



The Militarization of the Persian Gulf

An Economic Analysis

Hossein Askari
Amin Mohseni
Shahrzad Daneshvar



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Hossein Askari

The George Washington University, USA

Amin Mohseni

American University, USA

Shahrzad Daneshvar

Teach for America, USA

Edward Elgar

Cheltenham, UK • Northampton, MA, USA

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Published by
Edward Elgar Publishing Limited
The Lypiatts
15 Lansdown Road
Cheltenham
Glos GL50 2JA
UK

Edward Elgar Publishing, Inc.
William Pratt House
9 Dewey Court
Northampton
Massachusetts 01060
USA

A catalogue record for this book
is available from the British Library

Library of Congress Control Number: 2009933364



ISBN 978 1 84720 611 4

Printed and bound by MPG Books Group, UK

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About the authors

Hossein Askari is the Iran Professor of International Business and Professor of International Affairs at the George Washington University. He served for two and a half years on the Executive Board of the International Monetary Fund and was Special Advisor to the Minister of Finance of Saudi Arabia. During the mid-1980s he directed an international team that developed a comprehensive domestic, regional and international plan for Saudi Arabia. During 1990–91 he was asked by the governments of Iran and Saudi Arabia to act as an intermediary to restore diplomatic relations; and in 1992 he was asked by the government of Kuwait to mediate with Iran. He has written extensively on economic development in the Middle East, Islamic economics and finance, international trade and finance, agricultural economics, oil economics, and on economic sanctions.

Shahrzad Daneshvar, an Iranian-American, is a graduate of the George Washington University's Elliot School of International Affairs. She has written on Iranian affairs and US–Iranian relations. She is currently a member of the Teach for America Corps serving underprivileged children in Florida, USA.

Amin Mohseni is a PhD candidate in Economics at American University, while he is also completing his graduate studies in Applied Mathematics at University of Maryland, College Park. He also holds an MA in International Development and a BS in Electrical Engineering. He worked for more than five years as a telecommunications engineer before starting his graduate studies in economics. He has been working as a consultant for the World Bank for the past two years. His research interests are development macroeconomics, energy economics, economics in Islam, and issues related to socio-economic justice. His current research is analyzing the socio-economic costs of economic and financial instability and volatility.

1. Introduction

Countries have acquired military weapons since the dawn of time. The broad reasons for military expenditures have been for self-defense, as deterrence against external aggression, and to wage war. However, in many cases, rulers have also used these weapons to suppress their own citizenry as a means to remain in power. While these and other reasons may be used to justify military expenditures, there are attendant economic and social costs. Resources that could be used to enhance economic prosperity are wasted. Economic and social progress suffers. Moreover, military hardware that is acquired has the likelihood of being used to fuel conflict and wars, cause more economic destruction, and drain even more economic resources over time due to maintenance. Military expenditures, unless truly needed and effective for self-defense, are an impediment to economic and social progress for a country and a region.

Besides the direct and indirect deleterious implications of military expenditures for economic growth and development, vast military expenditures in Muslim countries broadly contradict fundamental Islamic teachings: (1) the pursuit of peace; (2) the achievement of economic prosperity and economic and social justice. While Islam requires the state to maintain social stability by promoting tolerance and opposition to all forms of extremism, it preaches peace through the coexistence of different races and religions. As such, Islam also advocates the peaceful resolution of differences.¹ In Islam war is seen as an illness and one of the worst qualities of humankind.² Similarly, the killing of innocent people and violence are antithetical to Islam. Conflicts are supposed to be resolved through dialogue and peaceful means, not through hostilities and war. Only peace and the pursuit of peace are the great achievements to be praised and rewarded. Thus, it is apparent that Muslim countries cannot justify vast military expenditures on religious grounds.

Islam also preaches the importance of economic prosperity and economic and social justice. Islam holds that positive intellectual and economic growth can occur once the community's basic physiological needs for food, shelter, clothing, and rest are assured; safety, security, and social cohesion are maintained; and public freedom of speech and religion are guaranteed. Islam has deemed the fulfillment of these essential needs, along with free and easy access to high-quality education, to be a

prerequisite for the promotion of economic growth and social development.³ Poverty is considered by Islam to be a threat to the very existence of the faith. Thus, specific capitalistic strategies that promote the maximization of efficiency and productivity must be modified if they leave the basic physiological and educational needs of a significant part of the populace unfulfilled, and hinder public access to equitable economic opportunities. Accordingly, it is difficult, if not impossible, to reconcile the siphoning of economic resources to finance vast military expenditures and conflicts with the pursuit of economic prosperity and economic and social justice.

1.1 SYNOPSIS OF MILITARY EXPENDITURES IN THE PERSIAN GULF

Military expenditures became significant in the Persian Gulf after the first dramatic rise in oil prices in 1973–74 and have remained large by any standard. Military spending in the Middle East—particularly in the Persian Gulf—surged with the onset of the Iran–Iraq War in 1980, with the most notable jumps in spending occurring in Iraq, Saudi Arabia, and the United Arab Emirates (UAE). Because military expenditures are motivated by a number of factors, especially the military expenditures of perceived foes and pressures from arms suppliers, these expenditures will not be reduced unilaterally by countries but will require a concerted and sustained international effort. While the economic burden of military expenditures has been highly significant, it has been trumped by the economic cost of conflicts and wars. Oil revenues have provided a seemingly painless means of financing the most sophisticated weaponry available. Even though the financing may appear painless, as taxes have not been used, the citizenry have in fact been negatively affected. Economic growth over most of 1975–2002 has been disappointing at best. Future generations will also suffer as finite oil and gas resources have been used to finance unproductive and destructive military expenditures.

In the 1970s, annual real per capita gross domestic product (GDP) growth in the Middle East and North Africa averaged 2.3 percent, exceeding that of developing countries as a group.⁴ In sharp contrast, however, between 1975 and 2002, real per capita GDP annual growth in the Middle East region stagnated to 0.1 percent, compared to average annual growth of 5.9 percent for the East Asia and Pacific region and 2.3 percent for all developing countries over the same period (see Chapter 8, Table 8.9). During the 1980s and 1990s, the Middle East region's overall weak growth performance primarily reflects the poor performance of the more populated oil-exporting countries (which overwhelm the regional average),

whose economies have continued to remain heavily dependent on oil and are vulnerable to significant oil price fluctuations.

The Persian Gulf oil-exporting countries (as opposed to the Middle East and North Africa, as a region) show negative growth rates in real GDP per capita for all the countries under consideration for the period 1975–2002 (see Chapter 8, Table 8.9). By comparison, growth in the in-region non-oil countries (that is, excluding Persian Gulf oil exporters within the Middle East and North Africa) was positive, albeit not as high as that in our group of out-of-region countries and in the East Asia and Pacific region. What is more striking is that the erosion of real GDP per capita incomes in the oil exporters is matched only by sub-Saharan Africa, despite vastly differing natural resource endowments and other country characteristics. Strikingly, for most of the major oil-exporting countries of the Persian Gulf the period when they experienced their highest level of per capita income was in the period 1975–1981, a time of high real oil prices⁵, whereas for other countries it was, as to be expected, in a recent year. In large measure because of rising and record oil prices (rising from \$22.8 per barrel to \$27.8 in 2003, \$37.7 in 2004, \$50 in 2005, \$58.3 in 2006, \$64.2 in 2007, and peaking at over US\$147 during the summer of 2008 before tumbling), this dismal performance was reversed during the period 2003–07 (see Chapter 8, Table 8.10). But with the ensuing downturn in oil prices beginning in the summer of 2008 and the expectation that the global economic downturn would linger for some time, the economic future for the vast majority of the population in the region again looked bleak in late 2008. Economic policies are largely designed to ensure the short-term survival of the regimes in power, as opposed to laying the foundations of sustained growth. Institutions are ineffective and weak; while governments rely on oil revenues and use the proceeds to subsidize essential consumption for the population at large and to enrich those in power.

While numerous factors explain the poor economic performance of the Persian Gulf oil-exporting countries, military expenditures (and the wars and conflicts that they have fueled) are amongst the leading negative factors. The Persian Gulf is, by some indicators, the most militarized region in the world.⁶ Public dissatisfaction with economic and social progress and the absence of elective legitimacy has led rulers and governments to rely on force to maintain power.

1.2 OVERVIEW

In this volume, we will explore the size, the dimension and the extent of military expenditures in the Persian Gulf region, with numerous comparisons

to other regions, and explore the economic ramifications. In Chapter 2, we begin with an examination of the reasons motivating military expenditures and their economic and social effects. In Chapter 3, we discuss the dimension and the size of military expenditures in the region while in Chapter 4 we focus on the size of arms imports. This is followed in Chapter 5 by an examination of the number of military personnel and the size of facilities. In Chapter 6, we concentrate on military research and development in the Persian Gulf region. In Chapter 7, we turn to the important question of why military expenditures are so high in this region. Is it because of religion? Is it because of high oil revenues? Is it because of corruption? Is it because of intensive foreign interference in the affairs of the region? Or is it a combination of all the above? This is followed in Chapter 8 by an assessment of the effects of high military expenditures—wars, conflicts, regional instability; and the economic toll—reduced productive investment, reduced human capital, and ultimately lower economic growth. Finally in Chapter 9, we conclude by suggesting how military expenditures may be reduced to benefit the region's citizens and regional peace and stability.

NOTES

1. The Prophet strongly condemned religious extremism, and actively struggled against pseudo-pietism and zealotry. Whenever he encountered religious fanatics during his lifetime, he would warn them three times that “the zealots will perish.” (Source: Ul Haq, Irfan, *Economic Doctrines of Islam*.)
2. Shirazi, Imam Muhammad, *War, Peace and Non-Violence: An Islamic Perspective*.
3. Ul Haq, Irfan, *Economic Doctrines of Islam*.
4. For GDP data, two main data series have been considered—GDP in current USD and GDP, PPP (constant 1995 USD). For GDP per capita, GDP per capita in current USD and GDP per capita, PPP (constant 1995 USD).
5. The same is likely to be true for the period 2003–07 because of increasing oil prices.
6. For a comprehensive discussion of the reasons underlying this dismal economic performance, see Askari, Hossein, *The Middle East Oil Exporters: What Happened to Economic Development?*

2. The justification and economic impact of military expenditures

2.1 INTRODUCTION

The premise of military expenditures (MILEX) and their impact on economic growth and development have been widely analyzed in the past half-century. In this chapter, we provide a brief overview of literature covering the various justifications for MILEX and their economic impact and fallout. Because MILEX are motivated by a number of factors, including the MILEX of perceived foes, these expenditures will not be reduced unilaterally by countries but will require an international effort.

2.2 THE REASONS UNDERLYING MILEX

The demand for MILEX can be affected by political, economic, social, and cultural factors. In the literature, some of the factors inducing MILEX include: (1) arms race;¹ (2) internal economic and political factors;² (3) bureaucracy;³ (4) culture and ideology;⁴ (5) internal and external conflicts,⁵ and security.⁶ What follows is a brief discussion of a selected sample of academic studies that attempt to explain the underlying reasons for military expenditures.

Kusi⁷ and Chowdhury⁸ utilize a time series and country-by-country approach and find, through applying Granger causality tests, that the causality linkage is widely different in direction and effect, from country to country. Kusi's findings covering the Persian Gulf countries are presented in Table 2.1. Although both of the authors employ the same analytical tool, Granger causality, Chowdhury's results (Table 2.2) differ from that of Kusi's. The main reason for this difference can be traced to the fact that the authors use a different number of observations (and thus different periods) in their analyses. Clearly Kusi and Chowdhury's analyses are not rooted in any theories linking economic growth to MILEX and are simply a statistical exercise.

Conversely, Smith⁹ develops a detailed model in which the demand for security is a necessary element of social welfare, inducing the government

Table 2.1 Kusi (1994) Granger causality test results for Persian Gulf economies

No Granger causality linkage between GDP growth rate and MILEX growth rate	Bahrain (1973–89) Iran (1971–86) Saudi Arabia (1971–88) UAE (1973–89) ^a
Granger causality linkage between GDP growth rate and MILEX growth rate	Kuwait (1971–89): GDP (-) → MILEX MILEX (+) → GDP ^b

Notes:

- a. The numbers in parenthesis reflect the period of analysis.
- b. Negative GDP growth rate causes MILEX growth rate and positive MILEX growth rate causes GDP growth rate.

Table 2.2 Chowdhury (1991) Granger causality test results for Persian Gulf economies

No Granger causality linkage between GDP growth rate and MILEX growth rate	Iraq (1961–85) Kuwait (1961–87)
Granger causality linkage between GDP growth rate and MILEX growth rate	Iran (1961–85): MILEX (-) → GDP GDP (+) → MILEX Saudi Arabia (1961–87): GDP (+) → MILEX

to allocate some of its resources to the military sector of the economy. In Smith's model, the government optimizes the amount of MILEX according to the weight of security in the welfare of the economy and the perceived level of threat. Smith then estimates the coefficient of this theoretical model based on data from the UK and finds correlations that are significant.

Dunne and Perlo-Freeman¹⁰ take a cross-country approach with MILEX induced by security needs and perceived levels of threat from various countries (not limited to neighboring countries). Table 2.3 presents the list of enemies and potential enemies for each Persian Gulf country. It is interesting to note that for any given Persian Gulf country, the majority of enemies consist of other countries in the Persian Gulf region. The results suggest that a country's MILEX is influenced by neighbors' MILEX as well as "internal and external conflict."¹¹ Although in their first study they find no structural shifts in the nature of demand for MILEX before and

Table 2.3 *Dunne and Perlo-Freeman's list of enemies and potential enemies for Persian Gulf countries*

Country	Enemies	Potential enemies
Bahrain	Qatar 1986–91 Iraq 1990–97	Saudi Arabia
Iran	Iraq 1981–97 Saudi Arabia 1987 USA 1981–97	Saudi Arabia 1988–96 Turkey 1991–97
Iraq	Israel 1981–97 Iran 1981–89 Kuwait 1990–97 Saudi 1990–97 Syria 1990–97 Turkey 1990–97 USA 1990–97	Bahrain Oman Qatar UAE 1990–97 Egypt 1990–91
Kuwait	Iraq 1990–97	
Qatar		Bahrain 1986–91 Iraq 1990–97 Saudi Arabia 1990–97
Saudi Arabia	Iran 1987 Iraq 1990–97	Iran 1988–96 Qatar 1990–97 Yemen 1992–97 Israel 1981–97
UAE		Iraq 1990–97

after the Cold War, Dunne and Perlo-Freeman refute this finding in a later paper,¹² arguing that cross-sectional analysis failed to reveal significant time series characteristics of the demand for MILEX.

