold War, it is easy to sympathise with Mak's comment on ASEAN defence modernisation that the factors are "unique to each ... country."[10] This, of course, would make it virtually

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[10] Mak, ASEAN Defence Modernization, p.15.

impossible to identify any general pattern and thus to determine where the SE Asian 'arms dynamic' fitted on the normal-abnormal spectrum of behaviour. With due regard to the particular circumstances of each state, however, it is still possible to identify some general trends which can provide a pointer as to whether the dynamic corresponded more closely to one of maintenance or racing.

In the main, over the whole period, internal security factors were of less importance than external ones. The internal security dimension as an independent factor (excepting Burma) was generally of little or at least diminshing significance. Despite the possible implications of the Vietnamese invasion of Cambodia and the introduction of a Soviet military presence into the region, the influence of external threat assessment characterised by a highly competitive action-reaction process did not dominate the external dimension. The influence of external threat assessment was really only significant in the case of Thailand. What the invasion did do, however, was create a climate in which the need to further develop conventional warfare capabilities was strengthened. The dominant pressure, in fact, was that of the requirements of defence policy and strategy which exerted an important influence in one way or another on all the states arms acquisitions. There was a continuous need for states to acquire weapons so as to maintain existing capabilities and to uphold vital national interests and, on occasion, there was also a need to respond to regional military developments. The responses to these developments sometimes indicated that a very low-level of military competition and inter-action was present.

The need to maintain existing capabilities, to uphold (often expanding) national interests, and to respond to a variety of regional military developments, occurred in an environment in which the rate of technological progression was increasing and there was a greater willingness by extra-regional powers to supply and help with the purchase of more advanced weapons. All this meant that the Second Cold War saw an increase in the range and sophistication of the major weapons possessed by all the states except Burma. From this general description and the general trends identified, the question arises of whether the SE Asian 'arms dynamic' during the

Second Cold War corresponded more closely to maintenance or racing.

Returning to Gray's theoretical approach to arms races, he disaggregates his 'minimal condition' and identifies four "basic conditions" which "must [all] be present for there to be any valid assertion that a particular relationship is an arms race."[11] These four conditions are as follows: "there must be two or more parties, conscious of their antagonism"; "they must structure their armed forces with attention to the probabale effectiveness of the forces in combat with, or as a deterrent to, the other arms race participants"; "they must compete in terms of quantity (men, weapons) and/or quality (men weapons, organization, doctrine, deployment)"; and "there must be rapid increases in quantity and/or improvements in quality."[12]

It is readily apparent from the analysis presented here that these conditions did not prevail - either overall or in terms of particular dyadic or sub-group relationships - and that the SE Asian 'arms dynamic' did not, under these conditions, constitute an arms race.[13] Even applying the much less rigid criteria put forward by, for example, Acharya, it is impossible to describe what occurred in SE Asia as an arms race.[14] This view is not controversial and is supported by others who have commented on the overall nature of the arms procurement pattern which prevailed in SE Asia in the 1980s. Alagappa and Sopiee, for example, contend that "in every arms race so far, instances can be found of very specific responses to

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[11] Gray, The Arms Race Phenomenon, p.41.

[12] Ibid.

[13] Mak also cites Gray's conditions in discussing the idea of an "intra-ASEAN arms race", but rather loosely suggests that the "classic arms race label" could be applied "to Phase I of the ASEAN conventional arms build-up of the late 1970s and early 1980s, since elements of insecurity and antagonism could be identified among at least some ASEAN countries, in particular Thailand and Malaysia, as a result of the perceived Vietnamese threat during that period." Mak, ASEAN Defence Modernization, pp.141-142.

[14] Acharya highlights the elements of inter-state interaction and competition which must exist in an arms race. Thus, in an arms race, inter-state security concerns outweigh either domestic ones or those derived from changed regional circumstances which affect all regional states. Acharya, An Arms Race in Post-Cold War Southeast Asia?, p.5.

equally specific identified actions or anticipated actions on the part of the arms race rival. These conditions clearly do not obtain in South-East Asia."[15] Although Thailand did react to Vietnam's deployment and utilisation of weapons in Cambodia, and an element of the action-reaction variable of timing was apparent on the Thai side, there was no mutual competition or antagonism between them and no response on the part of Vietnam. The absence of an arms race between Thailand and Vietnam has also been widely commented upon.[16] It is also difficult to place the SE Asian 'arms dynamic' at the point on the spectrum indicated by Buzan and Herring's new term of "arms competition" - "something rather less than an arms race, but rather more than the maintenance of the military status quo"[17] - because of the very low-level of competitive inter-action which occurred.

As the SE Asian 'arms dynamic' during the Second Cold War was not at, or near, the racing end of the spectrum, then it must have been at, or at least near to, the maintenance end. In other words, the pattern of behaviour displayed was more normal than abnormal. This begs the question, of course, of what was normal behaviour for the region. It is arguable that there was no discernibly 'normal' pattern of behaviour prior to the 1970s in any case. It was only during this decade that some of the states actually began to acquire major conventional weapons in response to a variety of stimulants both internal and external to the region. These stimulants included the withdrawals of British and US forces; the communist takeovers in Indo-China; and the fact that there was a general 'procurement cycle' operative in the early 1970s which saw Third World states seeking to replace obsolescent weapons "because of the demonstration effect on other regions of the supply of sophisticated weapons to the Middle East."[18]

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[15] Mutthiah Alagappa and Noordin Sopiee, "Problems and prospects for arms control in South-East Asia", in Ohlson, op. cit., p.194

[16] See, for example, Alagappa and Sopiee, op. cit., p.194, and Denoon, op. cit., p.67. Denoon discusses this issue in terms of the ASEAN 3 (Thailand, Malaysia and Singapore) and the absence of a Vietnamese reaction to the "precautionary action" which they took in response to Vietnam's invasion of Cambodia.

[17] Buzan and Herring, op. cit., p.80.

If normal behaviour in the recent past constituted the acquisition of limited numbers of major conventional weapons (some of which were advanced), then given the wide range, significant numbers and technological sophistication of the major weapons acquired during the Second Cold War, it can be contended that the SE Asian 'arms dynamic' during this period was one of *accelerated maintenance*. By the end of the Second Cold War, therefore, the dynamic had established a new military status quo at a higher level of armament.

[18] Brzoska and Ohlson, op. cit., p.128.

Appendix The Dynamic's Outcomes

The following tables detail the outcomes of the SE Asian 'arms dynamic' during the Second Cold War in terms of the major weapons acquired by Burma, Indonesia, Malaysia, Singapore, Thailand and Vietnam. In accordance with the historical boundaries of the overall thesis, the data provided on arms acquisitions covers those major weapons ordered and acquired during the period 1979-1989. The nature of arms acquisitions, however, in particular the existence of time lags between ordering and delivery and the often lengthy nature of the delivery process itself, means that the start and stop dates of 1979 and 1989 require clarification in terms of inclusions and exclusions.

The start date of 1979 means that the tables include all orders placed (and licences granted) from January 1979 onwards: that is, after the Vietnamese invasion of Cambodia in December 1978. The tables exclude any orders placed (and licences granted) prior to January 1979, although the deliveries of that equipment may have occurred during the 1979-1989 period. In the case of Indonesia, for example, a licence was granted in 1975 for the domestic production of 'Aviocar' transport aircraft, with subsequent deliveries to the armed forces occurring during 1979-1989. The 'Aviocars', therefore, are excluded from the tables.

The establishment of a clear cut-off point at the end of 1989 is especially problematic. Deliveries resulting from earlier orders placed (and licences granted) may still have been ongoing, and acquisitions resulting from orders placed (and licences granted) in 1989 may have occurred after the end of the year. To get round these problems the following inclusions and exclusions will apply. First, for deliveries which were ongoing in 1989 the Total Acquired column will include the figures for all those weapons which were acquired up to the end of the year, with the Notes making due reference to this. Secondly, those orders placed (and licences granted) in 1989 itself will be excluded unless any arms were actually delivered before the end of the year (in which case the first criterion will apply). Finally, any orders placed (and licences granted) prior to 1989 but for which no deliveries occurred

before the end of the year (for example, the case of the CN-235 transport aircraft in Indonesia) are obviously excluded.

Finally, in the way of an explanatory introduction to the tables, it is necessary to make one or two comments on the data. The data is compiled from a wide range of open sources (these are listed at the end of the tables) in order to ensure a higher degree of accuracy than is possible in those works which rely on a single source.[1] Utilising a range of sources enables not only the cross-checking of dates of delivery and of totals acquired (which are often problematic), but also enables more information to be provided about each weapon ordered. This is particularly important in terms of identifying their intended use; whether they are new, second-hand, or, the result of licensed production; any changes to the specifications after the order was placed; the nature of the contract, or arrangement, under which they were supplied; and, indeed, whether they are actually 'new' acquisitions, or merely replacements. All of these issues are of significance in terms of the discussion about the salience of the various individual pressures or factors. Of course, given the sensitive nature of arms acquistions in general, and the lack of readily available information on Burma and Vietnam especially, even employing a wide range of sources does not ensure complete accuracy. Where details are either not known, or, where an element of doubt exists, it is clearly indicated.

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[1] Mak, for example, in his tables on 'ASEAN Conventional Arms Purchases', relies solely on various editions of the SIPRI Yearbook and, as he himself acknowledges, has made no effort "to correct inaccuracies or inconsistencies for the sake of standardisation." Mak, ASEAN Defence Reorientation, p.175.