In an effort to refute one of Payne's conclusions,¹³ Weede¹⁴ uses a cross-section study and finds that threat levels are as important as cultural and ideological factors in determining the level of MILEX.

Looney's cross-country study finds that "[for arms-producing countries] a high proportion of the various measures of resources allocated to the military can be accounted by internal (economic) factors . . . [and] non-producer environments are relatively more susceptible to external factors."¹⁵ Furthermore, Kim and Correa¹⁶ argue, using their time series results, that MILEX is heavily influenced by internal political and economic factors in the case of the US and the USSR, as well as external factors in for the case of the USSR.

Peel and Byers¹⁷ employ a time series regression approach and conclude that MILEX of North Atlantic Treaty Organization (NATO) and Warsaw Pact states exhibit a long-run equilibrium behavior and that:

levels of real arms spending are co-integrated. The fact of proportionality does not imply that spending will settle down to fixed levels—it is equally consistent with steady growth in real arms spending by both alliances. However, the proportionality is *not* consistent with a situation where spending by one alliance moves entirely independently of spending by the other.¹⁸

They also attest to the fact that MILEX in these alliances is also affected by internal factors as outlined in other studies, a sample of which is presented above.

In his analysis of the Association of South East Asian Nations (ASEAN) countries, Harris¹⁹ argues that MILEX exhibits a strong first-degree autocorrelation. Furthermore, MILEX in period t has a strong correlation with “government budgetary position” in period $t-1$, and “weak negative relationship with inflation” in period $t-1$.²⁰ Although he does not present the formal models used and results obtained, it is an interesting study as it points to possible positive dependence (inertia) in ASEAN’s MILEX. Similar to Peel and Byers, Rattinger²¹ studies the MILEX of NATO and Warsaw Pact states. His time series regression analysis concludes that internal bureaucratic processes influence the MILEX of these two groups and lead to a given growth rate for their MILEX. Any deviation from these growth rates is caused by action–reaction processes and tensions. Like Harris, he also finds strong inertia in MILEX for countries belonging to both NATO and the Warsaw Pact.

Dunne and Mohammed’s²² work focuses on Sub-Saharan Africa’s MILEX patterns. Through their cross-country and pooled time series analysis which is based on a well-defined theory of MILEX ($MB_t = a_0 + a_1*GDPC + a_2*GE + a_3*XM + a_4*AP + a_5*MRD + a_6*WAR$)²³ they find that “economic factors play an important role in determining the military burden in the region.”²⁴ Moreover, their time series results suggest that “strategic variables are of importance, such as . . . size of the army, as well as inertia.”²⁵

As seen from the brief overview of the literature on the determinants of MILEX, researchers have employed widely different analytical techniques, covered various regions and countries, and have arrived at vastly different, and sometimes contradictory, conclusions. Still, these literatures point to some common factors as determinants of MILEX and they can be summarized as follows: current and previous MILEX of neighboring countries (ally or enemy); current and previous MILEX of hostile

countries (neighbor or not); previous MILEX of the country; general economic conditions of the country; history of conflicts; perceptions of future conflicts; and internal political factors and bureaucracy. It is noteworthy that this list does not include economic growth and development motives of governments, meaning that governments generally do not pursue MILEX as a means of achieving higher rates of economic growth and development. Therefore, if there are any positive effects of MILEX on the economy, they are simply intended or unintended side-effects of MILEX, which were originally motivated by other factors.

It is important to note that this is not to imply that MILEX does not have economic justification for an economy in today's world. In fact, once a military industry is established, it could prove to be a highly profitable sector. For example in the case of the US, in 1998, the military industry's revenues were 1.02 percent of the gross domestic product (GDP). In 2006 this figure was at 1.58 percent, an astonishing 55 percent increase. Furthermore, the value of US arms deliveries around the world between 1999 and 2006 is estimated to be more than US\$107 billion and the value of total global arms exports in the same period stands at more than US\$265 billion.²⁶ Therefore, we do not argue that MILEX is not a source of profit for a country.²⁷ Arms production and sale is indeed a very profitable and lucrative business. The point here is that no one can make a strong claim that the US military industry was established by business and profit motives alone. Rather, military industries are established to fulfill national security needs irrespective of pure economic justifications; and business aspects of such industries are simply, as mentioned above, intended or unintended side-effects.

Another example is the military building roads, bridges, dams, and telecommunication networks for purely strategic military purposes, which could have possible spillover effects to the civilian economy. Therefore, governments as a general rule do not initially engage in MILEX for business reasons, rather they engage in MILEX because of one or more of the factors mentioned above. However, if there is an opportunity to make their military industries economically profitable, governments happily look into those opportunities as an additional factor and justification to enhance their military-industrial complex.

2.3 THE ECONOMIC FALLOUT OF MILITARY EXPENDITURES

MILEX and militarization are argued to have wide-ranging effects, often conflicting, on economic performance and welfare.

Investment

Invariably governments finance MILEX through the budget. When a government taxes the civilian sector of an economy and simultaneously spends a portion of its income (gained through taxes) on military expenditures, it is simply transferring financial capital from the civilian sector of its economy towards the military sector, thus reducing the investment potential in the civilian economy and production.²⁸ Furthermore, MILEX reduce the ability of a government to allocate its resources toward the provisioning of civilian public goods in an economy, such as infrastructure, education, health, and research and development (R&D) in environmentally efficient technologies.²⁹ This phenomenon takes place both directly and indirectly. The direct effect is that government funds are shifted away from socially beneficial public goods to military goods. The indirect effect is through lower investment and thus a lower growth rate, which is outlined below. A lower growth rate reduces the government's tax income and thus its ability to fund social and public goods.³⁰ While the availability of more and better public goods and higher social capital are beneficial to an economy at all times and places, the benefits of the military goods might only be felt by the public during the times of war and conflict.³¹

Although the lower investment is directly due to government crowding-out, it could also be caused through the following indirect mechanisms:

1. Increased government spending on defense leads to higher budget deficits, which in turn leads to higher interest rates and thus lower investment.³²
2. Increased government spending on defense leads to higher budget deficits, which in turn leads to higher inflation rates. The increased inflation rates consequently discourage investment.
3. Increased government MILEX increase the tax rate, therefore reducing the availability of capital for investment purposes in the private civilian sector.³³

An important note is in order. Although in some specific cases (which are discussed in more detail below) investment in the military sector can have positive effects on the growth of an economy as a whole,³⁴ investment in the civilian sector has a greater impact on growth than does investment in the military sector. Therefore, by investing in the military industry, an economy's higher potential growth rate is not realized and thus there is an absolute trade-off between MILEX and economic growth.³⁵ As a result, it is always the case that MILEX are carried out at

the expense of growth in the civilian private economy, social capital, and public goods.³⁶

Externality and Spillover

Although the above argument that MILEX negatively influence investment in the civilian economy is valid, some exceptions exist. In many countries, the military builds large-scale infrastructural projects, such as roads, bridges, dams, communication and electrical networks, airports, sea ports, and so on. Although the military engages in such activities to expand and facilitate its own militarily oriented operations, such infrastructural projects often have positive spillover effects for the civilian economy as they can be used for civilian purposes (especially during peacetime) in addition to their original military purposes. For example, when the military builds a bridge in a region for strategic purposes, businesses and residents in that region could also use that bridge during times of peace. Furthermore, the military, alongside its investment in various technical and medical fields, is also often engaged in professional training of its personnel in those fields. It is argued that when the highly trained military personnel retire and/or leave the armed forces, the civilian sector can benefit from their professional training and experience, thus positively affecting the civilian sector. As a result, some portion of the MILEX can have positive effects on the growth of an economy due to spillover and Keynesian multiplier effects.³⁷

There are several critiques to the above argument. First, it can be argued that most of the technologies researched and employed in the military sector do not have immediate practical and productive civilian uses. In many cases, civilian use of military technology is employed several decades after its being used by the military. For example, the technologies used in spy planes to make them undetectable by sophisticated radars have no clear practical usage in the civilian sector for the foreseeable future. Second, due to the highly secretive nature of the military industry, many of the technologies developed and used in the military sector are not diffused into the civilian economy until a new superior technology is developed.³⁸ For instance, the Internet technology was developed in the mid-1970s by the US Defense Advanced Research Projects Agency (DARPA) and it did not enter the civilian sector until the late 1980s. As a result of these two factors, the spillover effects of military R&D and investment on society are slowed and hindered. Finally, not all infrastructure developed by the military has civilian economic justification.³⁹ More importantly, as it will be explained later, if such projects were performed by the civilian sector, they would be much more cost-effective, efficient, and free of corruption and waste.

Labor Market

MILEX can often influence the labor market through: (1) shifting investment and production away from the civilian sector to the defense sector; and by (2) providing employment opportunities for the unemployed population.

Because the weapons production industry has a high capital-to-labor ratio in comparison to the civilian sector, an extra unit of capital invested in the civilian sector would increase employment much more than an extra unit of capital invested in the defense sector. Therefore, investment in the military sector has high opportunity costs in terms of employment and leads to higher unemployment rates in the wider national economy.⁴⁰ A simple example is indicative of this fact. The price tag of one F-22 Raptor fighter aircraft currently stands at US\$338 million. The US Air Force bus December 2008 has a contract to purchase 183 such aircraft from Lockheed Martin/Boeing, a bill of approximately US\$62 billion for US taxpayers.⁴¹ The annual average cost for a state or local government in the US to hire an extra person is about US\$82,160, including all benefits and retirement packages.⁴² Thus, with the capital invested for purchasing 183 F-22 fighters, the government could have created at least an additional 20000 jobs for 40 years, while the F-22 project has been able to create only 8400 jobs⁴³ which certainly will not last for 40 years. Therefore, even if we assume that the jobs created for the F-22 project last for 40 years, more than 11000 jobs are lost. Considering that the F-22 is only one of the many thousand such projects in the US military, the negative effect of US MILEX on unemployment in the US is clear. This fact gains increasing importance in light of the widely acknowledged shortage of police officers, teachers, nurses, and other public workers at local, state, and federal levels.⁴⁴

In contrast to the above, it could be also argued that the military sector is a source of employment for many who are not employed by the civilian sector.⁴⁵ It is clear that military expenditures, which lower investment in the civilian sector, are not only directed to weapons production which is highly capital-intensive, but are also used to pay for wages and benefits of the personnel employed by the armed forces. Therefore, higher MILEX could actually increase the employment capacity of the government and/or increase the human capital and living standards of those employed by the military through increased health, educational, and retirement benefits.⁴⁶

The accuracy of the competing arguments above depends on the focus and distribution of increased military expenditures. Indeed, if the increased defense budget is allocated towards increasing the number of armed forces personnel and/or increasing their living standards, then the

later argument holds more ground, and if the increased defense budget is allocated towards production of expensive and sophisticated weaponry, then the first argument is valid. Therefore, one cannot draw a factual conclusion by simply viewing military expenditure numbers. However, by comparing MILEX per military personnel and the average income per capita in an economy, it can safely be claimed that the majority of MILEX are allocated towards non-personnel costs in many countries. For example, in 2005 Saudi Arabia's GDP per capita (at purchasing power parity – PPP) was reported to be US\$15711, while in the same year Saudi Arabia's MILEX per military personnel stood at US\$117460. Assuming that Saudi's median income per capita is close to its GDP per capita (which in reality is much lower than the GDP per capita) and that the Saudi government is compensating its military personnel at Saudi's median income, then it becomes clear that out of US\$117460 MILEX per military personnel, more than US\$100000 is not spent on the military personnel. Even if one assumes that women and children do not earn income in Saudi Arabia and that the average family size is five persons with one breadwinner (increasing average family income to about US\$75000), vast sums are still spent on non-personnel areas. Instead, a large portion of MILEX are channeled toward weapons and military capital production, purchase, and maintenance (and most likely corruption).

Budget, Debt, Money, and Finance

MILEX put an upward pressure on central government expenditures. Higher central government spending, in turn, increases aggregate demand in an economy and thus puts upward pressure on prices, leading to higher rates of inflation.⁴⁷ This is especially true for smaller economies where the size of the MILEX is relatively large in comparison to GDP. Moreover, it is often the case that the central government, in an effort to finance its military expenditures, undertakes debt and/or prints money, both of which fuel inflationary pressures in an economy. Furthermore an increased amount of debt affects the well-being of an economy in the short run as well as the long run through additional channels alongside the inflation channel.⁴⁸ First, by increasing the central government's obligation for interest payments, a higher amount of debt would shift available government funds from productive investment across the economy towards interest payments on the acquired debt. Second, debt shifts today's burdens of fiscal irresponsibility to future generations and will reduce their often scarce capital resources, negatively affecting an economy in the long run.⁴⁹ Third, high levels of debt in an economy increases the risk of investment, discouraging foreign investment. Again, this is especially true for smaller

economies where the debt to GDP ratio is high. Finally, high amounts of debt lead to increases in interest rates, which in turn increases the cost of capital to the private sector, thus discouraging investment.

Consumption, Aggregate Demand, Aggregate Supply

MILEX can stimulate aggregate demand in an economy, with positive or negative fallouts. If the economy in question is experiencing idle capacity and/or underconsumption, the increased aggregate demand can stimulate capacity utilization and output, leading to at least short-term higher growth rates, even if not in the long run.⁵⁰ This line of reasoning is only valid for domestic military production and/or payments to military personnel. When the majority of MILEX are allocated to imports of military equipment, domestic aggregate demand and thus GDP are not stimulated. Furthermore, such imports reduce the availability of foreign currency in an economy, which reduces the ability of domestic firms to import the necessary capital (physical, intellectual, and human) to support and expand their operations.⁵¹ Even if most of a country's MILEX are allocated to domestic military production, higher aggregate demand in economies that are already operating at or close to maximum potential output or utilization would put upward pressure on prices and lead to higher inflation rates across the economy.