BURMA
Heavy artillery

Weapon type	Weapon description1	Year(s) Ordered2	Year(s) Delivered	Total Acquired	Supplier/ Licenser	Notes3
BM-21	122mm MRL	n.k.	1987	n.k.	n.k.	Soviet weapons reported to have been obtained from Vietnam via Laos
M40A1	106mm Rocket launcher	n.k.	1989 (?)	n.k.	n.k.	Although the launchers are of US origin, they were not supplied to Burma by the US because of the imposition of a trade embargo (including armaments) on Burma at the end of 1988. They are likely to have been included in the various (unspecified) arms shipments from either Pakistan or Singapore in late 1988/early 1989

BURMA
Transport aircraft

Weapon type	Weapon description	Year(s) Ordered	Year(s) Delivered	Total Acquired	Supplier/ Licenser	Notes
'Citation II'	Light transport	1982	1982	1	US	Assigned to Air Force liaison flight

BURMA
Training and reconnaissance aircraft

Weapon type	Weapon description	Year(s) Ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
SF-260M	Trainer	1979-1984	1981-1985	16	Italy	An initial batch of nine aircraft were ordered in 1979, followed by subsequent orders in 1981 (3) and 1984 (4). It is thought that the first batch of nine, plus an additional aircraft, were intended for dual-use (both training and COIN operations)
PC-7 'Turbo Trainer'	Trainer	1979	1980-1981	9	Switzerland	As with the SF-260M, a number of these were also intended for dual-use (training and COIN). For COIN use they can be fitted with rocket launchers and/or gun pods
PC-9	Trainer	1985	1986	4	Switzerland	Dual-use (training/COIN)

INDONESIA
Armoured fighting and support vehicles

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
AMX VCI	MICV	1979	1979	200	France	Initially thought to be an order for further AMX-13 light tanks, with which the VCI shares a common chassis
AMX-10P/ AMX-10 PAC 90	MICV	1981	1982-1984	35-40	France	Indonesia ordered the AMX-10P Marines version, with a mix of AMX-10Ps (armed with a 12.7mm MG turret) and AMX-10 PAC 90 fire support vehicles (armed with a 90mm TS-90 turret)
'Commando Ranger'	APC	1983	n.k.	22	US	Some of these may have been destined for the Police
'Commando Scout'	Armoured car (command/ reconnaissance	1983	1985-1987 (?)	28	US	

INDONESIA
Heavy artillery

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
M-101	105mm Towed howitzer	1981	1982-1983	133	US	

INDONESIA
Missiles and launchers

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
RBS-70	SAM	1981(?)	1982(?)	40 (?)	Sweden	Low-Medium level SAM. 4 Portable version
'Towed Rapier'	AD missile system	1984	1985 (see notes)	25	Britain	Medium level missile. 'Rapiers' were observed in the parade to celebrate ABRI's fortieth anniversary in 1985, though this was prior to an official announcement of their delivery. In addition to the basic 'Rapier' system (of launcher and tracker) a number of 'Blindfire' radar units were included in this order. The addition of 'Blindfire' enables the 'Rapier' to be employed at night, or in conditions of poor visibility, when the standard optical tracker would be ineffective
'Towed Rapier'	AD missile system	1985	n.k.	20 (?)	Britain	The number of systems acquired in this, and the subsequent order, is uncertain, but in view of the limited number of systems which the Indonesian army currently deploys it is most certainly less than the very high estimates (e.g., 240 and 120) which have been reported
'Towed Rapier'	AD missile system	1986	n.k.	10 (?)	Britain	See above

INDONESIA Combat aircraft						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
A-4E 'Skyhawk'	Fighter/ground attack	1979	1980	14	Israel	Both variants part of same package. Second-hand from Israeli surplus stocks
TA-4 'Skyhawk'	Jet trainer	1979	1980	2	Israel	See above
'Hawk' T-53	Jet trainer	1980	1981	4	Britain	Can be configured for ground attack role
A4-E 'Skyhawk'	Fighter/ground attack	1981	1982	16	US	Second-hand US Navy aircraft (unrefurbished)
'Hawk' T-53	Jet trainer	1982	1983	5	Britain	See above 'Hawk' order
'Hawk' T-53	Jet trainer	1983	1984	3	Britain	See first 'Hawk' order
F-16 'Fighting Falcon'	Fighter	1986	1989	12 (?)	US	Eight single-seat F-16As and four twin-seat F-16B trainer variants. Deal included offsets and technology transfer. Deliveries began in 1989, but it is possible that some aircraft were still being delivered in 1990

INDONESIA
Transport aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
C-160F 'Transall'	Transport	1979	1982	3	France	Not listed under Air Force Order of Battle. Assigned to transmigration programme
L-130-30	Transport	1979	1980	1	US	Civilian version diverted to Air Force
C-130H-30 'Hercules'	Transport	1979	1980-1981	5	US	Three reported to be stretched version
C-130H 'Hercules'	Transport	1980	1981	2	US	Possibly for MR
C-130H-30 'Hercules'	Transport/MR	1981	1982	4	US	Two in maritime patrol configuration (C-130H-MP)
B707-3M1C	Transport	1981 (?)	1982	1	US	Transferred to Indonesian Air Force from Pelita Air Services (Indonesia)
C-160F 'Transall'	Transport	1984	n.k.	3	France	For transmigration programme

INDONESIA
Training and reconnaissance aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
AS-202 'Bravo'	Primary trainer	1980	1981	20	Switzerland	
N22SL 'Nomad Searchmaster'	Maritime reconnaissance	1980	1981-1982	6	Australia	
B737-200	MR/AEW	1981	1982-1984	3	US	One test aircraft (without radar) was supplied in 1982, with two fully equipped versions (i.e., with SLAMMR) arriving in 1983. Test aircraft was returned for radar fitting and then delivered in 1984
T-41D	Trainer	1980 (?)	1981	5	US	
T-34C	Basic trainer	1983	1984	9	US	Some of these aircraft may have been the T-34C-1 armament training version
AS-202 'Bravo'	Primary trainer	1984	n.k	20	Switzerland	

INDONESIA
Combat helicopters

Weapon type	Weapon description	Year(s) ordered	Year)s) delivered	Total acquired	Supplier/ Licenser	Notes
'Wasp' HAS.1	ASW helicopter	1981	1981-1982	10	Netherlands	Ex-Dutch navy. Refurbished by Westland prior to delivery

INDONESIA
Transport and training helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
NAS-330L 'Puma'	Transport helicopter	1980	1981-1983	7	France	Licensed production of Aerospatiale's SA-330 'Puma' by Indonesia's P.T. Nurtanio Aircraft (subsequently renamed IPTN)
Model 300C	Helicopter	1982	1983	9	US	For Army Aviation training
NAS-332 'Super Puma'	Transport/ASW helicopter	1983 (see notes)	1985-1989	4	France	Licensed production of 'Puma' by IPTN switched to more advanced 'Super Puma' in 1983. First four helicopters (delivered by 1989) for Indonesian Navy, with three of these in ASW configuration
Model 412	Helicopter	1982	1987-1989	5	US	Licensed production of Bell 412 by IPTN. For Army Aviation

INDONESIA
Warships

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Tacoma' type	LST	1979	1981 (?)	4	South Korea	A copy of US LST-542, designed to carry up to three helicopters
Boeing jetfoil	FAC (Hydrofoil)	1980	1982	1	US	For trials
'Attack' class	Patrol craft	1981	1982	1	Australia	The third ex-RAN 'Attack' class vessel to be transferred to Indonesia under the 'Defence Co-operation Programme - maritime patrol project' (programme total of eight vessels)
'Tacoma' type	LST	1981	1982 (?)	2	South Korea	These two were not thought to be designed for helicopter operations
? Frigate	Training ship	1981 (?)	1984	1	Yugoslavia	The second such training ship to be acquired
Lurssen 57m	Patrol craft	1982	1984	2	West Germany	Armed with two 533mm torpedo-tubes and one 57mm gun
Lurssen 57m	Patrol craft	1982	1987-1989 (?)	6	West Germany	Built under licence by P.T. PAL. First two boats (NAV II) armed with one 57mm gun. Last four boats (NAV III) armed with one 57mm gun and equipped with a helicopter deck
Boeing jetfoil	FAC (Hydrofoil)	1983	1984 -1987	4	US	Contract included Boeing assisting P.T. PAL in developing the capacity to build the jetfoils under licence
'Attack' class	Patrol craft	1983	1983	1	Australia	The fourth ex-RAN vessel
'Attack' class	Patrol craft	1984	1984	1	Australia	The fifth ex-RAN vessel
'Attack' class	Patrol craft	1984	1985	2	Australia	The sixth and seventh ex-RAN vessels
'Attack' class	Patrol craft	1985	1986	1	Australia	The eighth, and final, ex-RAN vessel to be transferred
'Tribal' class	Frigate	1984	1986	3	Britain	Ex-RN ships which underwent an 18 month refurbishment by Vosper Thorneycroft before delivery. Refurbishment was essentially a standard refit with limited upgrades to radars and sonars
'Alkmaar' class	Minehunter (coastal)	1985	1987-1988	2	Netherlands	A modified 'Tripartite' design
Type 12 ('van Speijk' class)	Frigate	1986	1986-1988	4	Netherlands	Recently modernised ex-Dutch navy ships. Deal included ships being supplied with 'Harpoon' SSMs and 'Seacat' SAMs, but not with 'Lynx' helicopters
Type 12 ('van Speijk' class)	Frigate	1989	1989	1	Netherlands	Order for a further two of these ex-Dutch navy ships. Only one delivered by the end of 1989

MALAYSIA
Tanks

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Scorpion 90'	Light tank	1982	1983-1984	26	Britain	Armed with 90mm gun