It may be useful to highlight the effects of high inflation rates on an economy's well-being. Although there is disagreement about what level of inflation is harmful for the health of an economy,⁵² economists generally agree that, *ceteris paribus*, higher inflation rates are harmful.

First, higher inflation means higher volatility in prices, which means higher volatility in supply and demand schedules, leading to increasing inefficiencies in an economic system. In today's modern economic system, where prices act as the signaling mechanism based upon which demand and supply of goods are allocated, high rates of inflation (which mean rapidly changing price signals) lead to inefficient allocation and distribution of resources, and thus entail a welfare loss.

Second, higher inflation lowers government tax revenues, which are usually collected in nominal terms. In order to compensate for this loss, the central government becomes more dependent on seigniorage revenue (revenue gained from printing money) to finance the losses of its tax base due to inflation. Because increasing the money supply in an economy leads to yet higher inflation rates, which in turn forces the government to increase the money supply, this vicious cycle can continue if the government does not adopt another way to finance its expenses and shift away from seigniorage income. The analysis of economic theory and the Latin

American hyperinflation experiences shows that such a vicious cycle is detrimental to an economy's health.

Third, investment falls dramatically in hyperinflation economies because the potential lenders are discouraged from investing as they fear they might experience losses in real terms. Furthermore, higher rates of inflation reduce the saving propensity among the public. If the public expects higher prices tomorrow, they would rather spend all their income or wealth today rather than saving it for future consumption. In turn, lower saving and investment leads to lower levels of output growth and employment and thus lowers welfare for the economy.⁵³

Furthermore, based on adaptive expectation theory of behavior of economic agents, constantly high rates of inflation at time t would create yet higher rates of expected inflation at time $t+1$ and thus push investment and lending activities to even lower levels.

Fifth, capital flight is yet another consequence in an economy inflicted by high inflation rates. In an effort to protect their wealth and assets for future consumption, people convert out of the domestic currency (which is experiencing inflation) into foreign currencies that are more stable. This process devalues the domestic currency's already falling value, exacerbating the inflationary process.

Finally, in an effort to control inflation the monetary authorities are encouraged to increase interest rates, leading to lower growth and higher unemployment.⁵⁴ Although there are a number of additional negative consequences to high inflation rates, the above list is enough to indicate that high inflation rates, which could be caused by high military expenditures, could lead to lower economic efficiency and lower welfare across the economy.⁵⁵

Allocative and Productive Efficiency

Increasing expenditures in the domestic military industry leads to various types of allocative inefficiencies, some of which are outlined below.

First, the demand for military goods is price-inelastic while the demand for most civilian goods is price-elastic. Therefore, it is often the case that governments subsidize military equipment at the expense of the civilian goods.⁵⁶

Second, by increasing military R&D and the technical innovation budget, the military sector attracts highly trained and qualified professionals from the civilian sector into the military R&D sector. This is harmful for innovation and technical progress in the civilian sector of the economy, negatively affecting long-term welfare and general living standards.⁵⁷

Third, due to the secretive nature of the military production industry

and its immense capital requirement, the military production industry is often characterized by a state monopoly or private market oligopolies. Both of these structures lack the necessary competitive forces to ensure the efficient usage of scarce resources, which are derived from national wealth at the cost of public welfare.

Fourth, scarce capital resources can lead to much more economic growth if invested in the civilian sector than if invested in the military sector because:

1. As explained earlier, the capital invested in the civilian sector can create more employment opportunities than if invested in the military sector.
2. Investment in civilian public projects such as health, education, and infrastructure increase social and human capital, which serve as prerequisites for sustained long-run economic growth in an economy.⁵⁸
3. Investment in any civilian sector (public or private) has spillover effects on other sectors. This effect is much lower or non-existing in the military sector due to its secretive structure and the low degree of relevance of military technology to the civilian sector.

Therefore, one can conclude that significant allocative inefficiencies are associated with any amount of capital invested in the military industry,⁵⁹ and thus investment in the civilian sector of the economy yields higher returns and benefits than investment in the military industry.

Finally, due to a strong political apparatus in support of military expenditures, especially in developing economies, the civilian sector is often in a weak position to compete with the military sector for access to financing and other resources.⁶⁰ This is also a result of the immense degrees of corruption involved in military contracts.

Corruption

Corruption is a major cause of economic inefficiency and underdevelopment because public resources are used for personal and political party gains.⁶¹ Specifically, recent studies confirm the hypothesis that economic growth and development are negatively affected when MILEX and corruption are mixed together. This is mainly due to the fact that corruption motivates upward biases in military expenditures.⁶² This bias is in turn due to the fact that typical military contracts are on the scale of millions and billions of dollars. Therefore, even a portion of 1 percent personal gain from such contracts is a considerable sum by any standard. Consequently, MILEX are much higher when corruption exists, thus leading to higher

Table 2.4 Top ten defense prime contractors (US\$ billion)^a

Rank and company	FY 2006	FY 2005	% change 2005–06	% change 2001–06
1. Lockheed Martin	26.6	19.4	+36.8	+81.2
2. Boeing	20.3	18.3	+10.9	+52.1
3. Northrop Grumman	16.6	13.5	+23.0	+222.6
4. General Dynamics	10.5	10.6	-0.9	+53.3
5. Raytheon	10.1	9.1	+10.9	+80.6
6. Halliburton	6.1	5.8	+5.2	+1325.2
7. L-3 Communications	5.2	4.7	+10.6	+950.5
8. BAE Systems	4.7	5.6	-16.1	+442.3
9. United Technologies	4.5	5.0	-10.0	+36.4
10. Science Applications International Corp.	3.2	2.8	+14.3	+83.6

Note:

- a. Berrigan, Frida and William D. Hartung “Top Pentagon Contractors, FY 2006: Major Beneficiaries of the Bush Administration’s Military Buildup,” World Policy Institute, 2007, 3.

Source: Berrigan and Hartung (2007), p. 3.

inefficiencies in the allocation of scarce capital resources and channeling of resources toward private gains.

It is a well-known but often overlooked fact that many US government officers have previous and current professional and/or economic links with the US arms industry. Two cases prove this point:

1. Thirty-two top policymaking positions in Bush’s first administration were filled by “executives, paid consultants, or major shareholders of weapons contractors.”⁶³
2. Before becoming Vice-President, Cheney was the Chief Executive Officer (CEO) of Halliburton, and still receives annual deferred compensation of about US\$180 000 from it.⁶⁴ Furthermore, in Summer 2008, he held about US\$10 million worth of Halliburton stock options.⁶⁵ Table 2.4 coincidentally indicates that Halliburton experienced the largest growth rate (1325 percent) in Pentagon contracts between the fiscal years 2001 and 2006.

Such connections between US government officials and the US arms industry are ripe ground for corruption. It is debatable whether these officials were and are able to give US national interests a higher priority than their own personal financial interests.

Furthermore, recent allegations regarding Prince Bandar of Saudi Arabia and his receipt of bribes from the British BAE Systems in the Al-Yamamah arms deal is another example of such large-scale corruption that exists between government officials and the military industrial complex. On June 7, 2007, the BBC reported that Prince Bandar bin Sultan, the son of the Saudi Defense Minister and the ex-Saudi Ambassador to the US, received up to £120 million a year for more than a decade from BAE because he negotiated a more than a £40 billion deal between BAE and Saudi Arabian government.⁶⁶

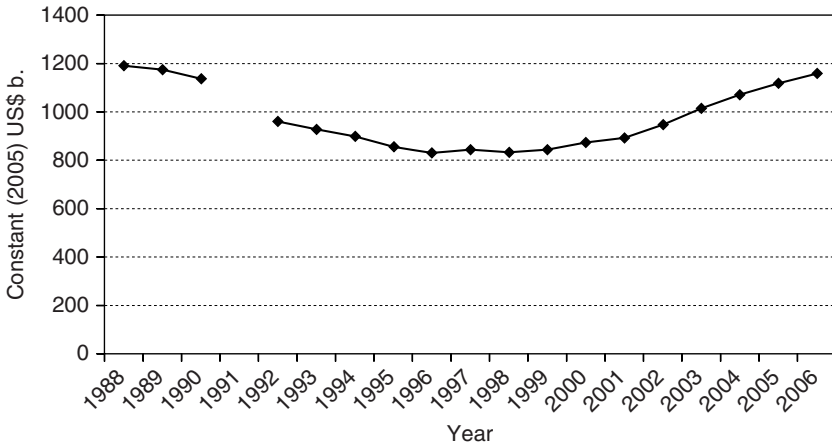
Moreover, foreign aid to economically underdeveloped nations for the purpose of improving the education and health sectors is often funneled into the military sector, wasting limited aid resources.⁶⁷

As it will be argued in Chapter 7, the issue of such corruption becomes even more serious in developing countries, especially oil-rich nations, where the tax base is weak and thus the government is not accountable to the public on how the income from the oil revenues is allocated and used.

Security, Conflict, and War

A well-known belief among development economists is that political instability hinders economic growth and development. Based on this belief, one could argue that increased MILEX that lead to higher military preparedness increase the political stability of a country by decreasing the probability that the government would be overthrown. Therefore, higher MILEX may have positive effects on economic development by increasing the political stability of a system.⁶⁸ This argument should be considered in light of other reasoning that higher MILEX in any given region increase the probability of armed conflict in that region, and thus reduce the degree of stability. This is especially the case where there is no asymmetry of power and all nations in a given region have more or less equal military power. When nations build up their arms, their tolerances toward internal and external rivals decrease. As a result, the probability of minor conflicts being converted into full-scale bloody wars (and civil wars) increases.⁶⁹ In a study, Sample finds that: “over the period from 1816 to 1992, disputes between states engaged in mutual military buildups were 232 percent more likely to escalate than disputes where the states were not engaging in such a buildup.”⁷⁰ Therefore, increased MILEX in the form of an arms race increase the frequency of wars and thus increase the degree of destruction inflicted upon human life, physical capital, and the environment, all of which have detrimental effects on the economic well-being of a country, region, and the world.⁷¹

The issues of security and the arms race deserve some attention. Although it was discussed earlier that MILEX could have negative effects



Source: Staelenheimer et al. (2008).

Figure 2.1 World Military Expenditures, 1988–2006

on the welfare of a society through various channels, the subject of what leads to higher MILEX in a country and/or region was not analyzed. It is commonly agreed that in a world where one's life and capital can be threatened in a matter of seconds, higher MILEX arise from the need to ensure security against all possible hostile actions from rivals. Therefore, when a country increases its military capabilities, other nations in the world, friend or foe, feel that their security is threatened and are thus provoked in response to increase their military capabilities. Such a vicious cycle continues indefinitely, leading to higher and higher degrees of military build-up and thus expenditures in the region and around the globe. Accordingly, this vicious cycle leads to increasing tensions in the international sphere. For example during the Cold War, the US–USSR rivalry caused global MILEX to rise. Although global MILEX declined from the post-Cold War era until the mid-1990s, they rose again to Cold War levels in 1998–2007. This global increase has been the result of the emergence of China and the revival of Russia as a US military rival, as well as increasing tensions in South Asia and the Middle East.

2.4 CONCLUSION

In this chapter we have argued that although MILEX can have positive spillover effects on the civilian sector of an economy through professional

training of personnel, construction of infrastructure, and increased aggregate demand, such benefits are minimal when compared to the negative influences of MILEX on the efficient workings of an economy.⁷² Lower investment in the civilian sector of the economy, lower expenditures on health and education, higher civilian unemployment, allocative inefficiencies, lower civilian R&D, higher budget deficit, higher debt, higher inflation rates, corruption, increased chance of armed conflicts, and thus higher rates of destruction of human life and physical capital were mentioned as some of the possible negative economic effects of military expenditures. Furthermore, it was argued that MILEX in the form of military imports hinder the economic performance and growth of an economy. Finally, it must be mentioned that in cases where there is a positive relationship between higher MILEX and higher rates of economic growth, it could very well be the case that higher economic growth rates would lead to higher MILEX and not the other way around. The direction of causality does vary from country to country and from time to time.⁷³ Our overall conclusion is that on balance MILEX have a negative effect on national welfare through numerous channels and have little to no economic justification.⁷⁴ Even if there are any economic benefits to military expenditures, they are minimal, short-term, and specific to certain economic conditions.

NOTES

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 4. For a detailed discussion of culture and ideology affecting MILEX see Payne, James L., *Why Nations Arm*.
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 8. Chowdhury, Abdur R., “A Causal Analysis of Defense Spending and Economic Growth,” supra n. 2.
 9. Smith, R., “The Demand for Military Expenditure,” *Economic Journal*, Vol. 90, pp. 811–20; Smith, R., “The Demand for Military Expenditure,” in K. Hartley and T. Sandler, *Handbook of Defense Economics*, pp. 71–87.
 10. Dunne, P. and S. Perlo-Freeman, “The Demand for Military Spending in Developing Countries,” supra n. 1.
 11. Ibid.
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3. Military expenditures in the Persian Gulf

3.1 INTRODUCTION

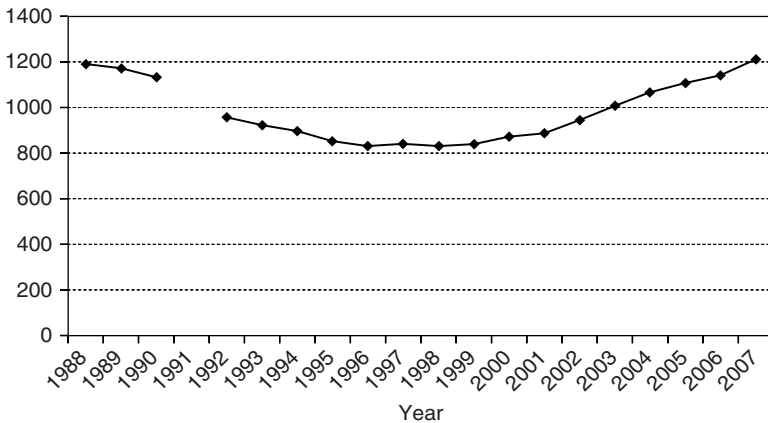
Military expenditures are one of the earliest expenditures carried out by countries in the history of mankind. Standing at US\$1214 billion (2.5 percent of global gross domestic product), the world's military expenditures in 2007 reached their highest level in absolute real terms since 1988,¹ while the US alone accounted for about 45 percent of this spending.² Figure 3.1 confirms the fact that global military expenditures have been on a rising trend since 1998, following a decade of fall during 1988–98. Specifically global military expenditures experienced a fall of more than 30 percent between 1988 and 1998, and then increased by more than 45 percent from 1998 to 2007.

As can be seen in Table 3.1, although the Middle East and North Africa (MENA) region accounted for only 7.1 percent of global military expenditures in 2007, the MENA region can be considered as one of world's most heavily militarized regions given the fact that it has only 4.7 percent of the world's population. This claim is further supported by the fact that MENA region's 1988–2005 average annual military expenditure as a percentage of its gross domestic product (GDP) stood at 6.11 percent while the global figure averaged at 2.96 percent.

Moreover, as indicated in Table 3.2, when measured in PPP (purchasing power parity) dollar terms, two Persian Gulf countries (Iran and Saudi Arabia) in 2007 were among the top 15 military spenders in the world.

An understanding of the intensity and growth rate of MILEX in the Persian Gulf is crucial because of several economic, political, socio-political, religious, and historical reasons:

1. Geopolitical. As emphasized by Zbigniew Brzezinski, the US National Security Advisor to President Jimmy Carter, the control of the Middle East and Central Asia is a necessary condition towards global hegemony.³
2. Energy. The Persian Gulf region is home to about 60 percent of the world's proven oil reserves and 40 percent of the world's proven



Source: Staelenheimer et al. (2008).

Figure 3.1 1988–2007 world military expenditures (constant 2005 US\$ billion)

natural gas reserves. Furthermore, more than 20 percent of the global oil supply and 40 percent of global seaborne traded oil is transported through the Strait of Hormuz,⁴ located between the Persian Gulf and the Gulf of Oman and considered to be world's most strategic strait. The narrowest point of the Strait of Hormuz is about 21 miles, permitting only one incoming and one outgoing shipping lane into the Persian Gulf. Finally, more than 17 percent of US oil imports are from the Persian Gulf.

3. Distribution of wealth. Per capita oil and gas reserves vary dramatically from country to country in this region. For example, Qatar and the UAE (or more correctly Abu Dhabi) are oil and gas "rich," while countries like Iran could be considered energy "poor" in comparison. This highly uneven distribution can be a source of instability.
4. Social and political. Persian Gulf countries, excluding Iran since 1979 and Iraq since 2003, are characterized by kingdoms or sheikdoms. Bahrain's majority Shia population is ruled by minority Sunni leaders. With more than 80 percent of its population composed of immigrant workers most of whom are unskilled labor,⁵ the UAE faces increasing social tensions in its class and racially based social structure. In Kuwait there are increasing frictions between the popularly elected parliament and the emir (ruler) of Kuwait, Sheikh Sabah al-Ahmad al-Sabah, who dissolved parliament twice from the beginning of his rule in 2006 to 2008. In Iran, inflation is well above 25 percent

Table 3.1 1988–2007 world and regional military expenditures (constant 2005 US\$ billion)

Region	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Africa	12.1	13.1	12.6	11.4	10.7	10.6	11.7	11.1	10	10.3	11.1	12.3	13	13.2	14.4	14	14.8	15.3	15.8	16.8
North	3.1	3.9	3.2	3.3	3.6	3.7	4.3	4.2	4.2	4.4	4.6	4.6	5	5.2	5.6	5.7	6.2	6.5	6	6.6
Sub-Saharan	9	9.3	9.4	8.1	7.1	6.9	7.4	7	5.8	5.8	6.5	7.7	8	8	8.9	8.3	8.6	8.8	9.7	10.1
Americas	525	520	493	433	457	437	414	397	375	376	367	367	382	387	431	481	522	548	559	598
Caribbean	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Central	2.4	2.6	2.6	2.8	3.1	3.2	3.9	3.3	3.4	3.4	3.5	3.7	3.9	3.7	3.6	3.6	3.4	3.4	3.6	4
North	499	494	473	416	438	416	391	370	350	347	340	341	354	357	399	453	493	516	525	562
South	23.4	23.3	17.7	14.1	14.9	17.7	18.7	23.4	21.7	25.2	23.3	22.1	23.9	26.7	27.5	24.6	25.8	28.1	30.1	32
Asia & Oceania	102	106	110	112	118	121	122	124	128	130	132	135	139	146	153	160	166	176	186	200
Central Asia	..	..	..	..	0.6	0.7	0.5	0.5	0.5	0.6	0.6	0.5	..	0.6	..	0.8	..	..	..	..
East Asia	76.8	80.2	83.8	86.4	91.7	92.9	93.5	95.1	99	100	100	101	104	110	116	122	127	132	140	152
Oceania	10.7	10.5	10.4	10.5	10.7	11	11.1	10.8	10.7	10.9	11.4	11.9	11.8	12.2	12.7	13.2	13.8	14.3	15.1	16.4
South Asia	15	15.7	15.8	15.3	15.1	16.6	16.7	17.5	17.6	18.8	19.6	21.9	22.8	23.5	23.6	24.2	25	28.2	29.7	30.7
Europe	514	498	468	..	326	314	308	283	282	283	276	280	287	288	295	302	306	306	311	319
Central	16.4	14.9	14.3	11.1	12.9	14.7	15.4	15.4	15.1	15.5	15.1	14.7	14.8	15.5	15.8	16.2	16.3	16.8	17.1	18
Eastern	218	203	171	..	43.5	38.7	38.8	23.7	21	23.6	15.6	15.9	21.4	23.3	25.8	27.6	28.9	32	35.6	40.8
Western	279	280	282	280	270	261	254	244	246	244	245	250	251	249	253	258	261	257	258	261
Middle East	41.1	39.1	53	59.5	48.7	45	43.5	40.8	40.2	44.5	48.8	48.1	54.3	56.7	54.3	56	60.3	67.2	73.9	79
World	1195	1175	1136	..	960	928	899	855	835	844	834	843	875	892	947	1013	1071	1113	1145	1214
Change (%)	..	-1.6	-3.3	..	..	-3.3	-3.1	-4.8	-2.4	1.1	-1.1	1	3.8	2	6.2	7	5.7	4	2.9	6

Source: Information from the SIPRI Arms Transfers Database, <http://armstrade.sipri.org>.

Table 3.2 2007 top 15 countries in military expenditures (constant 2005 PPP US\$ billion)^a

Rank	Country	Military expenditures
1	USA	547.0
2	China	[140.0]
3	Russia	[78.8]
4	India	72.7
5	UK	54.7
6	Saudi Arabia	52.8
7	France	47.9
8	Japan	37.0
9	Germany	33.0
10	Italy	29.6
11	South Korea	29.4
12	Brazil	26.7
13	Iran	22.1
14	Turkey	16.5
15	Taiwan	15.8

Note:

[] = estimated figure.

^a The figures in PPP dollar terms are converted at PPP rates (for 2005), based on prices comparisons of the components of GDP.

Source: Staelenheim et al. (2008).

per annum, the unemployment rate is 20–25 percent (depending on varying statistical sources), and 60 percent of the population is under the age of 30. As a result, Iran has encountered a dramatic generational transformation which has led to many internal political, social, and economic challenges. Saudi Arabia is also facing population pressure as its 0–14 years age group accounts for more than 38 percent of its population, while at the same time 35 percent of its labor force are expatriate workers. Finally, with unemployment running at 13–25 percent (depending on varying statistical sources)⁶ the Saudi Kingdom is facing increasing unpopularity among its young population. Finally, Iraq has become a failed state that is held together through the exercise of immense military force by Americans and the American-trained Iraqi army. The absence of basic public security; sectarian violence; and dramatically weak and unstable economic and political structures are only some of the problems that Iraq is faced with on a daily basis.

5. Religious. The Persian Gulf region is home to Islam's most sacred sites:

- a. The holy cities of Mecca and Medinah, which are sacred to all Muslims regardless of sect, located in Saudi Arabia.
- b. The holy cities of Najaf, Karbala, and Kadhemyyn in Iraq and the holy city of Mashad in Iran, which are sacred to Shiite Muslims and respected by moderate Sunni Muslim.

Furthermore, the Persian Gulf contains the majority of Shiite Muslims in the world, a minority among the global Muslim population. Considering the fact that the Persian Gulf is simultaneously the birth-place and stronghold of radical anti-Shiite Wahhabism, the Wahhabi–Shiite tension has been on the rise in the region. The bombings of Shiite sacred sites in Iraq are evidence of the rising tension between Shia and radical Wahhabi Muslims in the region.

6. Historical. The history of the Persian Gulf is filled with extra-territorial conflicts as well as internal civil strife. The legacy of such conflicts and tensions in the Persian Gulf is vivid among its rulers and population and plays a critical role in policies adopted by the governments of the region. Moreover, territorial disagreements in the region, which have been inherited from the colonial rule of Britain in the region, have often led to tensions and disputes between Persian Gulf countries. One such example is the four-decade-long dispute between Iran and the UAE over the ownership of the three strategic islands near the Strait of Hormuz, Abu-Musa and the two Tumb Islands. Similarly, the boundaries between Qatar and Saudi Arabia have also been a source of dispute amongst these countries.

Any of the dynamics mentioned above can independently contribute significantly to the instability of the region. The combinations of these factors have, therefore, made the Persian Gulf region even more unstable and volatile. Furthermore, the geopolitical and energy-related dynamics of the Persian Gulf have attracted the attention and interest of extra-regional actors since the eighteenth century. The Persian Gulf's history is characterized by physical and political interventions and the presence of foreign powers, contributing significantly to the existing regional political and social complications. Specifically, Britain and the United States have held influential roles in the region, while other powers such as France and Russia have attempted to gain some level of influence in the Persian Gulf. After the demise of the Soviet Union in 1991, the emergence of China as a global economic and military power has made it a key player in the Persian Gulf's affairs. The fact remains that, due to its importance in geopolitical and energy-related issues, global economic and military powers have significant vested interests in this region, which has contributed to regional instability. Given these facts (see also Chapter 7 for further discussion),

militarization of the Persian Gulf region has a great deal of significance for global economic and political stability.

3.2 DATA, DEFINITIONS, AND METHODS

Since military expenditures and militarization are defined, measured, and organized differently by various authors and institutions, it is germane to present a clear description of what is meant by military expenditures and how the process of militarization and its intensity is measured throughout this book. Table 3.3 shows the basic indicators used in this chapter alongside their respective sources and detailed definitions. These variables serve as the foundation upon which several other important indicators are derived and analyzed.

In order to have a more accurate cross-regional comparison, the time period 1988–2005 was selected for analysis because not all countries and regions have recorded data for all the variables of interest before 1988 and after 2005. We are aware that in order to acquire a more complete picture of Persian Gulf military expenditures and their social, political, and economic causes and effects one has to expand the period of analysis to the early 1970s. Therefore, even though the span of presented data is from 1988 to 2005, we will make references to various Persian Gulf dynamics in our qualitative analysis, including military expenditures during the 1970s and 1980s.

It must also be mentioned that because some countries of the Persian Gulf do not have recorded data for all years under analysis, not all the countries of the Persian Gulf are covered in our discussion. We only cover Bahrain, Iran, Kuwait, Saudi Arabia, and the UAE and exclude Iraq, Qatar and Oman. As a result, this report refers to the first set of countries as the “Persian Gulf” unless stated otherwise. Although rough estimates of Iraq’s and Qatar’s military expenditures are available or could be interpolated or extrapolated, we avoided including such data in this chapter because when Iraq’s and Qatar’s estimates were included, the results were even more supportive of our conclusions. In Chapter 4 we allude to rough estimates of Iraq’s and Qatar’s data to afford additional perspective.

Finally, the collected data are presented in level, growth, percentage or share, per capita, and intensity formats. Before we embark on presenting the data, a few words are necessary regarding the format of data presentation:

1. Since military expenditures are highly volatile, it would be inaccurate to analyze their growth rate based on levels of two years because the

Table 3.3 Sources and descriptions of indicators

Indicator	Source	Description
Military expenditures	SIPRI	Expenditures on “a. the armed forces, including peace keeping forces, b. defense ministries and other government agencies engaged in defense projects, c. paramilitary forces when judged to be trained, equipped and available for military operations, d. military space activities.” It includes expenditures on “a. personnel, b. operations and maintenance, c. procurement, d. military research and development, e. military construction, f. military aid.” ^{3a} Presented in constant 2005 US\$.
GDP	WDI 2007	Gross domestic product: “GDP at purchaser’s prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.” ^{3b} Current US\$ and constant 2000 US\$ values are taken from WDI 2007 and then used to calculate the constant 2005 US\$.
Population	WDI 2007	“Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin.” ^{3c}

Table 3.3 (continued)

Indicator	Source	Description
GCE	WDI 2007	General government final consumption expenditures: “General government final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation.” ^d Current US\$ and constant 2000 US\$ values are taken from WDI 2007 and then used to calculate the constant 2005 US\$.
Military personnel	IISS Military balance	“Armed forces personnel are active duty military personnel, including paramilitary forces if the training, organization, equipment, and control suggest they may be used to support or replace regular military forces.” ^e

Notes:

- a. Staelenheim et al. (2008), <http://www.sipri.org/>.
- b. World Bank, *World Development Indicators 2007*.
- c. Ibid.
- d. Ibid.
- e. Ibid.

Source: Staelenheim et al. (2008).

result is heavily dependent on whether the levels of military expenditures were high or low for the initial and final year. Therefore, the growth rates for military expenditures and other related indicators are calculated for each year from 1989 to 2005 and an average of these annual growth rates is examined. This affords a better picture of the general growth rate of military expenditures and other related variables during 1988–2005.

2. The description of the intensity indicator is best done through an example. For country X, the intensity of military expenditures to population in global framework is calculated as follows:
 - a. For a given country X, calculate its share of global military expenditures and call this share *A*.
 - b. For country X, calculate its share of global population and call this share *B*.
 - c. Divide *A* by *B*; we refer to this ratio result as the intensity of military expenditures to population for country X in a global framework.