MALAYSIA
Armoured fighting and support vehicles

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Condor'	APC	1981	1983-1984	459	West Germany	Order included all variants: APCs (both 7.62mm MG and 20mm cannon versions); command posts; ambulances; and fitters' vehicles equipped with cranes
'Sibmas'	APC	1981	1983-1986	186	Belgium	162 Armoured Fire Support Vehicle 90s (AFSV-90) with CM 90mm turrets and 24 ARVs
'Stormer'	APC	1982	1983-1984	25	Britain	12 with Helio FVT900 turrets (with one 20mm cannon and one 7.62mm MG) and the remainder with TH-1 turrets (with two 7.62mm MGs)

MALAYSIA
Heavy artillery

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
FH-70	155mm Towed howitzer	1988	1989	9	Britain	Of an order for 15 FH-70s, nine had been delivered by the end of 1989

MALAYSIA
Missiles and launchers

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
SS-11	ATGW	1979	1979	n.k.	France	
MM-38 'Exocet'	SSM	1981	1984	n.k.	France	For FS-1500 frigates

MALAYSIA
Combat aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
F-5E 'Tiger II'	Fighter	1979	1981	1	US	Replacement for written off aircraft
F-5F 'Tiger II'	Fighter	1979	1981	4	US	Two-seat training version. Acquired at a time when the RMAF was considering the F-5F as a replacement for its ageing 'Tebuan' trainers
RF-5E 'TigerEye'	Fighter/ reconnaissance	1980	1982 (?)	2	US	
A-4C/L 'Skyhawk'	Fighter/ bomber	1980	1984-1985	40	US	34 A-4PTMs and six TA-4PTM two-seat trainers. The RMAF bought 88 US Navy surplus A-4C/Ls in 1980 for US$ 23m with the intention of contracting for the refurbishment and modification of 68 of these (the remaining 20 being cannibalised). Budgetary constraints in 1982, however, led to the programme being cut back. Instead, a US$ 120m contract was awarded to Grumman for the refurbishment and modification of 40 aircraft (13 being cannabilised), with the remaining 35 planes being placed in store in Arizona. The refurbishment and modifcation included fitting an improved engine (the engine overhaul being carried out by a Singapore firm); updated avionics; and extra wing stores pylons. These upgraded 'Skyhawks' were designated A-4PTMs
MB-339A	Jet trainer	1982	1983	12	Italy	Can be configured for light attack role

MALAYSIA
Transport aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
HU-16B 'Albatross'	Transport	1985	1986 (?)	2	US	Refurbished
'Falcon-900'	Light/executive	1988	1989	1	France	For VIP use

MALAYSIA
Training and reconnaissance aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
C-130H-MP 'Hercules'	MR	1979	1980-1981	3	US	
PC-7 'Turbo Trainer'	Primary/basic trainer	1981	1983-1985	44	Switzerland	

MALAYSIA
Combat helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Wasp' HAS.1	ASW helicopter	1987	1988	6	Britain	Ex-RN
'Wasp' HAS.1	ASW helicopter	1988	1989	6	Britain	Further ex-RN 'Wasps'

MALAYSIA
Transport and training helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
SA 316B 'Alouette III'	Utility helicopter	1981 (?)	1982	7	Singapore	Ex-RSAF. Employed by the RMAF in liaison role
NAS-332 'Super Puma'	Transport helicopter	1987	1988	1	Indonesia	One of the licensed production 'Super Pumas' by IPTN. For evaluation

MALAYSIA
Warships

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Type FS-1500	Frigate	1981	1984	2	West Germany	Equipped with two twin MM-38 'Exocet' SSM launchers, a 100mm gun, and a helicopter deck
'Lerici' class	Minehunter/ sweeper	1981	1986	4	Italy	
'Musytari' class	Offshore patrol vessel	1983	1985-1987	2	South Korea	Second vessel produced under licence in Malaysia

MALAYSIA
Support ships

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Mahawangsa' class (?)	Logistics support	1981	1983-1984	2 (?)	South Korea	

SINGAPORE
Tanks

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
AMX-13	Light tank	1979	1979 (?)	150	Switzerland	Ex-Swiss army Model 51s with 75mm gun. The Singapore Armed Forces had earlier ordered 150 new AMX-13s in 1978 which were delivered between 1980 and 1984

SINGAPORE
Armoured fighting and support vehicles

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
M113A1	APC	1982 (?)	1984-1986 (?)	600	US	Singapore first began evaluating the purchase of the M113s back in the late 1970s. The M113 fitted in with the SAF's operational requirements because of its amphibious features

SINGAPORE
Heavy artillery

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
FH-88	155mm howitzer	1983	1988-1989	24	Singapore	Locally designed and produced gun by the Ordnance Development and Engineering Company, of which 24 had been acquired by the end of 1989. The FH-88 represented a significant improvement over the SAF's exisiting US M114 and Israeli M68 155mm howitzers being able to be deployed more rapidly, with a greater rate of fire and range, and operated by fewer crew. The FH-88 has its own self-propulsion unit, but can also be towed

SINGAPORE
Missiles and launchers

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Improved Hawk'	SAM system	1979	1981	3	US	The 'Hawk' is normally employed in High and Very High level defence, but it can also be used at Low and Medium levels. Order included an unspecified number of MIM-32B 'Hawk' missiles
RBS-70	SAM	1980 (?)	1981 (?)	n.k.	Sweden	Low - Medium level SAM. Portable version. Singapore was reported to have received 304 missiles in total, including those supplied in 1979 under an earlier order. Some of the missiles were subsequently mounted on V-200 APCs
'Rapier'	AD missile system	1981	1984-1985	2 (?)	Britain	Medium level missile. 'Towed Rapier' (with 'Blindfire' radar)
'Rapier	AD missile	1981	1984-1985	96	Britain	
'Improved Hawk'	SAM system	1982 (?)	1985 (?)	3 (?)	US	See above 'Hawk' entry
AGM-65A 'Maverick'	ASM	1981	1981	200	US	For arming F-5Es
AGM-65D 'Maverick'	ASM	1985	1988	32 (?)	US	For arming F-16s
AIM-9P 'Sidewinder'	AAM	1985	1988	64 (?)	US	For arming F-16s
RGM-84A L	SSM launcher	1986 (?)	1989 (?)	2	US	Two double 'Harpoon' launchers to arm first 'Victory' class corvette
RGM-84A 'Harpoon'	SSM	1986 (?)	1989 (?)	8	US	Arming first corvette
RGM-84A L	SSM launcher	1987 (?)	1988-1989 (?)	8	US	Two x four double 'Harpoon' launchers for retrofitting on first two 'Sea Wolf' class FAC (replacing triple 'Gabriel II' launchers)
RGM-84A 'Harpoon'	SSM	1987 (?)	1988-1989 (?)	16 (?)	US	For arming retrofitted 'Sea Wolf' FAC

SINGAPORE Combat aircraft						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
T-33A 'Shooting Star'	Jet trainer	1979	1980-1982	24	France	Ex-French Air Force
F-5E 'Tiger II'	Fighter	1980	1982 (?)	6	US	
A-4C 'Skyhawk'	Fighter/bomber	1981	1982-1983	40	US	Ex-US Navy aircraft. Probably acquired with a view to their subsequent local upgrading into 'Super Skyhawks'
F-5F 'Tiger II'	Fighter	1982	1982	3	US	Two-seat training version
S-211	Jet trainer	1983	1984-1987	30	Italy	First six aircraft delivered by SIAI-Marchetti, with the remainder being assembled locally by Singapore Aircraft Industries (SAI). Contract also included SAI being able to manufacture parts for the S-211 under licence. The S-211 can be armed with bombs, guns and rockets for the light attack role
A-4C 'Skyhawk'	Fighter/bomber	1983	n.k.	16	US	Replacements and for spares. Second-hand ex-US Navy
TA-4S 'Skyhawk'	Fighter/bomber	1983	1984	8 (?)	US	Two-seat training version. Second-hand ex-US Navy
F-16A/B 'Fighting Falcon'	Fighter	1984	1988	8	US	Four single-seat F-16A fighters and four two-seat F-16B operational trainers. Singapore initially ordered eight of the less powerfully engined F-16/J79s in 1984, but the order was upgraded to the F-16A/Bs in 1985 after the US administration first approved the sale of the F-16A to Thailand (the contract price remaining unchanged). The aircraft were delivered in 1988, although the RSAF kept them in the US until 1990 when they were deployed in Singapore
F-5E 'Tiger II'	Fighter	1987	1988	5	US	Second-hand ex-US Air Force (?)
F-5E/F 'Tiger II'	Fighter	1988	1988-1989	8 (?)	US	As above. Order may have included three F-5F two-seat training aircraft

SINGAPORE
Transport aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
C-130H 'Hercules'	Transport	1987	1988	2	US	

SINGAPORE
Training and reconnaissance aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
SF-260W	Trainer	1979	1980 (?)	6	Italy	Capable of dual-use for both training and COIN operations
SF-260W	Trainer	1982	1983	5 (?)	Italy	As above
E-2C 'Hawkeye'	AEW	1983	1987	4	US	

SINGAPORE
Transport and training helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Model 204B (UH-1B)	Utility helicopter	1980 (?)	1981 (?)	n.k.	US	Ex-US Army
AS-350B 'Ecureuil'	General purpose helicopter	1982	1982	6	France	
Model 205A-1 (UH-1H)	Utility helicopter	1983	1983-1984	2	Canada	Replacements (?)
AS-332 'Super Puma'	Transport helicopter	1984	1985-1987	22	France	Six 'Super Pumas' were delivered in partially assembled form by Aerospatiale in 1985 for final assembly in Singapore by a joint venture company (Samaero) set up by Aerospatiale Samco (a subsidiary of Singapore Aircraft Industries). The remaining 16 helicopters were delivered in kit form for assembly by Samaero: the final assembly including the use of locally manufactured components under an offset programme