For example, an intensity value of 1 indicates that while country X is responsible for *M* percent of global military expenditures, it also holds *M* percent of global population. Therefore intensity would increase if country X's share in global military expenditures increases and/or its share in global population decreases. The same could be applied to intensity of gross domestic product (GDP) to population, military expenditures to GDP, military imports to population, military imports to military expenditures, and so on.

3. In an effort to rank different countries and regions based on a given indicator, the average over the period 1988–2005 for the indicator is used.
4. There may be an error in the World Development Indicators (WDI's) GDP indicator for the MENA region, therefore we calculated MENA's GDP by using the GDP for each country in the MENA region.

3.2 PERSIAN GULF MILITARY EXPENDITURES: A REGIONAL PERSPECTIVE

Although Persian Gulf military expenditures were declining for the first half of the 1990s, they were continuously increasing during most of the 1996–2005 period, with the highest growth rates seen after 2002. Figure 3.2 depicts the military expenditures for Persian Gulf countries during 1988–2005.

First and as to be expected, the expenditures of all countries move up

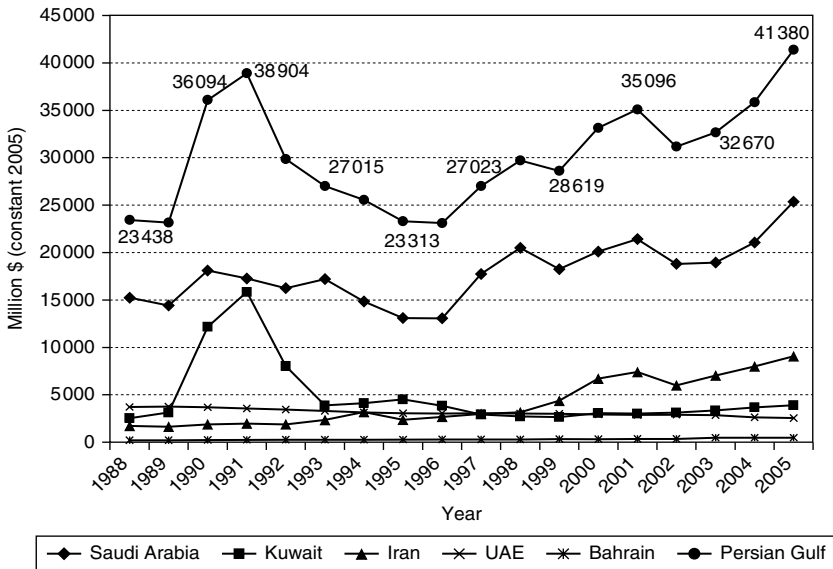
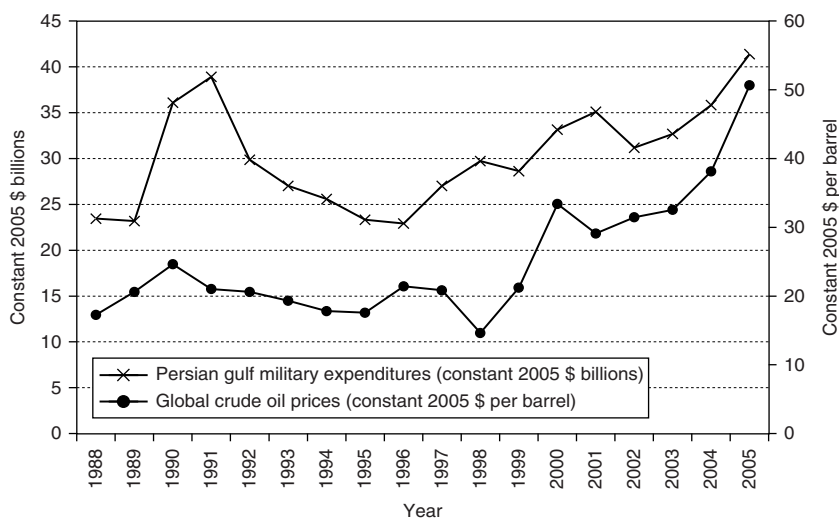


Figure 3.2 1988–2005 Persian Gulf military expenditures

and down more or less in unison. This could be that oil finances military expenditures and that each country feels the need to keep up with the others. As can be seen, Saudi Arabia's military expenditures constitutes the major part of Persian Gulf military expenditures, while other Persian Gulf countries have military expenditures that are comparable to one another. It further becomes immediately clear from this figure that the sudden jump in the Persian Gulf's military expenditures during 1990–92 was largely caused by Kuwait's sudden increase in its defense budget. During the eight years of destructive war with Iran, which ended in 1988, Saddam Hussein's regime faced increasing levels of debt to Saudi Arabia and Kuwait which financially supported Iraq in its war efforts against Shia Iran, which was viewed as the common enemy of the majority Sunni Arab nations of the Persian Gulf region.

After the end of war with Iran, the pressures of debt and other tensions between Iraq and Kuwait led to an antagonism between Iraq and Kuwait, eventually triggering Saddam Hussein's invasion of Kuwait in 1991. This in turn led to a large jump in Kuwait's military expenditures and to a lesser degree in Saudi Arabia military expenditures. It is clear that if Kuwait's sudden increase in defense expenditures between 1990 and 1992 is removed from the data, one could see that the Persian Gulf's military expenditures were more or less constant from 1988 to 1996, and



Source: IEA (2007).

Figure 3.3 1988–2005 crude oil prices and Persian Gulf military expenditures

then started to grow thereafter. This finding is not surprising because as will be discussed in more detail in Chapter 7, Persian Gulf military expenditures track oil prices very closely, and as seen in Figure 3.3 crude oil prices fluctuated around US\$30 until 1999 and thereafter started to grow rapidly. Furthermore, this figure points to the fact that Persian Gulf military expenditures have a strong correlation with one year lag of crude oil prices, meaning that if oil prices rise/fall in year t , military expenditures rise/fall in year $t+1$.

Among the Persian Gulf nations, Saudi Arabia is by far the largest military spender, while Kuwait, Iran, and the UAE have comparable military expenditures, with Bahrain having the smallest expenditures (Figure 3.4).

Over the period of 1988–2005, Saudi Arabia on average accounted for about 60 percent of the Persian Gulf’s total military expenditures (Table 3.4). It is interesting to note that over the same period Kuwait’s share stood at 16 percent while Iran accounted for only 13 percent of total military expenditures in the Persian Gulf region.

Table 3.5 presents the growth rate of military expenditures for each Persian Gulf country. The reasons for Iran and Kuwait’s significantly larger growth rates are that these two countries have tried to replenish their stock of depleted military equipment after their conflicts with Iraq,

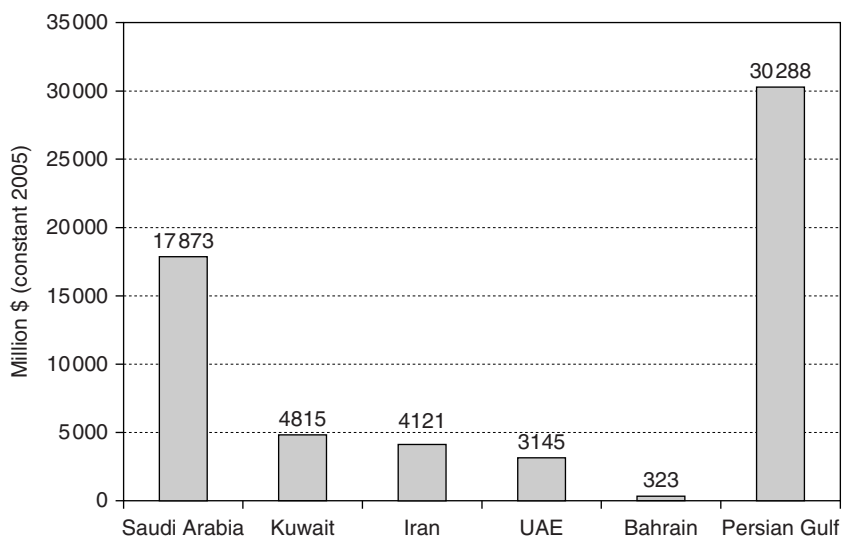


Figure 3.4 1988–2005 average annual Persian Gulf military expenditures

Table 3.4 1988–2005 average annual shares in Persian Gulf military expenditures

Shares in Persian Gulf military expenditures (%)	1988–2005 mean
Saudi Arabia	59.40
Kuwait	15.54
Iran	13.13
UAE	10.81
Bahrain	1.07

Table 3.5 1988–2005 average annual growth rates of military expenditures

Growth rate of military expenditures (%)	1988–2005 mean
Kuwait	14.56
Iran	12.00
Bahrain	5.28
Saudi Arabia	3.94
UAE	-2.15

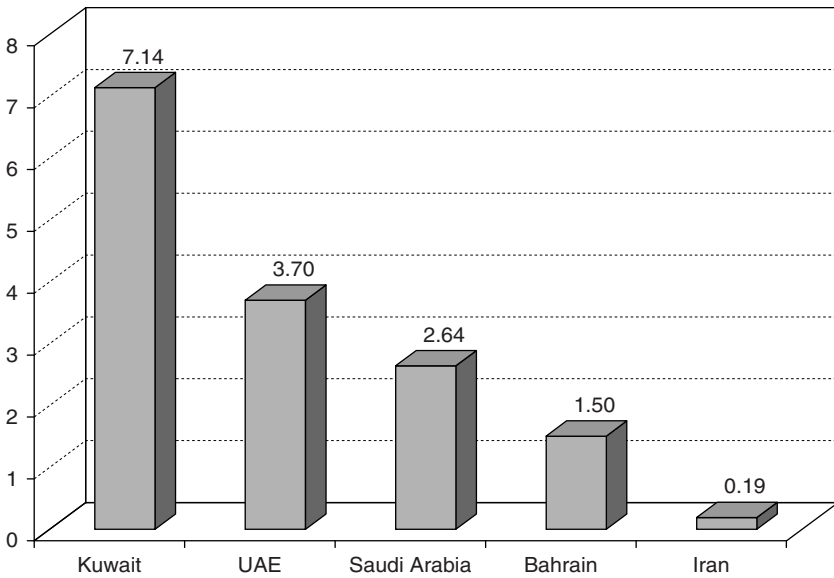


Figure 3.5 1988–2005 average annual intensity of military expenditures to population

and they started with a smaller base of military expenditures than Saudi Arabia.

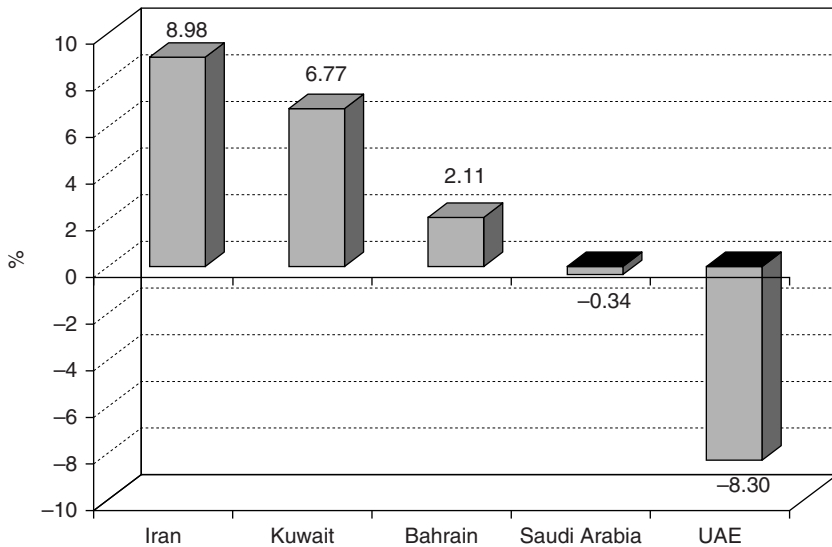
This fact leads to interesting results in terms of the intensity of military expenditures in the Persian Gulf region. Kuwait, while comprising only 2.2 percent of the Persian Gulf's population, accounts for 15.5 percent of its total military expenditures, giving it the highest military expenditure to population intensity indicator in the region (Figure 3.5). On the other hand Iran, because it accounts for about 70 percent of the Persian Gulf's population and only about 13 percent of its military expenditures, has on average the lowest intensity indicator between 1988 and 2005.

The Arab countries of the Persian Gulf clearly have much higher military expenditures to population intensities. The same pattern is also visible when the military expenditures to GDP intensity are analyzed (Table 3.6).

However, a look at the growth rates of these two intensity indicators for military expenditures points to the fact that although Iran has on average had the lowest intensity indicators, its intensity of military expenditures to population and GDP is on the rise. Figures 3.6 and 3.7 indicate that compared to other economies of the Persian Gulf, Iran's share in the Persian Gulf total GDP and population has on average been decreasing faster

Table 3.6 1988–2005 average annual intensity of military expenditures to GDP

Intensity of military expenditures to GDP	1988–2005 mean
Kuwait	1.51
Saudi Arabia	1.27
UAE	0.76
Bahrain	0.53

*Figure 3.6 1988–2005 average annual growth rate for intensity of military expenditures to population*

and/or its Persian Gulf share of military expenditures has been increasing faster, leading to the largest positive growth rate for its intensity indicators. The UAE's intensity indicators have been decreasing over 1988 to 2005, indicating that the share of the UAE's military expenditures has been declining and/or its share of GDP and population has been rising faster.