SINGAPORE
Warships

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Lurssen MGB-62 ('Victory'class)	Corvette	1986	1988-1989	3	West Germany	Order for six missile corvettes. The first, constructed by Lurssen, was delivered in 1988, with the remaining five being built under licence by Singapore Shipbuilding and Engineering: two of these had been delivered by the end of 1989

SINGAPORE
Miscellaneous

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
35mm Oerlikon	Anti-aircraft gun	1984 (?)	1986 (?)	n.k.	Switzerland	Radar-controlled. Produced under licence by Chartered Industries of Singapore

THAILAND Tanks						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
M48A5	MBT	1979	1979-1980	50	US	The first 15 tanks arrived in October 1979. The remainder were due to be delivered in late 1980, or early 1981, but deliveries were accelerated and they arrived in September 1980. Probably from US Army reserve stocks
M41	Light tank	1979	1979-1980	30	US	From US Army stocks. Mainly acquired for spares for the Thai Army's existing M41s
M41	Light tank	1984	1984	1	West Germany	A refurbished M41 for evaluation
M48A5	MBT	1984	1984-1985	40	US	Ex-US Army. Reconditioned
Type 69	MBT	1985 (?)	1985 (?)	24	China	Supplied under a military grant-in-aid programme
Type 69-II	MBT	1987	1987-1988	30	China	The Type 69-II has a rifled gun barrel. Standard 100mm gun relaced with a 105mm gun for compatibility with the M48A5s in Thailand's inventory
M48A5	MBT	1987	1989(?)	40	US	Ex-US Army. Reconditioned
'Stingray'	Light tank	1987	1989	58 (?)	US	Two prototypes of the 'Stingray' were delivered in 1985/86 to participate in extensive trials to select a light tank for the Army. An order for 106 production tanks was placed in late 1987, with deliveries commencing in 1989. 58 (?) tanks had been delivered by the end of 1989. The 'Stingray' is armed with a Royal Ordnance 105mm gun
Type 69-II	MBT	1988	1989	23	China	See above Type 69-II entry

THAILAND
Armoured fighting and support vehicles

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
M113A1	APC	1979	1979	30 (?)	US	
M113A1	APC	1980	1980	40	US	
M113A2	APC	1982	1984-1986	148 (?)	US	
LVTP7A1	AAAV	1984	1984	8 (?)	US	For Marines
YW531H	APC	1987	1987-1988	n.k.	China	Armed with US M2 type 12.7mm MGs

THAILAND
Heavy artillery

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
M-101-A1	105mm Towed howitzer	1979	1980-1981	24 (?)	US	
M-114	155mm Towed howitzer	1979	1980-1981 (?)	34 (?)	US	
M-114	155mm Towed howitzer	1982 (?)	1983-1984 (?)	34 (?)	US	
M-198	155mm Towed howitzer	1982	1983	18	US	
M-198	155mm Towed howitzer	1983 (?)	1984-1985	44	US	
Type 59/1	130mm Towed gun	1985 (?)	1985 (?)	18	China	Supplied under a military grant-in-aid programme
M-618A2	105mm Towed howitzer	1985 (?)	1986-1987 (?)	n.k.	Thailand (see notes)	Locally assembled at the Army's Weapons Production and Test Centre, using component parts from a variety of countries
GHN-45	155mm Towed howitzer	1987 (?)	1988(?)	6	Austria	For Royal Thai Marines. The GHN-45 is a redesigned version of the GC-45; twelve of which had been acquired earlier for the Marines
Type 82/ Type 83	130mm/ 122mm MRL	1987 (?)	1988-1989	n.k.	China	Part of first deal with China for MBTs and APCs (?)

THAILAND Missiles and launchers						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
FGM-77A 'Dragon'	ATGW	1979	1979-1980	300 (?)	US	
'Blowpipe'	Portable SAM	1981	1982	100 (?)	Britain	Low - Medium level SAM
FIM-43A 'Redeye'	Portable SAM	1982	1983	20	US	Low - Medium level SAM
'Blowpipe'	Portable SAM	1982	1984	50 (?)	Britain	
FIM-43A 'Redeye'	Portable SAM	1983	1983	50 (?)	US	
RGM-84A L	SSM launcher	1983	1987	2	US	Two x two quad launchers to arm 'Rattanakosin' class corvettes
RGM-84A 'Harpoon'	SSM	1983	1987	48 (?)	US	Arming 'Rattanakosin' class corvettes
'Albatross'	SAM launcher	1984	1987	2	Italy	Two x two octuple launchers to arm 'Rattanakosin' class corvettes
'Albatross'	SAM	1984	1987	48	Italy	Arming 'Rattanakosin' class corvettes
AGM-65D 'Maverick'	ASM	1985	1988	32 (?)	US	For arming F-16s
AIM-9P 'Sidewinder'	AAM	1985 (?)	1988	96 (?)	US	For arming F-16s
'Aspide'	SAM	1987	1988 (?)	36 (?)	Italy	Towed launch canisters with 'Flycatcher' fire control system
AGM-84A 'Harpoon'	ASM	1987	1989	6	US	To arm Navy's three F27-200MEs for anti-ship operations
BGM-71D 'TOW-2'	ATGW	1988 (?)	1989	24 (?)	US	Arming first two AH-1Gs

THAILAND Combat aircraft						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
F-5E/F 'Tiger II'	Fighter	1979	1981	18	US	15 single-seat F-5Es and three F-5F two-seat training versions
T-33A 'Shooting Star'	Jet trainer	1982 (?)	1983 (?)	16	France	Ex-French Air Force. Refurbished before delivery
F-5B 'Freedom Fighter'	Fighter	1982	1982	2	Malaysia	Two-seat training version. Ex-RMAF aircraft
F-5E 'Tiger II'	Fighter	1984 (?)	1987 (?)	8	US	Probably a mix of new build and second-hand ex-US Air Force aircraft
F-16A/B 'Fighting Falcon'	Fighter	1985	1988-1989	12	US	Eight single-seat F-16A fighters and four two-seat F-16B operational trainers. Thailand first requested approval from the US administration to purchase F-16s in 1979, although this was declined. Thailand did not receive conditional agreement from the US administration until April 1984 (having made a request again in December 1983), and only in May 1985 were there no remaining Congressional obstacles to the sale of F-16s to Thailand. Thailand initially intended to order 16 of the aircraft, but this was subsequently reduced to 12 due to financial constraints imposed by a devaluation of the Baht
T-33A 'Shooting Star'	Jet trainer	1988	1988	6 (?)	US	Ex-US Air Force
F-5E 'Tiger II'	Fighter	1988	1988-1989	10	US	Ex-US Air Force

THAILAND Transport aircraft						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
C-130H 'Hercules'	Transport	1979	1980	3	US	Thailand's first order for C-130s
Model 99A	Light plane	1979 (?)	1980	1	US	For Royal Thai Army aviation
'Queen Air' A65	Light transport	1980 (?)	1981	2	US	
N22 'Nomad Missionmaster'	Utility transport	1981	1982-1984	20	Australia	Has provision for underwing hardpoints, making it also capable of being employed in a COIN role
C-130H-30 'Hercules'	Transport	1981	1982	2	US	Stretched version of C-130H
C-130H-30 'Hercules'	Transport	1982	1983	1	US	As above
'Super King Air'	Light transport	1983 (?)	1984 (?)	1	US	For Royal Thai Army aviation
HS-748	Transport	1983	1983	6 (?)	Britain	Two of these aircraft were intended for the Royal Flight (?)
SD.330-UTT	Utility transport	1984	1984	2	Britain	For Royal Thai Army aviation
NC-212	Utility transport	1985 (?)	1985-1986 (?)	3 (?)	Indonesia	
Model 208	Light plane	1985	1986-1987	10	US	For Royal Thai Army aviation
N22B 'Nomad Missionmaster'	Utility transport	1986	1987	2	Australia	Two ex-Australian Defence Force aircraft transferred under the 'Defence Co-operation Programme'
'Learjet' 35A	Light transport	1987	1988	3	US	For use in survey role by Royal Thai Air Force
B737-200	Transport	1987 (?)	1989	1	US	For Royal Flight
C-130H-30	Transport	1988	1989	2	US	Stretched version of C-130H

THAILAND
Training and reconnaissance aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
T-37B/C	Basic jet trainer	1979 (?)	1980	6	US	From US Air Force stocks. The T-37C version is equipped with underwing pylons which can carry light ordnance if required
IAI-201 'Arava'	Reconnaissance (see notes)	1980	1980-1982	3	Israel	For electronic countermeasures/ intelligence use
Model 337 'Skymaster'	MR	1980	1981	6	US	For Royal Thai Navy. Can be configured for light attack role
SF-260M	Trainer	1981 (?)	1982 (?)	4 (?)	Italy	
'Fantrainer-400'	Primary trainer	1982	1984	2	West Germany	For evaluation etc., prior to subsequent licensed production
F27-200 'Maritime Enforcer'	Maritime patrol	1982	1984 (?)	3	Netherlands	For Royal Thai Navy. Equipped with search radar and underwing pylons
N24A 'Nomad Searchmaster'	MR	1983	1984	4	Australia	Grant aid under Australia's 'Defence Co-operation Programme', which Thailand joined in 1980
'Fantrainer-400/600'	Primary trainer	1983	1986-1989	16 (?)	West Germany	Licensed production. By 1989, c.16 of an eventual total production of 45 had been delivered
Model 337 'Skymaster'	MR	1984	1984	4	US	See above Model 337 entry
N24A 'Nomad Searchmaster'	MR	1984	1985	1	Australia	Funded by UN High Commissioner for Refugees for anti-piracy operations
F27-200 'Maritime Enforcer'	Maritime patrol	1985	1986	1	Netherlands	Replacement for written off aircraft
F27-400M	MR (?)	1986	1987	2	Netherlands	

THAILAND
Combat helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Model 209 (AH-1G)	Attack helicopter	1988	1989	2	US	Order for four AH-1Gs. First two delivered by the end of 1989. Armed with one M197 three-barrel 20mm gun and able to carry eight 'TOW-2' anti-tank missiles

THAILAND
Transport and training helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Model 412	Transport helicopter	1981	1982	2	US	
Model 205 (UH-1H)	Utility helicopter	1982	1983-1984	12 (?)	US	For Royal Thai Army aviation
Model 212 (UH-1N)	Utility helicopter	1984	1984 (?)	8	US	For Royal Thai Army aviation
Model 214ST	Utility helicopter	1984 (?)	1984 (?)	2	US	For Royal Thai Army aviation
Model 206B	Light utility helicopter	1985	1985	7	US	For Royal Thai Army aviation
Model 214ST	Utility helicopter	1986	1987	5	US	For employment by the Royal Thai Navy in SAR operations
TH-300C	Training helicopter	1986	1986	24	US	For Royal Thai Army aviation
TH-300C	Training helicopter	1987 (?)	1988-1989	24	US	For Royal Thai Army aviation
CH-47D 'Chinook'	Medium transport helicopter	1988	1989	3 (?)	US	For Royal Thai Army aviation

THAILAND
Warships

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
MV-400	FAC	1979 (?)	1983	3	Italy	One of these may only have been an option in 1979, with a firm order being placed in 1980/81. Gun armed
'Rattanakosin' class	Missile corvette	1983	1986-1987	2	US	
'Sattahip' class	Patrol craft	1983-1985	1985-1986 (?)	6	Thailand	Locally designed and produced by Ital-Thai Marine
Lurssen T-48	Minehunter/ sweeper	1984-1985	1986-1987 (?)	2	West Germany	
PS-700 class	LST	1984-1985	1988-1989	2	France	Produced under licence by Ital-Thai Marine. The 4000t PS-700 is capable of carrying 14 tanks, 300 troops, and is equipped with a helicopter deck

THAILAND
Miscellaneous

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ licenser	Notes
M163 'Vulcan'	Self-propelled AA gun	1980	1980-1981	24	US	Armament consists of one x six barrel 20mm cannon in a turret mounted on standard M113 chassis
M167 'Vulcan'	Towed AA gun	1982	1982 (?)	24	US	Towed counterpart of M163
'Stingray'	Anti-submarine torpedo	1984	1986 (?)	12	Britain	To arm 'Makut Rajakumarn' frigate
Type 74	AA gun	1985 (?)	1985 (?)	14	China	Twin-barrelled 37mm

VIETNAM Tanks						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
T-55	MBT	1979 (?)	1979-1981 (?)	n.k.	USSR	A number of T-55s are also thought to have been provided prior to the invasion of Cambodia to augment the PAVN's existing inventory of T-54s
T-62	MBT	1979 (?)	1979	200	USSR	
PT-76	Light amphibious tank	1979 (?)	1979-1981 (?)	n.k.	USSR	

VIETNAM Armoured fighting and support vehicles						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
BTR-60P	APC	1979 (?)	1979-1981 (?)	n.k.	USSR	

VIETNAM Heavy artillery						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
D-20	152mm Towed howitzer	1979 (?)	1979-1981 (?)	300 (?)	USSR	

VIETNAM
Missiles and launchers

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ licenser	Notes
SA-3	Self-propelled SAM system	1979 (?)	1979	15-20 (?)	USSR	For Medium level defence
SA-3	SAM	1979 (?)	1979	360 (?)	USSR	
SA-6	Self-propelled SAM system	1979 (?)	1979-1980	10 (?)	USSR	For High and Very High level defence. Each launcher can carry three SA-6 missiles. Probably supplied with accompanying radar and reload vehicles
SA-6	SAM	1979 (?)	1979-1980	200 (?)	USSR	
SS-N-2B	SSM	1979 (?)	1979-1981	48 (?)	USSR	For arming 'Osa II' class FAC
AS-7	ASM	1982	1983-1985	60 (?)	USSR	For arming Be-12 'Chaikas' (?)

VIETNAM
Combat aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
MiG-17PF	Fighter	1979 (?)	1979	55	USSR	Second-hand. Probably from Soviet Air Force stores
MiG-19P	Fighter	1979 (?)	1979	60	USSR	As above
MiG-21F/PF	Fighter	1979 (?)	1979-1981	120 (?)	USSR	
MiG-21bis	Fighter	1979 (?)	1979-1981	60 (?)	USSR	A more advanced version of the MiG-21 than the MiG-21F/PF with, amongst other improvements, additional underwing hardpoints making it capable of operating in a ground attack role also
Su-7	Fighter/ground attack	1979 (?)	1979	60	USSR	
Su-22M-3	Fighter/ground attack	1980 (?)	1981 (?)	n.k.	USSR	
MiG-21F/PF	Fighter	1982 (?)	1983 (?)	51 (?)	USSR	
MiG-23M/ML	Fighter	1984 (?)	1984-1985	(see notes)	USSR	A squadron of MiG-23s was reported to have become operational at Cam Ranh Bay in 1985. These were manned by Soviet Air Force personnel, however, and were probably not intended to be transferred to the Vietnamese People's Air Force; subsequently being withdrawn in 1989/90 as part of the Soviet Union's reduction of forces in Vietnam

VIETNAM
Transport aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
An-12	Transport	1979 (?)	1979	12 (?)	USSR	
An-26	Light transport plane	n.k.	1981 (?)	10 (?)	USSR	

VIETNAM
Training and reconnaissance aircraft

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Be-12 'Chaika'	Maritime patrol	1981 (?)	1982-1984	12 (?)	USSR	For employment in ASW role

VIETNAM
Combat helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Ka-25	ASW helicopter	1979	1979-1981	15 (?)	USSR	To be operated by Air Force. Can also be used in utility and transport roles
Ka-25	ASW helicopter	1984 (?)	1984 (?)	2 (?)	USSR	
Mi-24	Assault/gunship helicopter	1984 (?)	1984-1985	30 (?)	USSR	The Mi-24 can be configured for either the assault or gunship role

VIETNAM
Transport and training helicopters

Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
Mi-6	Transport helicopter	1979	1979-1980	11 (?)	USSR	
Mi-8	Transport helicopter	1979	1979-1980	30 (?)	USSR	Possibly included some assault versions of the Mi-8

VIETNAM Warships						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
'Osa II' class	FAC	1979 (?)	1979-1981	8	USSR	Armed with four SS-N-2B SSM launchers. Possibly transferred from the Soviet Navy's Baltic Fleet
'Polnochny' class (Group B)	LSM	1979 (?)	1979-1980	3	USSR	Can carry up to 180 troops and six tanks. Armed with four SA-N-5 quad SAM launchers. Transferred from Soviet Navy (Baltic Fleet?)
SO-1 class	Patrol craft	1979 (?)	1980-1983	8 (?)	USSR	Two or three of these may have been ordered and delivered prior to 1979. Transferred from Soviet Navy
'Shershen' class	FAC	1979 (?)	1979-1983	14	USSR	Armed with one SA-N-5 quad SAM launcher and (not all of them) four 533mm torpedo-tubes. Transferred from Soviet Navy
'Yurka' class	Minesweeper (coastal)	1979 (?)	1979	1	USSR	
'Petya II' class	Frigate	1983	1983-1984	3	USSR	Fast frigates armed with ASW rocket launchers, torpedo-tubes and twin 76mm guns
'Turya' class	FAC (Hydrofoil)	1983 (?)	1984-1986	5	USSR	Armed with four 533mm torpedo-tubes. Transferred from Soviet Navy
'Matka' class	FAC (Hydrofoil)	1989 (?)	1989 (?)	2 (?)	USSR	

VIETNAM Miscellaneous						
Weapon type	Weapon description	Year(s) ordered	Year(s) delivered	Total acquired	Supplier/ Licenser	Notes
ZSU-23-4 'Shilka'	Self-propelled AA gun	1979 (?)	1979 (?)	n.k.	USSR	Armament consists of four x 23mm cannon. The 'Shilkas' were almost certainly supplied in order to operate in tandem with the SA-6 SAM systems as was Soviet practice

1 The following abbreviations are used:

AA	Anti-aircraft
AAAV	Armoured amphibious assault vehicle
AAM	Air-to-air missile
AD	Air defence
AEW	Airborne early warning
APC	Armoured personnel carrier
ARV	Armoured recovery vehicle
ASM	Air-to-surface missile
ASW	Anti-submarine warfare
ATGW	Anti-tank guided weapon
COIN	Counter-insurgency
FAC	Fast attack craft
LSM	Landing ship, medium
LST	Landing ship, tank
MBT	Main battle tank
MG	Machine gun
MICV	Mechanised infantry combat vehicle
MR	Maritime reconnaissance
MRL	Multiple rocket launcher
n.k.	Details not known
RAN	Royal Australian Navy
RMAF	Royal Malaysian Air Force
RN	Royal Navy
RSAF	Republic of Singapore Air Force
SAM	Surface-to-air missile
SAR	Search and rescue
SLAMMR	Side-looking Multi-Mission Radar
SSM	Surface-to-surface missile

2 In the case of licensed production, year licence granted.

3 These include details of the intended platforms in the case of missiles and launchers.

4 The operational height levels attributed to the various surface-to-air guided weapons are basd on the following NATO designations: Low Level (150-600m); Medium Level (600-7,500m); High Level (7,500-15,000m); Very High Level (over 15,000m). See R. G. Lee et al., Land Warfare, Brassey's New Battlefield Weapons Systems and Technology Series into the 21st Century. Volume 5, Guided Weapons, (3rd ed.), (London: Brassey's, 1998), p.205. The higher altitude missiles also have a longer range and vice versa.