Two notes are in order here regarding the growth rate of intensity indicators. First, in 1988–2005, Iran's average annual population growth rate declined significantly to about 1.7 percent (Table 3.7), while other Arab countries' proportion growth rate stayed well above 2.5 percent. Therefore, Iran's share in the Persian Gulf total population has been

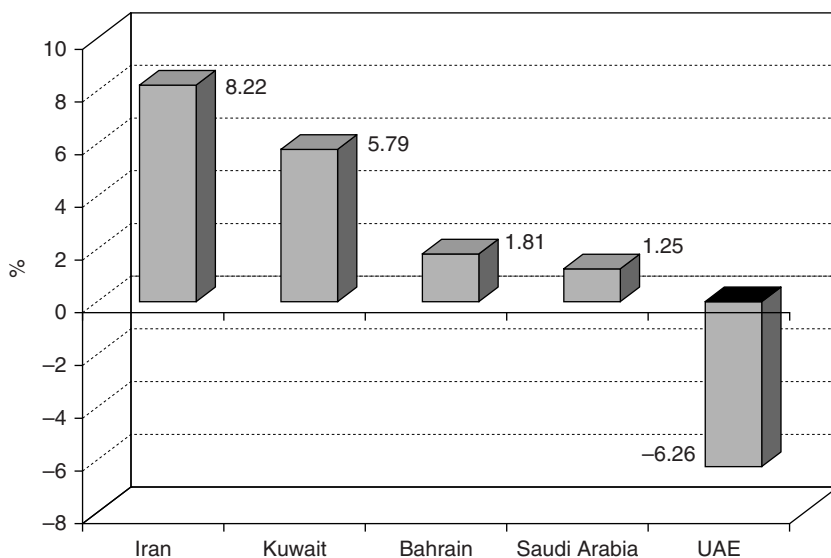


Figure 3.7 1988–2005 average annual growth rate for intensity of military expenditures to GDP

Table 3.7 1988–2005 average annual population growth rate

Annual population growth rate (%)	1988–2005 mean
UAE	5.75
Kuwait	3.69
Bahrain	2.77
Saudi Arabia	2.69
Iran	1.77

declining in 1988–2005, contributing to higher growth rates for military expenditures to population intensity. Similarly, the UAE’s share of the Persian Gulf total population has been rising faster than other Persian Gulf nations, contributing somewhat to its negative growth rate for intensity of military expenditures to population. Second, during Iran’s eight-year war with Iraq, Iran’s military stocks were dramatically depleted. Furthermore, the continuous threat from the presence of the US Navy in the Persian Gulf and hostile relations with Israel have prompted Iran’s military expenditures to grow much faster than its GDP, leading to higher growth rates for military expenditures to GDP intensity. As will become clear in Chapter 6, Iran’s expenditures

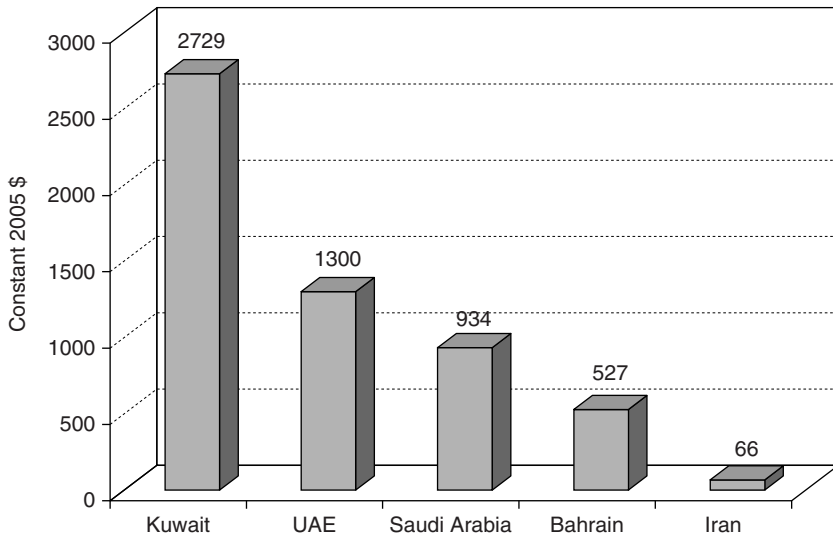


Figure 3.8 1988–2005 average annual military expenditures per capita

on military equipment are not only in the form of imports, but also Iran has been able to develop a relatively strong domestic military industry compared to other Persian Gulf nations which only import military equipment.

At this point, it may be helpful to look at military expenditures as a percentage of national GDP and income per capita levels. As is evident from Figure 3.8, Kuwait has the highest average annual military expenditures per capita, about double the figure for the UAE, triple that of Saudi Arabia, more than five times that of Bahrain, and more than 41 times that of Iran. These results can be attributed to two facts. Conflicts lead to more military expenditures, such as Kuwait rearming after its conflict with Iraq to build its armed forces and to pre-position military equipment for US forces. At the same time, high levels of per capita income, more correctly per capita oil revenues, enable and facilitate high levels of military expenditures.

Again looking at military expenditures as a percentage of GDP (Figure 3.9), we see that between 1988 and 2005, on average, Kuwaiti military expenditures constituted about 10 percent of GDP, while Iranian military expenditures accounted for about 3 percent of Iranian GDP. A look at the growth rates of these indicators point to the fact that Iran's 1988–2005 average annual growth rate is higher than most of the Persian Gulf nations (except that of Kuwait), while the UAE has significantly negative growth

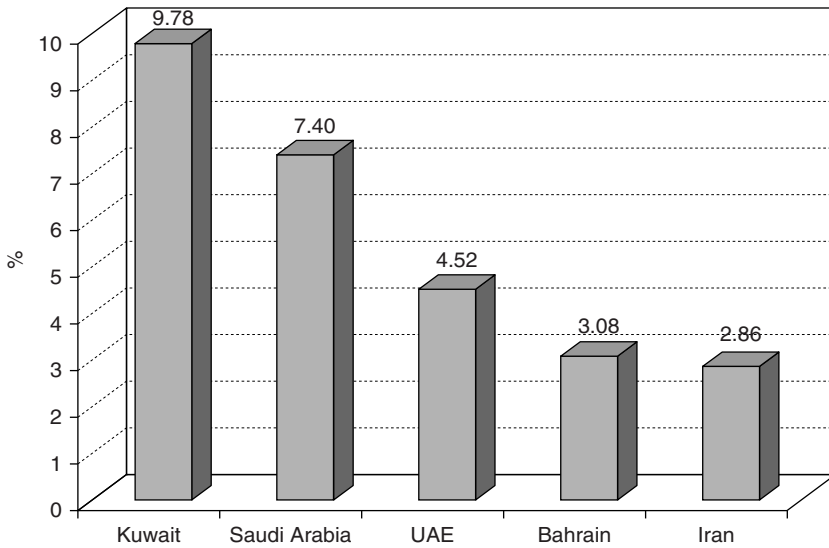


Figure 3.9 1988–2005 average annual ratio of military expenditures to GDP

rates for both indicators. Similar to the intensity indicators, one has to keep in mind the population growth rate and the effects of wars (higher military expenditures in the post-war era) when analyzing the growth rates of these indicators.

Finally, in an effort to quantify the sophistication of military technology and equipment employed by a given country, military expenditures per military personnel are calculated for Persian Gulf countries (Table 3.10).

Iran’s military is far less equipment-intensive than that of the other countries in the region; in other words, the Iranian military is labor-intensive. There is also a great deal of evidence to support the contention that Iran’s military equipment is less sophisticated and technologically less advanced in comparison to the military equipment used by the Arab countries of the Persian Gulf, especially that of Kuwait and Saudi Arabia. At least three reasons could be behind such results. First, due to the existing arms embargo on Iran, the Iranian government has difficulty importing the latest military technology and often imports technology that is two to three decades old from Russia, China, and former Soviet Union countries. Second, Iran’s population and number of military personnel account for respectively, about 70 percent and 65 percent of the Persian Gulf’s population and military personnel. Therefore, when compared to Arab Persian

Table 3.8 1988–2005 average annual growth rate for military expenditures per capita

Growth rate of military expenditures per capita (%)	1988–2005 mean
Kuwait	14.20
Iran	10.22
Bahrain	2.49
Saudi Arabia	1.35
UAE	–8.01

Table 3.9 1988–2005 average annual growth rate for ratio of military expenditures to GDP

Growth rate of ratio of military expenditures to GDP (%)	1988–2005 mean
Kuwait	9.96
Iran	6.94
Saudi Arabia	0.57
Bahrain	–0.02
UAE	–8.19

Table 3.10 1988–2005 average annual military expenditures per military personnel

Military expenditures per military personnel (constant 2005 US\$)	1988–2005 mean
Kuwait	367825
Saudi Arabia	106018
UAE	55838
Bahrain	25347
Iran	6935

Gulf countries, Iran's military expenditures have to support a larger military, leading to a lower military spending per military personnel and thus less technological sophistication. Third, and related to the second reason, when an army has a high number of active military personnel, it can afford to be less technologically advanced and still ensure military supremacy over other nations, which have smaller militaries and a technological advantage.

Summary

Before moving to the global perspective on Persian Gulf military expenditures, we summarize our regional perspective:

1. In 1988–2005, Saudi Arabia has been the largest military spender in the Persian Gulf region, contributing to about 60 percent of the Persian Gulf's total military expenditures.
2. In per capita terms and as a percentage of the GDP indicators, Kuwait is the most intensely militarized country of the Persian Gulf, while Iran is the least.
3. In terms of the growth rates of military expenditures, military expenditures per capita, and military expenditures' share of the GDP, Kuwait and Iran have the two highest positive rates. Furthermore, significant gaps exist between these two countries' growth rates and those of other Persian Gulf nations. Finally, for all these indicators the UAE records significant negative growth rates.
4. History of wars (and thus replenishment of depleted military stocks), different levels of oil revenues and oil revenues per capita and different population growth rates, have significant effects on the growth rates of military expenditures per capita and military expenditures' share of the GDP and their respective intensity indicators. *Ceteris paribus*, lower population growth rates, higher oil revenues and oil revenues per capita and/or replenishments of depleted military stock (due to wars) would lead to higher growth rates in these indicators.
5. There is some tentative evidence to link military expenditures in the Persian Gulf region to global crude oil prices.
6. Iran's military spending per military personnel is far below that of Arab countries of the Persian Gulf.

3.4 PERSIAN GULF MILITARY EXPENDITURES: A GLOBAL PERSPECTIVE

As seen in Table 3.2, in 2007, Saudi Arabia and Iran were among the top 15 military spenders when measured in purchasing power parity terms, pointing to the high degree of militarization in the Persian Gulf region. Through a comparative analysis between the Persian Gulf and other regions of the world,⁷ it will be concluded below that during 1988–2005 Persian Gulf militarization experienced the highest growth rate in the world.

From 1988 to 2005, the Persian Gulf region had the highest growth

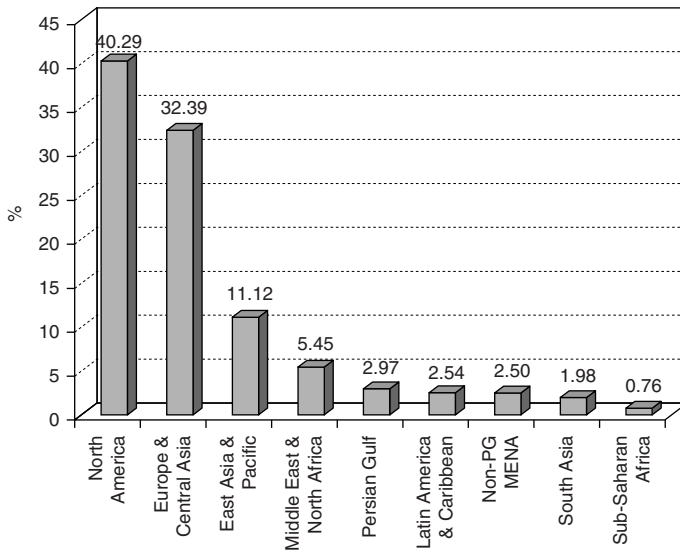


Figure 3.10 1988–2005 average annual shares of global military expenditures

rates of military expenditures, both in its share of global military expenditures (Figure 3.11) and in real dollar terms (Figure 3.12).⁸ It is interesting to note that the growth rate of military expenditures of Non-PG (non-Persian Gulf) MENA, South Asia, and MENA regions are comparable to the Persian Gulf region, while there is a considerable gap between these regions and other regions of the world. Specifically Europe and Central Asia's share of global military expenditures have on average been declining, while North America's average annual growth rates for both indicators are less than 0.5 percent. Having the highest growth rate of military expenditures in the world is indicative of the strong militarization motivation of Persian Gulf countries.

Military Expenditures and Population

In relation to population, we observe that with expenditures of US\$357 per person (Table 3.11), the Persian Gulf has the third-highest average annual military expenditures per capita and third-highest average annual intensity of military expenditures to population (Table 3.12). Similar to its share of global military expenditures, the Persian Gulf region also has the highest positive growth rate of intensity of military expenditures to population as well as military expenditures per capita. These observations

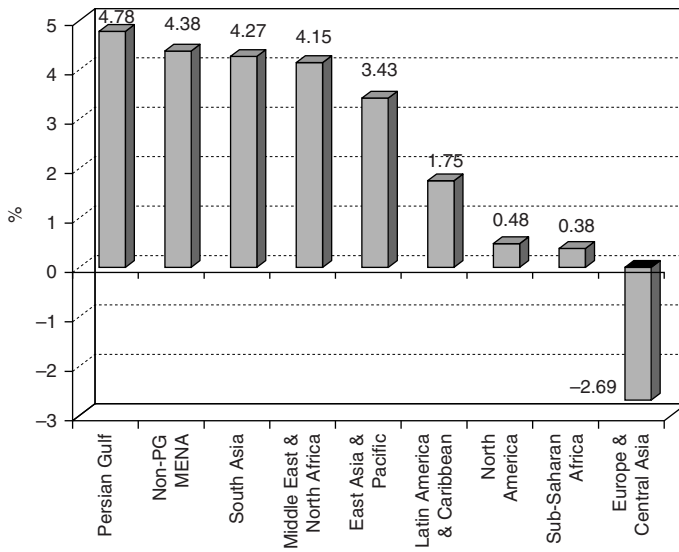


Figure 3.11 1988–2005 average annual growth rate of shares of global military expenditures

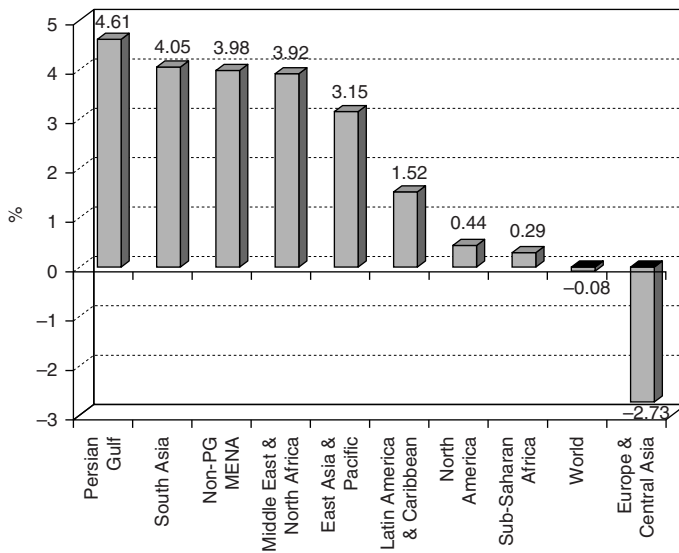


Figure 3.12 1988–2005 average annual growth rate of military expenditures

Table 3.11 1988–2005 average annual military expenditures per capita

Military expenditures per capita (constant 2005 US\$)	1988–2005 mean
North America	1385
Europe & Central Asia	740
Persian Gulf	357
Middle East & North Africa	212
World	179
Non-PG MENA	143
East Asia & Pacific	65
Latin America & Caribbean	53
South Asia	16
Sub-Saharan Africa	13

Table 3.12 1988–2005 average annual intensity of military expenditures to population

Intensity of military expenditures to population	1988–2005 mean
North America	7.74
Europe & Central Asia	4.10
Persian Gulf	2.02
Middle East & North Africa	1.21
Non-PG MENA	0.82
East Asia & Pacific	0.37
Latin America & Caribbean	0.30
South Asia	0.09
Sub-Saharan Africa	0.07

gain extra significance since the global military expenditures per capita on average experienced negative growth rates in the 1988–2005 period. Finally, the considerable growth gap between the Persian Gulf, the MENA, and the South Asia region in comparison to other regions needs to be heeded in a comparative analysis.