SOURCES: Compiled from Michael Brzoska and Thomas Ohlson, *Arms Transfers To The Third World, 1971-1985*, (Oxford: SIPRI/Oxford University Press, 1987); *Collins/Jane's Combat Aircraft*, (Glasgow: Harper Collins, 1995); *Defence of Singapore 1990*, (Singapore: Ministry of Defence, 1990); *Far East Air Arms and Australasia*, (Uxbridge: Mach III Plus, 1994); *Far Eastern Economic Review* [various issues]; Keith Faulkner, *Jane's Warship Recognition Guide*, (Glasgow: Harper Collins, 1996); Christopher F. Foss, *Jane's Tank and Combat Vehicle Recognition Guide*, (Glasgow: Harper Collins, 1996); Christopher F. Foss, *Armoured Fighting Vehicles Of The World*, (Shepperton: Ian Allan, 1982); William Green, *The Observer's Book of Aircraft* (26th ed.), (London: Frederick Warne & Co., 1977); Ian V. Hogg, *Artillery 2000*, (London: Arms & Armour Press, 1990); Chandran Jeshurun (ed.), *Arms and Defence in Southeast Asia*, (Singapore: Institute of Southeast Asian Studies, 1989); R. G. Lee et al., *Land Warfare, Brassey's New Battlefield Weapons Systems and Technology Series into the 21st Century. Volume 5, Guided Weapons*, (3rd ed.), (London: Brassey's, 1998); Bob Lowry, *Indonesian Defence Policy and the Indonesian Armed Forces*, (Canberra Papers on Strategy and Defence No.99), (Canberra: SDSC, 1993); Douglas Pike, *Vietnam And The Soviet Union. Anatomy Of An Alliance*, (Boulder, CO: Westview Press, 1987); *Pacific Defence Reporter* [various issues]; *Reuter Textline; SIPRI Yearbook: World Armaments and Disarmament* [various years]; *Straits Times* [various issues]; *The Military Balance* [various years].

From the data on each state's major weapons acquisitions during the Second Cold War, it is possible to identify a number of general trends in the SE Asian arms dynamic's outcomes.

With the obvious exception of Burma (which acquired only a very limited number of weapons for the purposes of counter-insurgency operations), all the states acquired weapons in most of the categories. This was part of an evident attempt to develop fairly broad conventional warfare capabilities, if not actually 'balanced', across the board, capabilities. In some cases, an obvious emphasis was given to certain capabilities: for example, air defence in Singapore; maritime defence and amphibious lift in Indonesia; and ground warfare in Thailand. These emphases clearly reflect the priorities of defence procurement policy in those states.

Notably absent in terms of procurement was the acquisition of any submarines.[2] Indonesia, Malaysia and Vietnam, however, all acquired ASW helicopters and several of the warships which they purchased had an ASW capability (for example, Indonesia's Type 12 and Vietnam's 'Petya II' class frigates). The acquisition of ASW capabilities was clearly directed at sub-surface threats from extra-regional powers.

The lack of any efforts to develop a sub-surface warfare capability was undoubtedly connected to the 'coastal' role - one essentially limited to operations within territorial waters - which each state's navy had been tasked with.[3] There was no attempt to develop the capability for longer range naval power projection which would have required the acquisition of logistic support vessels, for example. Only Malaysia acquired a limited number of these.

Taking those categories in which weapons were acquired as a whole, most states acquired a mix of new, second-hand, and (excepting Burma and Vietnam) locally produced weapons. There was certainly a marked tendency in many instances, however, towards the acquisition of second-hand

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2 Indonesia possessed a limited submarine capability, however, as a result of its order for two German Type 209s in 1977.

3 A 'coastal' role sees navies focussing on "protecting maritime resources, exercising jurisdiction and maintaining order". Till, op. cit, p.17.

(often refurbished) arms. Such arms were usually transferred from the supplier state's own armed forces, or from reserve stocks, through both defence co-operation programmes and special grant arrangements. The acquisition of second-hand equipment frequently occured when states were acquiring additional numbers of a type purchased new some years previously. This was particularly evident in the case of combat aircraft.

The trend towards the acquisition of refurbished, second-hand, weapons, appears to be inter-linked with another preference displayed by many of the states; that of upgrading existing weapons holdings. Many states clearly preferred the option of upgrading, rather than purchasing new weapons, when practicable. This could be described as a policy of participating in the general process of technological innovation, or at least deferring obsolescence, through limited technological advances.[4]

Where states opted for technologically sophisticated, leading-edge, weapons, then it mainly occurred in the categories of missiles and launchers and combat aircraft: that is, in those categories which are subject to the greatest rates of technological innovation. In the case of combat aircraft these acquisitions of technologically sophisticated weapons were often part of a package which included offsets for, and technology transfer to, the recipient states.

The orders for F-16 fighter aircraft by Indonesia, Singapore and Thailand in the mid-80s (the F-16 then seeming to symbolise the leading-edge of weapons technology) have led to the suggestion that this constituted a 'significant' increase in the 'sophistication' of the SE arms dynamic's outcomes.[5] It is arguable, though, that the level of sophistication had

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[4] Buzan makes a similar point with regard to the purchase of second-hand weapons by following states: they "will make do with the offerings on the second-hand market, keeping pace with the forward qualitative movement of the leading edge, but only at some distance behind it." Buzan, An Introduction to Strategic Studies, p.39.

[5] Brzoska and Ohlson contend that the introduction of the F-16 (along with the MiG-23 - though this was not actually introduced by a regional state) meant that the "level of sophistication was ...significantly raised by the mid-80s". Brzoska and Ohlson, op. cit., p.28.

actually begun to increase somewhat in the early 1980s with the introduction of several types of advanced missile into the region which states had not hitherto possessed. Singapore, for example, acquired its first air-to-surface missiles ('Mavericks') in 1981 and Thailand acquired its first surface-to-air missiles ('Blowpipes') in 1982.

Irrespective of the actual point in the 1980s at which a much higher level of sophistication began to emerge in the SE Asian 'arms dynamic', it is evident that the outcomes of that dynamic clearly reflected the desire of all the states (Burma, again, mostly excepted) to follow the process of technological innovation. The way in which states followed this process was either through upgrading existing capabilities, the purchase of new, technologically advanced weapons, or through incremental technological advances resulting from the receipt of the supplier state's obsolescent equipment. Where acquisitions have resulted from the licensed production of weapons by the states themselves, or from entirely indigenous design and production, then those weapons have, in the main, been of a less sophisticated nature. This clearly reflects, and reinforces, the designation of these states as part-producers. The licensed production of weapons also usually occurred in those categories where there were obvious links with the civil sector: for example, transport helicopters and training aircraft.

Finally, with regard to general trends, there are those relating to the supplier states and the arms they provided to the states under consideration. As Vietnam was wholly dependent on a single supplier, the Soviet Union, and Burma was supplied with very few weapons at all, they are necessarily excluded from the following analysis.[6] The remaining states saw weapons supplied by a wide range of countries, though some trends are fairly evident.

With the exceptions of China's provision of tanks and artillery to Thailand and Yugoslavia's supply of a training frigate to Indonesia, all the suppliers were non-communist states. In

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6 Burma is, however, worth mentioning in this context as it was the only state to receive weapons (rocket launchers) from suppliers whose identity cannot be confirmed. Despite the general sensitivity of arms sales, and the secrecy surrounding them on occasion, it was these sales which were the only ones where a supplier could not be readily identified or confirmed.

the main they were North American and European ones, but they also included pro-Western states such as Australia, Israel and South Korea.

Overall, across all weapon categories, the US was clearly the major supplier. It was pre-eminent in supplies of combat aircraft and other very sophisticated weapons systems (for example, AEW aircraft), though markedly less so in terms of warships. Thailand showed the greatest reliance on American equipment with Malaysia at the other extreme. The US was followed by France and Britain - after America and the Soviet Union the other major international arms exporters during the 1980s - who supplied weapons in most categories. Britain and France, however, were not dominant in any category or in any one country in particular. The other - relatively minor - suppliers exported weapons in one or more specialised areas:[7] Switzerland supplied training aircraft; Italy supplied training aircraft and jet trainers; West Germany supplied training aircraft and warships; and the Netherlands supplied transport aircraft and warships.

It was these smaller arms exporters who were generally more prepared than the major exporters (with the exception of France) to offer licensed production arrangements. Among them, however, only Australia transferred equipment under a defence co-operation programe which was a clear indication that its relations with the recipients differed substantially from those of the other smaller exporters.

Lastly, there were a few instances of the inter-state supply of weapons between Indonesia, Malaysia, Singapore and Thailand. These instances mainly concerned the supply of fairly old equipment first provided by an external supplier (for example, Malaysia received second-hand French 'Alouette III' transport helicopters from Singapore), rather than locally produced equipment, which again indicated the part-producer status of these states.[8]

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[7] This is in keeping with the pattern identified by Brzoska and Ohlson with regard to those smaller members of NATO who have "sizeable" arms industries. These countries have "specialized in one or several areas within the field of arms production in which they have traditionally been producers or have acquired expertise". Brzoska and Ohlson, op. cit., p.95.

[8] An exception was Malaysia's purchase of a single Indonesian produced 'Puma' transport helicopter for evaluation. Thailand may also have acquired three NC-212 transport aircraft built by Indonesia.

BIBLIOGRAPHY

Official Publications

Defence of Singapore 1990, Singapore: Ministry of Defence, 1990.

Foreign Military Sales, Foreign Construction Sales and Military Assistance Facts As Of September 30, 1994, Deputy for Financial Management Comptroller, Defense Security Assistance Agency.

Fourth Malaysia Plan, 1981-1985, Kuala Lumpur: National Printing Department, 1981.

The Defence of Australia 1987, Canberra: Australian Government Publishing Service, 1987.

The Policy Of The State Defence And Security Of The Republic Of Indonesia 1995.

Third Malaysia Plan, 1976-1980, Kuala Lumpur: Government Press, 1976.

Books and Monographs

Acharya, Amitav, An Arms Race in Post-Cold War Southeast Asia? Prospects for Control, Pacific Strategic Papers No.8, Singapore: Institute of Southeast Asian Studies, 1994.

Ayoob, Mohammed and Chai-anan Samudavanija (eds.), Leadership Perceptions and National Security. The Southeast Asian Experience, Singapore: Institute of Southeast Asian Studies, 1989.

_____ The Third World Security Predicament: State Making, Regional Conflict, and the International System, Boulder, CO: Lynne Reinner, 1995.

Ball, Nicole, Security and Economy in the Third World, Princeton, NJ:Princeton University Press, 1988.

Baylis, John et al., Contemporary Strategy, London: Croom Helm, 1975.

_____ and N. J. Rengger (eds.), Dilemmas of World Politics, New York: Oxford University Press, 1992.

Broinowski, Alison (ed.), Understanding ASEAN, London: Macmillan, 1982.

Brzoska, Michael and Thomas Ohlson, Arms Transfers To The Third World, 1971-1985, Oxford: SIPRI/Oxford University Press, 1987.

Buzan, Barry, An Introduction to Strategic Studies, London: Macmillan/International Institute for Strategic Studies, 1987.

_____ People, States and Fear, 2nd ed., Hemel Hempstead: Harvester Wheatsheaf, 1991.

_____ and Eric Herring, The Arms Dynamic in World Politics, Boulder/London: Lynne Reinner, 1998.

Cassen, Robert (ed.), Soviet Interests In The Third World, London: Sage Publications, 1985.

Chanda, Nayan, Brother Enemy. The War After The War, New York: Collier Books, 1986.

Chee, Stephen (ed.), Leadership and Security in Southeast Asia, Singapore: Institute of Southeast Asian Studies, 1991.

Chin, Kin Wah (ed.), Defence Spending in Southeast Asia, Singapore: Institute of Southeast Asian Studies, 1987.

Collins/Jane's Combat Aircraft, Glasgow: Harper Collins, 1996.

Copper, John F. and Daniel S. Papp (eds.), Communist Nations' Military Assistance, Boulder, CO: Westview Press, 1983.

Dickens, David (ed.), No Better Alternative: Towards Comprehensive and Cooperative Security in the Asia-Pacific, Wellington, NZ: Centre for Strategic Studies, 1997.

Eide, Asbjorn and Mary Kaldor (eds.), The World Military Order, London: Macmillan, 1979.

Evangelista, Matthew, Innovation and the Arms Race, Ithaca, NY: Cornell University Press, 1988.

Evans, Grant and Kelvin Rowley, Red Brotherhood at War. Indochina since the Fall of Saigon, Leichhardt, NSW: Pluto Press, 1984.

Far East Air Arms and Australasia, Uxbridge: Mach III Plus, 1994.

Faulkner, Keith, Jane's Warship Recognition Guide, Glasgow: Harper Collins, 1996.

Foss, Christopher F., Armoured Fighting Vehicles of the World, Shepperton: Ian Allan, 1982.

_____ Jane's Tank and Combat Vehicle Recognition Guide, Glasgow: Harper Collins, 1996.

Graham, Norman A. (ed.), Seeking Security and Development: The Impact of Military Spending and Arms Transfers, London: Lynne Reinner, 1994.

Gray, Colin, Strategic Studies, Westport, Conn: Greenwood Press, 1982.

Green, William, The Observer's Book of Aircraft, 26th ed., London: Frederick Warne & Co., 1977.

Harkavy, Robert and Stephanie G. Neuman (eds.), The Lessons of Recent Wars in the Third World, Volume I, Lexington, Mass: Lexington Books, 1985.

Hogg, Ian V., Artillery 2000, London: Arms & Armour Press, 1990.

Huisken, Ron, Arms Limitation in South-East Asia: A Proposal, Canberra Papers on Strategy and Defence No.16, Canberra: Strategic and Defence Studies Centre, 1977.

Huxley, Tim, The ASEAN States' Defence Policies, 1975-1981: Military Responses To Indochina?, Working Paper No. 88, Canberra: Strategic and Defence Studies Centre, 1984.

J. Soedjati Djiwandono and Yong Mun Cheong (eds.), Soldiers and Stability in Southeast Asia, Singapore: Institute of Southeast Asian Studies, 1988.

Jeshurun, Chandran (ed.), Governments and Rebellions in Southeast Asia, Singapore: Institute of Southeast Asian Studies, 1985.

_____ (ed.), Arms and Defence in Southeast Asia, Singapore: Institute of Southeast Asian Studies, 1989.

Job, Brian L. (ed.), The Insecurity Dilemma. National Security of Third World States, Boulder and London: Lynne Reinner, 1992.

Kolko, Gabriel, Vietnam. Anatomy of War 1940-1975, London: Allen & Unwin, 1986.

Lee, R. G. et al., Land Warfare, Brassey's New Battlefield Weapons Systems and Technology Series into the 21st Century. Volume 5, Guided Weapons, 3rd ed., London: Brassey's, 1998.

Leifer, Michael, ASEAN And The Security Of South-East Asia, London: Routledge, 1989.

Lockhart, Greg, Strike in the South Clear in the North: The Problem of Kampuchea and the Roots of Vietnamese Strategy There, Clayton: Monash Centre of Southeast Asia Studies, No.36, 1985.

Lowry, Bob, Indonesian Defence Policy and the Indonesian Armed Forces, Canberra Papers on Strategy and Defence No.99, Canberra: Strategic and Defence Studies Centre, 1993.

_____ The Armed Forces of Indonesia, St. Leonards, NSW: Allen & Unwin, 1996.

Mak, J. N., ASEAN Defence Reorientation 1975-1992: The Dynamics of Modernisation and Structural Change, Canberra Papers on Strategy and Defence No.103, Canberra: Strategic and Defence Studies Centre, 1993.

McGregor, Charles, The Sino-Vietnamese Relationship and the Soviet Union, Adelphi Paper 232, London: International Institute for Strategic Studies, 1988.

McInnes, Colin and Mark G. Rolls (eds.), Post-Cold War Security Issues In The Asia-Pacific Region, London: Frank Cass, 1994.

McKinlay, Robert, Third World Military Expenditure, London: Pinter, 1989.

Menon, Rajan, Soviet Power And The Third World, New Haven: Yale University Press, 1986.

Morrison, Charles E. (ed.), Threats to Security in East Asia-Pacific, Lexington, Mass: Lexington Books, 1983.

Muscat, Robert J., Thailand and the United States: development, security, and foreign aid, New York: Columbia University Press, 1990.

Neuman, Stephanie G., Military Assistance in Recent Wars, New York: Center for Strategic and International Studies/Praeger, 1986.

O'Connor, Michael, To Live In Peace, Carlton: Melbourne University Press, 1985.

O'Neill, Robert and D. M. Horner (eds.), New Directions in Strategic Thinking, London: Allen & Unwin, 1981.

Ohlson, Thomas (ed.), Arms Transfer Limitations and Third World Security, Oxford: SIPRI/ Oxford University Press, 1988.

Ong, Chit Chung, Operation Matador. Britain's War Plans against the Japanese 1918-1941, Singapore: Times Academic Press, 1997.

Pearton, Maurice, The Knowledgeable State, London: Burnett Books, 1982.

Pierre, Andrew J., The Global Politics of Arms Sales, Princeton, NJ: Princeton University Press, 1982.

Pike, Douglas, Vietnam And The Soviet Union. Anatomy Of An Alliance, Boulder, CO: Westview Press, 1985.

_____ PAVN: People's Army of Vietnam, New York: Da Capo Press, 1991.

Randolph, R. Sean, The United States and Thailand: Alliance Dynamics, 1950-1985, Berkeley, CA: Institute of East Asian Studies, University of California, 1986.

Sampson, Anthony, The Arms Bazaar, London: Hodder & Stoughton, 1977.

SarDesai, D. R., Southeast Asia. Past and Present, 3rd ed., London: Macmillan, 1994.

Selth, Andrew, Transforming The Tatmadaw: The Burmese Armed Forces since 1988, Canberra Papers on Strategy and Defence No.113, Canberra: Strategic and Defence Studies Centre, 1996.

Sheehan, Michael, The Arms Race, Oxford: Martin Robertson, 1983.

Singh, Bilveer, ABRI And The Security Of Southeast Asia. The Role And Thinking Of General L. Benny Moerdani, Singapore: Singapore Institute of International Affairs, 1994.

SIPRI Yearbook: World Armaments and Disarmament, Stockholm: Stockholm International Peace Research Institute (SIPRI), various years.

Smith, Martin, Burma: Insurgency and the Politics of Ethnicity, London: Zed Books, 1991.

Snitwongse, Kusuma and Sukhumbhand Paribatra (eds.), Durable Stability in Southeast Asia, Singapore: Institute of Southeast Asian Studies, 1987.