Military Expenditures and GDP

As seen in Table 3.13, military expenditures in the Persian Gulf accounts for about 6 percent of the region's GDP, or double that of the global average. Furthermore, the Persian Gulf's military intensity of military expenditures

to its GDP is the third-highest (Table 3.14) and its growth rate is the highest (Figure 3.15) when compared to other regions of the world. This is indicative of the fact that the Persian Gulf region exhibits a faster rise in its share of global military expenditures than its share of global GDP.

Military Expenditures and Military Personnel

As can be seen in Table 3.15, the Persian Gulf region has the third-highest military spending per military personnel. Although there is a considerable gap between the Persian Gulf and North America as well as Europe and Central Asia, the Persian Gulf's military expenditures per military personnel are more than double that of other regions.

Again in terms of the growth rate of this indicator, the Persian Gulf region has the second-highest growth rate following the Non-PG MENA region (Figure 3.16). This is in light of the fact that global military expenditures per global military personnel have been declining at an average annual rate of -1.18 percent.

Summary

A summary of these results is as follows:

1. Compared to other regions of the world, over the period of 1988–2005, the Persian Gulf region experienced the highest (or in some cases the second-highest) growth rates in:
 - a. military expenditures;
 - b. share of global military expenditures;
 - c. military expenditures per capita;
 - d. intensity of military expenditures to population;
 - e. intensity of military expenditures to GDP;
 - f. military expenditures per military personnel (second-highest after Non-PG MENA).
2. Compared to other regions of the world, over the period of 1988–2005 the Persian Gulf region has had the third-highest levels of:⁹
 - a. military expenditures per capita;
 - b. military expenditures per military personnel;
 - c. ratio of military expenditures to GDP;
 - d. intensity of military expenditures to population ;
 - e. intensity of military expenditures to GDP.
3. The larger MENA region as well as the South Asia region has followed the militarization growth pace of the Persian Gulf region very closely.

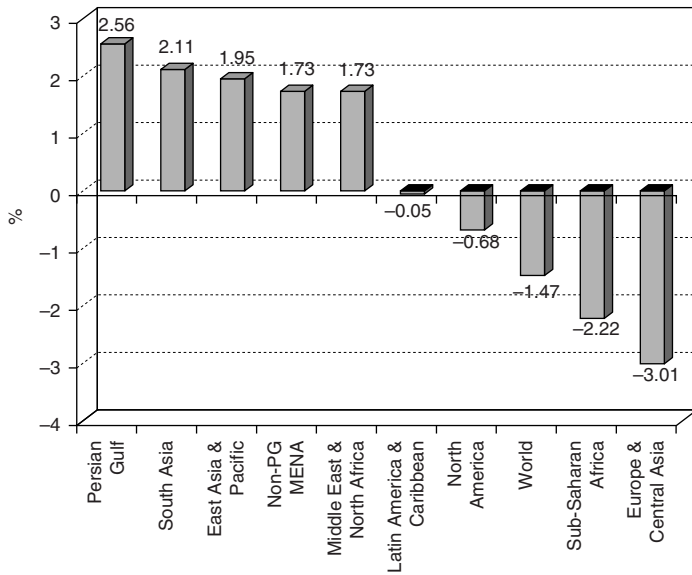
The militarization of the Persian Gulf

Figure 3.13 1998–2005 average annual growth rate of military expenditures per capita

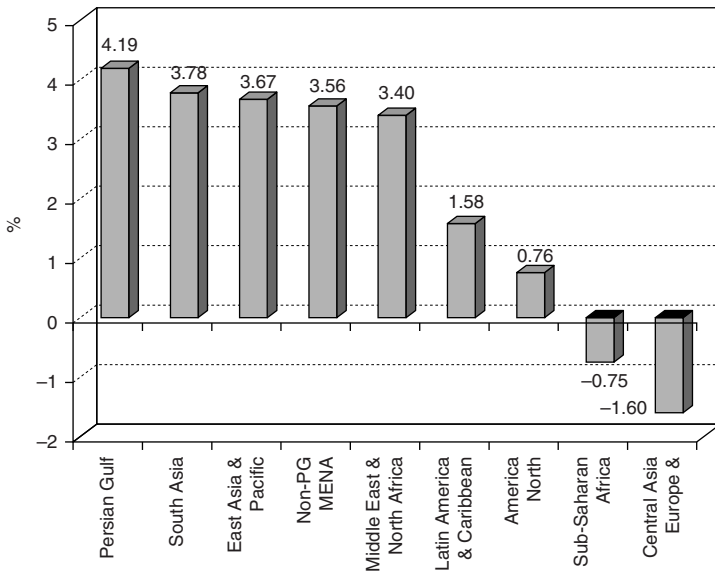


Figure 3.14 1988–2005 average annual growth rate for intensity of military expenditures to population

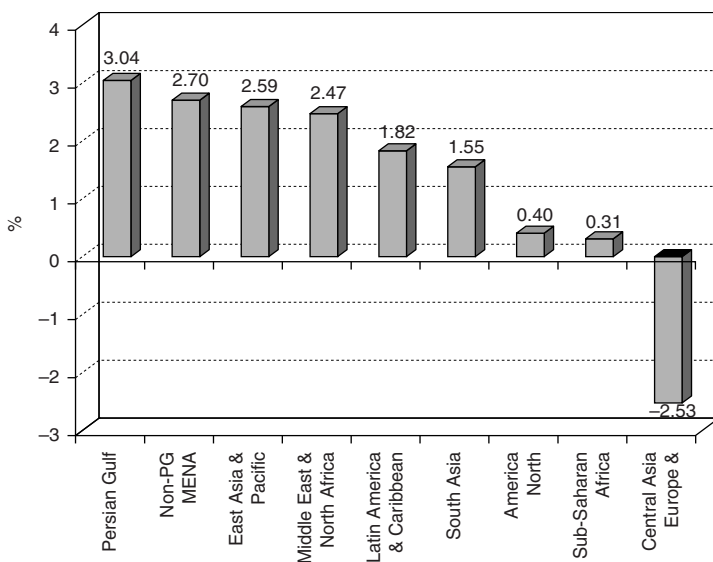


Figure 3.15 1988–2005 average annual growth rate of intensity of military expenditures to GDP

Table 3.13 1988–2005 average annual ratio of military expenditures to GDP

Ratio of military expenditures to GDP (%)	1988–2005 mean
Non-PG MENA	6.39
Middle East & North Africa	6.11
Persian Gulf	5.93
North America	4.02
South Asia	3.20
World	2.96
Europe & Central Asia	2.63
Sub-Saharan Africa	1.72
East Asia & Pacific	1.57
Latin America & Caribbean	1.28

3.5 CONCLUSION

Based on these results, one can argue that the Persian Gulf region is becoming increasingly militarized, with the larger MENA region and South Asia following its lead. Given the geopolitical and economic importance of

Table 3.14 1988–2005 average annual intensity of military expenditures to GDP

Intensity of military expenditures to GDP	1988–2005 mean
Non-PG MENA	2.22
Middle East & North Africa	2.11
Persian Gulf	2.04
North America	1.35
South Asia	1.11
Europe & Central Asia	0.87
Sub-Saharan Africa	0.58
East Asia & Pacific	0.55
Latin America & Caribbean	0.45

Table 3.15 1988–2005 average annual military expenditures per military personnel

Military expenditures per military personnel (constant 2005 US\$)	1988–2005 mean
North America	233478
Europe & Central Asia	114882
World	37998
Persian Gulf	35050
Middle East & North Africa	18108
East Asia & Pacific	14667
Latin America & Caribbean	13770
Non-PG MENA	11651
South Asia	6360
Sub-Saharan Africa	5577

these regions, especially that of the Persian Gulf, increasing militarization of these regions would fuel their already unstable social and political environments. The increasing instability in these regions would in turn lead to dire consequences on various fronts, such as energy supply shocks and regional and more widespread wars. Although Iran is, on a number of measures, the least militarized nation in the Persian Gulf region, it is becoming increasingly militarized because of the perceived threats by the presence of US military forces and Iran's ambition to reassert its traditional powerful role in the region. As will be shown in Chapter 6, the motivations above have resulted in the dramatic expansion of the capabilities of Iran's domestic military industry, making Iran the second-largest arms producer of the larger MENA region, with Israel the largest.

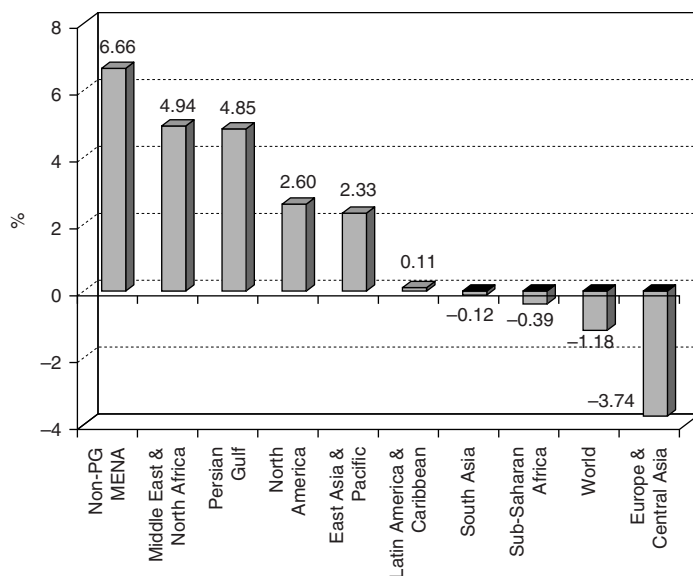


Figure 3.16 1988–2005 average annual growth rate of military expenditures per military personnel

NOTES

1. As will be shown later in this chapter, standing at 4.4 percent of the GDP, global military expenditures as a percentage of GDP were at their highest level in 1988, then declined to their lowest level in 1998, 2.38 percent, and have been rising since then.
2. Staelenheimer et al. (2008), <http://www.sipri.org/>.
3. Brzezinski, Zbigniew, *The Grand Chess Board: American Primacy and Its Geostategic Imperatives*.
4. Energy Information Administration, “World Oil Transit Chokepoints,” http://www.eia.doe.gov/cabs/World_Oil_Transit_Chokepoints/pdf.pdf and http://www.eia.doe.gov/emeu/cabs/Persian_Gulf/pdf.pdf.
5. Weir, Kimberly, “The Economy of Immigrant Labor in the United Arab Emirates: Young Women and Thai Migration.”
6. CIA, “The 2008 World Factbook,” Online version, www.cia.gov/cia/publications/factbook/.
7. The regions analyzed are: North America, Latin America & Caribbean, Europe & Central Asia, Middle East & North Africa (MENA), Persian Gulf (PG), Non-PG MENA, Sub-Saharan Africa, South Asia, and East Asia & Pacific. Please see the Appendix for a complete list of countries in any given region.
8. North America on average accounted for more than 40 percent of annual global military expenditures, while the Persian Gulf accounted for only about 3 percent (Figure 3.10).
9. North America and Europe & Central Asia have been the highest and second-highest respectively for all these indicators.

APPENDIX

East Asia & Pacific: Brunei, Cambodia, China, Indonesia, Japan, North Korea, South Korea, Laos, Malaysia, Mongolia, Myanmar (Burma), the Philippines, Singapore, Taiwan, Thailand, Viet Nam, Australia, Fiji, New Zealand, Papua New Guinea.

Europe & Central Asia: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechoslovakia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, German Democratic Republic, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, the UK, Ukraine, USSR/Russia, Yugoslavia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan.

Latin American and Caribbean: Argentina, the Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela.

Middle East and North Africa (MENA): Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen, Algeria, Libya, Morocco, Tunisia.

North America: USA, Canada.

Persian Gulf: Bahrain, Iran, Kuwait, Saudi Arabia, United Arab Emirates.

South Asia: Afghanistan, Bangladesh, India, Nepal, Pakistan, Sri Lanka.

Sub-Saharan Africa: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo (Republic of), Congo (Democratic Republic of, DRC), Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

4. Military imports¹ in the Persian Gulf

4.1 INTRODUCTION

Military expenditures can be divided into two broad categories:

1. Domestic military expenditures, requiring payments to domestic firms and individuals.
2. Import of military equipments and services, requiring payments to foreign governments, companies, and nationals.

In Chapter 2, the differential impact of these two categories of expenditures on economic development was noted. It was argued that imports of military goods and services do not result in the limited and highly conditional positive effects associated with domestic military expenditures, such as employment in the military, increased aggregate demand, and improved infrastructure and technology. Furthermore it was pointed out that military imports may lead to shortages of hard currency, in turn crowding out investment and import of civilian technology. Therefore, it is essential to analyze the level, intensity, and growth rate of military imports separately from aggregate military expenditures.