Spear, Joanna, Carter and Arms Sales. Implementing the Carter Administration's Arms Transfer Restraint Policy, London: Macmillan, 1995.

Stockholm International Peace Reasearch Institute (SIPRI), The Arms Trade With The Third World, New York: Holmes and Meier, 1975.

Suchit Bunbongkarn, The Military in Thai Politics, 1981-86, Singapore: Institute of Southeast Asian Studies, 1987.

Taylor, John G., Indonesia's Forgotten War. The Hidden History of East Timor, London: Zed Books, 1991.

Thayer, Carlyle A., The Vietnam People's Army Under Doi Moi, Pacific Strategic Papers No.7, Singapore: Institute of Southeast Asian Studies, 1994.

The Military Balance, London: International Institute for Strategic Studies, various years.

Thee, Marek, Military Technology Military Strategy and the Arms Race, London: The United Nations University and Croom Helm, 1986.

Thompson, Sir Robert, Defeating Communist Insurgency, London: Chatto & Windus, 1966.

_____ Peace Is Not At Hand, London: Chatto & Windus, 1974.

Till, Geoffrey, Maritime Strategy And The Nuclear Age, 2nd ed., London: Macmillan, 1984.

Tilman, Robert O., Southeast Asia and the Enemy Beyond. ASEAN Perceptions of External Threats, Boulder, CO: Westview Press, 1987.

Van der Kroef, Justus M., Communism In South-East Asia, London: Macmillan, 1981.

Vatikiotis, Michael R. J., Indonesian Politics Under Suharto, London: Routledge, 1993.

Williams, Michael C., Vietnam at the Crossroads, London: Pinter/Royal Institute of International Affairs, 1992.

Zakaria Haji Ahmad and Harold Crouch (eds.), Military-Civilian Relations in Southeast Asia, Singapore: Oxford University Press, 1985.

Articles

Acharya, Amitav, 'Arms Proliferation Issues in ASEAN: Towards a More 'Conventional' Defence Posture?', Contemporary Southeast Asia, Vol.10, No.3, December 1988.

Albright, David E., 'The USSR and the Third World in the 1980s', Problems of Communism, Vol.38, Nos.2-3, 1989.

ASEAN Notes, Pacific Defence Reporter, August 1985.

Ashton, William, 'Air Force gets arms boost', Asia-Pacific Defence Reporter, November 1991.

Ball, Desmond, 'Arms and affluence: military acquisitions in the Asia-Pacific region', International Security, Vol.18, Winter 1993/94.

Buzan, Barry, 'The Southeast Asian Security Complex', Contemporary Southeast Asia, Vol.10, No.1, June 1988.

Dupont, Alan, 'Indonesia's Defence Strategy and Security: Time for a Rethink?', Contemporary Southeast Asia, Vol.18, No.3, December 1996.

Glazebrook, A. W., 'Indonesia builds for its needs', Pacific Defence Reporter, October 1986.

Gray, Colin, 'The Arms Race Phenomenon', World Politics, XXIV 1971.

Harris, G. T., 'Economic Aspects of Military Expenditure in Developing Countries: A Survey Article', Contemporary Southeast Asia, Vol.10, No.1, June 1988.

Hollingworth, Clare, 'Burma's uncertain future', (The Armed Forces of the Asia-Pacific Region No 14), Pacific Defence Reporter, February 1985.

_____ 'To forestall economic collapse, Vietnam will pull out of Cambodia', Pacific Defence Reporter, May 1988.

Huxley, Tim, 'Singapore and Malaysia: A Precarious Balance?', The Pacific Review, Vol.4, No.3, 1991.

_____ 'Singapore forces shape up', Jane's Defence Weekly, 19 November, 1994.

Indorf, Hans, 'Thailand: A case of multiple uncertainties' (The Armed Forces of the Asia-Pacific Region No 6), Pacific Defence Reporter, September 1983.

Josephs, Captain H. A., 'Indonesia: Complex requirements and a huge task', (The Armed Forces of the Asia- Pacific Region No 15), Pacific Defence Reporter, March 1985.

Karp, Aaron, 'Military Procurement and Regional Security in Southeast Asia', Contemporary Southeast Asia, Vol.11, No.4, March 1990.

Klare, Michael T., 'The Unnoticed Arms Trade: Exports of Conventional Arms-Making Technology', International Security, Vol.8, No.2, 1983.

Looney, Robert E. and P. C. Frederiksen, 'The Economic Determinants of Military Expenditure in Selected East Asian Countries', Contemporary Southeast Asia, Vol.11, No.4, March 1990.

MacIntyre, Andrew, 'Don't worry about those Indonesian F-16s', Pacific Defence Reporter, August 1986.

Mak, J. N., 'The Modernization of the Malaysian Armed Forces', Contemporary Southeast Asia, Vol.19, No.1, June 1997.

Nagara, Bunn, 'The Notion of an Arms Race in the Asia-Pacific', Contemporary Southeast Asia, Vol.17, No.2, September 1995.

Neuman, Stephanie G., 'Arms, Aid and the Superpowers', Foreign Affairs, Vol.66, No.5, Summer 1988.

Nishizaki, Yoshinori, 'A Brief Survey of Arms Production in ASEAN', Contemporary Southeast Asia, Vol.10, No.3, December 1988.

Pike, Douglas, 'The USSR and Vietnam: Into The Swamp', Asian Survey, Vol.XIX, No.12, December 1979.

_____ 'Vietnam, a modern Sparta', (The Armed Forces of the Asia-Pacific Region No 2), Pacific Defence Reporter, April 1983.

Richardson, Michael, 'The RAAF's role in South-East Asia', Pacific Defence Reporter, October 1982.

_____ 'New eyes and sting for poisoned shrimp', Pacific Defence Reporter, March 1983.

_____ 'Singapore's defence industry', Pacific Defence Reporter, May 1983.

_____ 'F-16As for Thailand?', Pacific Defence Reporter, June 1984.

_____ 'The F-16 for South-East Asia: Arms Race or strategic balance?', Pacific Defence Reporter, May 1985.

_____ 'Major changes in power balance as Soviets withdraw from Cam Ranh', Pacific Defence Reporter, March 1990.

Rolls, Mark G., 'ASEAN: Where from or Where to?', Contemporary Southeast Asia, Vol.13, No.3, December 1991.

Ross, Andrew L., 'Growth, Debt, and Military Spending in Southeast Asia', Contemporary Southeast Asia, Vol.11, No.4, March 1990.

Sebastian, Leonard C., 'Ending an Armed Struggle Without Surrender: The Demise of the Communist Party of Malaya (1979-89) and the Aftermath', Contemporary Southeast Asia, Vol.13, No.3, December 1991.

Selth, Andrew, 'The Myanmar Army Since 1988: Acquisitions and Adjustments', Contemporary Southeast Asia, Vol.17, No.3, December 1995.

_____ 'The Myanmar Air Force Since 1988: Expansion and Modernization', Contemporary Southeast Asia, Vol.19, No.4, March 1998.

Stubbs, Richard, 'Malaysian Defence Policy: Strategy versus Structure', Contemporary Southeast Asia, Vol.13, No.1, June 1991.

Thayer, Carlyle A., 'Force Modernization: The Case of the Vietnam People's Army', Contemporary Southeast Asia, Vol.19, No.1, June 1997.

Tin Maung Maung Than, 'Burma's National Security and Defence Posture', Contemporary Southeast Asia, Vol.11, No.1, June 1989.

Um, Khatharya, 'Thailand and the Dynamics of Economic and Security Complex in Mainland Southeast Asia', Contemporary Southeast Asia, Vol.13, No.3, December 1991.

Wang, Fei-Ling, 'Four Cheers For International Political Anarchy', Journal of Chinese Political Science, Vol.2, No.1, Winter 1995.

Warner, Denis, 'Vietnam, the double-edged sword in South-East Asia', Pacific Defence Reporter, June 1985.

Wattanayagorn, Panitan, 'ASEAN's arms modernization and arms transfer dependence', The Pacific Review, Vol.8, No.3, 1995.

Weinstein, F., 'The Meaning of National Security in Southeast Asia', Bulletin of the Atomic Scientists, Vol.34, No.9, November 1978.

Wettern, Desmond, 'Soviet submarines for Vietnam, but wither Gorshkov?', Pacific Defence Reporter, March 1985.

Yong, Deng, 'Sino-Thai Relations: From Strategic Co-operation to Economic Diplomacy', Contemporary Southeast Asia, Vol.13, No.4, March 1992.

Newspapers and other News Sources

BBC Summary of World Broadcasts (November 1978 - December 1989).

C-Reuters@clari.net (1997).

Far Eastern Economic Review (January 1979 - February 1990).

Reuter Textline (January 1985 - March 1990).

Straits Times (March 1979 - August 1990).

Correspondence and Discussions

1. Discussion with Professor Juwono Sudarsono, Vice-Governor LEMHANNAS (Institute of National Resilience), Jakarta, 31 January, 1996.

2. Discussion with Dr. Soedjati Djiwandono, Centre for Strategic and International Studies, Jakarta, 31 January, 1996.

3. Discussion with former Singapore Armed Forces NCO, April 1997.

4. Discussion with Associate Professor Laurie Barber, University of Waikato, 5 August, 1997.

5. Correspondence with Mr. Daljit Singh, Senior Fellow, Institute of Southeast Asian Studies, September 1997.

6. Correspondence and discussions with Mr. Howard Lang, British Aerospace, Warton, Lancashire, 1997-1998.

7. Discussions with Mr. Daljit Singh, Senior Fellow, and Dr. Leonard Sebastian, Research Fellow, Institute of Southeast Asian Studies, Singapore, 8 May, 1998.