Before we begin our discussion of the Persian Gulf's arms imports, and in order to get a broader perspective, it may be helpful to take a brief look at the size of global military trade. In a detailed Congressional Research Service (CRS) report released by the US Congress, the following disturbing facts about the global arms trade, and in particular the arms trade with developing nations, were reported:

1. "For the period 2003–2006, the total value of all international arms transfer agreements (US\$160 billion) was higher than the worldwide value during 1999–2002 (US\$156.7 billion), an increase of 2.1 percent."²
2. "During the years 1999–2006, the value of arms transfer agreements with developing nations comprised 66.4 percent of all such agreements worldwide. More recently, arms transfer agreements with developing nations constituted 65.7 percent of all such agreements globally from 2003–2006, and 71.5 percent of these agreements in 2006."³

3. “In 2006, the United States ranked first in the value of all arms deliveries worldwide, making US\$14 billion in such deliveries or 51.9 percent of the total. This is the eighth year in a row that the United States has led in global arms deliveries. Russia ranked second in worldwide arms deliveries in 2006, making US\$5.8 billion in such deliveries. The United Kingdom ranked third in 2006, making US\$3.3 billion in such deliveries. These top three suppliers of arms in 2006 collectively delivered nearly US\$23.1 billion, 85.6 percent of all arms delivered worldwide by all suppliers in that year.”⁴

The large and increasing share of developing countries in arms transfer agreements over the period of 1999–2006 is particularly disturbing. Instead of allocating their scarce hard currencies, earned through exports, to human capital development, infrastructure improvement, and imports of civilian technology, developing countries use a significant share of their hard currencies for importing military goods and services. Such military imports in turn increase the likelihood of costlier wars among developing nations, leading to unimaginable economic costs, some of which are outlined in Chapter 8, as in the case of Iran and Iraq.

4.2 DATA

In addition to the data used in Chapter 3, in this chapter we employ two more sets of indicators described in Table 4.1. The import data are converted to constant 2005 dollars using the World Import Prices indicator provided by the International Monetary Fund (IMF). A note of caution is in order here. Regardless of the efforts of the World Bank, Stockholm International Peace Research Institute (SIPRI), International Institute of Strategic Studies (IISS), and the US Department of State to collect accurate data, military expenditures and especially military imports involve a considerable amount of secrecy. This fact is even more significant in the analysis of Persian Gulf countries.

For one, there has been an international trade embargo on Iran; thus, no institution can claim to have accurate information on Iran’s military imports. Furthermore, Persian Gulf countries are often associated with weak independent non-governmental civil institutions. Therefore, the actions of the government are often not scrutinized by third-party civilian institutions. As a result, in many cases one has to depend solely on the information provided by government agencies in the Persian Gulf region. Additionally, Arab countries of the Persian Gulf are sometimes involved in oil-for-arms barter with arms-producing nations. An example of such deals is the 14-year-old

Table 4.1 Sources and descriptions of indicators

Indicator	Source	Description
Arms imports	WDI 2007	“Arms transfers cover the supply of military weapons through sales, aid, gifts, and those made through manufacturing licenses. Data covers major conventional weapons such as aircraft, armored vehicles, artillery, radar systems, missiles, and ships designed for military use. Excluded are transfers of other military equipment such as small arms and light weapons, trucks, small artillery, ammunition, support equipment, technology transfers, and other services.” ^a
Imports of goods and services	WDI 2007, CIA World Fact Book, SESRIC	“Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude labor and property income (formerly called factor services) as well as transfer payments.” ^b

Notes:

a. World Bank, World Development Indicators 2007.

b. Ibid.

Al Yamamah arms deal between Saudi Arabia and the United Kingdom, wherein Saudi Arabia has agreed to supply the UK with oil in return for arms supplies from BAE.⁵ Often such deals do not accurately reflect the true dollar value of imported arms in comparison to using hard currencies as the payment method. Finally, we do not have data series on military expenditures and arms imports for two Persian Gulf countries, specifically Iraq and Qatar. If we had such figures, most if not all of our indicators would point to an even higher degree of militarization in the Persian Gulf region.

These precautionary facts should, therefore, be taken into consideration when looking at the figures and indicators that follow. In short, although we have taken care to provide the most accurate data available, we by no means profess that the data presented in this chapter reflect the exact picture of military imports in the Persian Gulf region and around the globe.

4.3 PERSIAN GULF MILITARY IMPORTS: A REGIONAL PERSPECTIVE

During the period of 1988–2005, Persian Gulf countries spent more than US\$53 billion (constant 2005 dollars) on arms imports, translating to about an average of US\$3 billion per year. As shown in Figure 4.1, Persian Gulf arms imports have been extremely volatile (similar to the region's military expenditures). Similar to military expenditures, there is a close relationship between Persian Gulf arms imports and crude oil prices. Although this relationship is not as clear as it was for military expenditures, a closer look at Figure 4.2 indicates that:

1. Between 1988–92 and 2001–05, crude oil prices and arms imports were generally rising and falling together.
2. Between 1992 and 2000, crude oil prices were stagnant at around US\$20 per barrel. This eight-year-long stagnation of crude oil prices is a possible explanation for the dramatic fall of arms imports in the period of 1997–2001, even in the face of rising oil prices during 1988–2000.
3. If we remove the military build-up effect following the First Gulf War, it becomes clear that between 1992 and 1997 Persian Gulf arms imports were also following crude oil prices very closely.

It is also noteworthy that Persian Gulf arms imports increased in 2001 and 2003 (a larger jump in 2003), which correspond to the September 11 attacks and the US invasion of Iraq.

As is evident from Figure 4.3, Saudi Arabia was the main arms importer in the Persian Gulf region in the period 1988–2005, accounting for over 40 percent of such imports. It is also interesting to note that the UAE had a comparable share in Persian Gulf arms imports as Iran. A look at the growth rate of arms imports in the Persian Gulf region points to other facts (Figure 4.4). Arms imports of smaller Arab countries in the Persian Gulf have been experiencing much larger growth rates than those of Saudi Arabia and Iran. Furthermore, Iran has a significantly lower growth rate

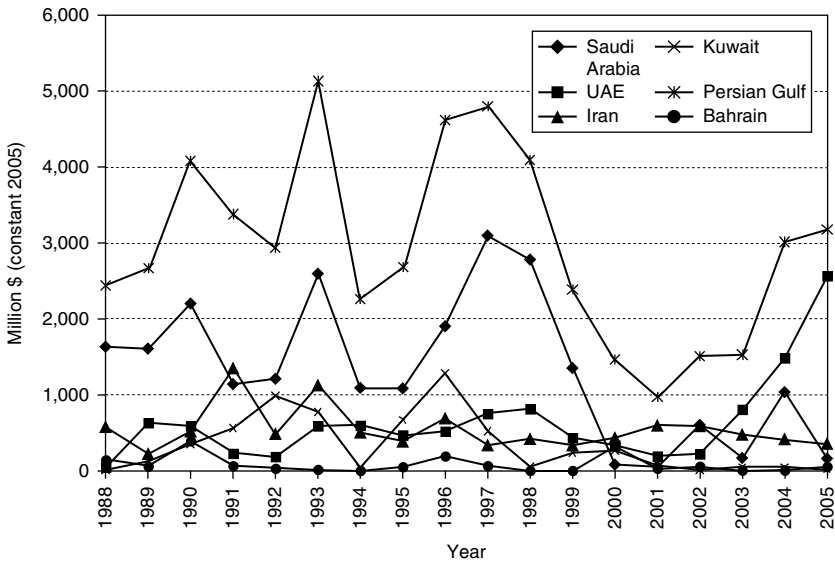


Figure 4.1 1988–2005 Persian Gulf arms imports

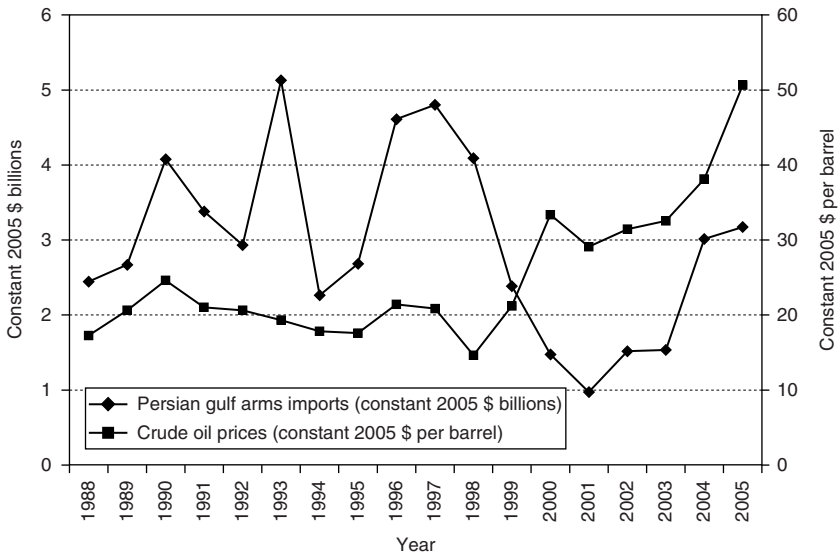


Figure 4.2 1988–2005 crude oil prices and arms imports in the Persian Gulf

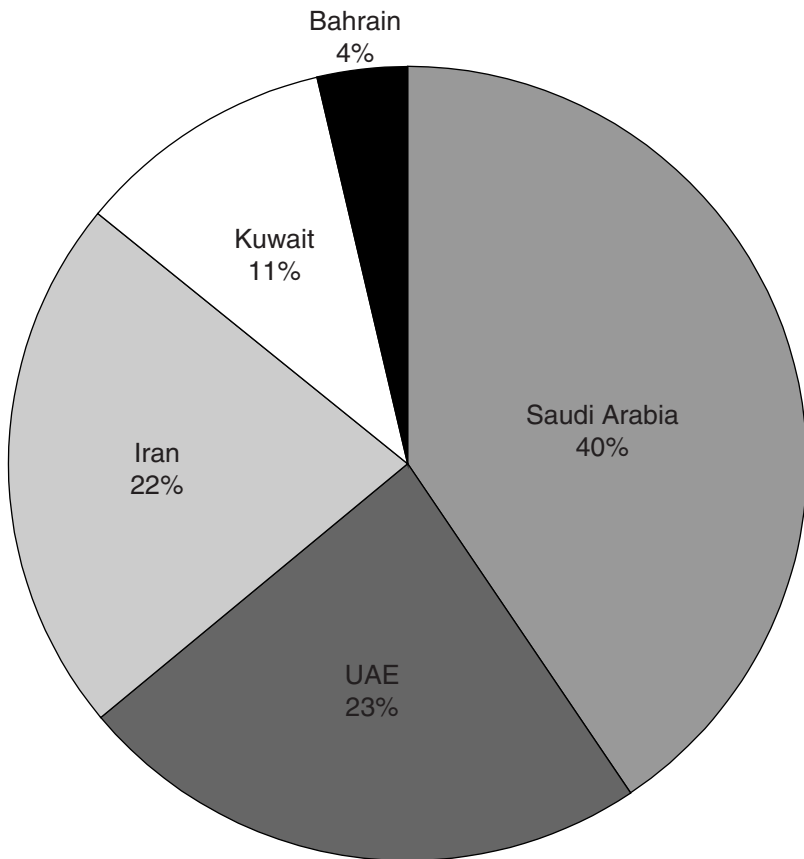


Figure 4.3 1988–2005 average annual shares of Persian Gulf arms imports

in arms imports in comparison to its Arab counterparts. At first, this may sound odd: because of the destructive effects of the eight-year Iran–Iraq war on Iran’s military structure one would expect a much higher growth rate of arms imports in the aftermath of this costly war. But considering the fact that Iran has been under tight international military and trade sanctions, Iran’s arms imports have been growing less rapidly than those of other Persian Gulf countries. Instead, as will be discussed in Chapter 6, Iran has developed its domestic arms industry in large part because of sanctions. As a result, Iran’s domestic military industry is the second most advanced military industry (after Israel) in the larger Middle East and North Africa region.

Iran’s growth rate of arms imports as a percentage of its total imports

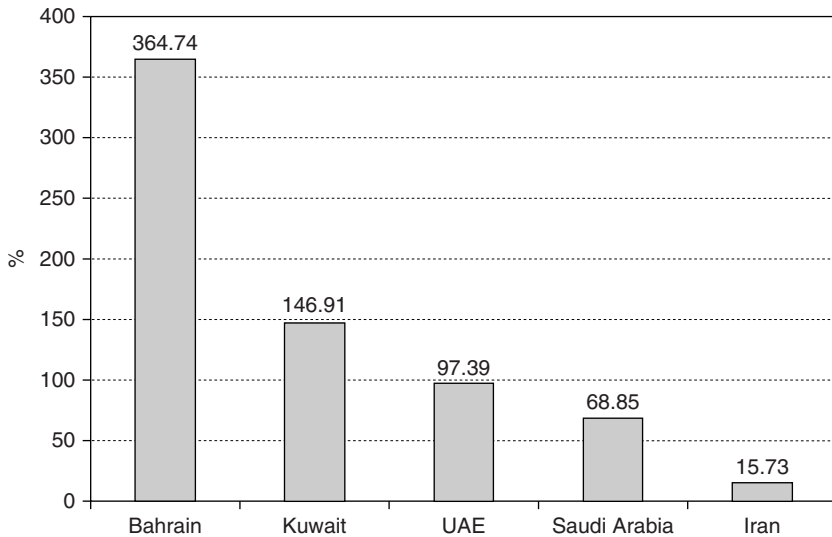


Figure 4.4 1988–2005 average annual growth rate of arms imports

of goods and service is again the smallest when compared to the Arab countries of the Persian Gulf (Figure 4.5). One could argue that the higher growth rates for the smaller Arab countries of the Persian Gulf are mainly due to their relatively small military stocks. This argument, however, does not hold given the fact that Iran's arms imports is still much smaller than that of Saudi Arabia and the UAE, which are known for their large military stocks (Figure 4.3). Furthermore, as mentioned earlier given that Iran's military stocks were heavily depleted during its eight-year war with Iraq, one would expect much higher growth rates for Iran's arms imports after the Iran–Iraq War. Therefore, one could argue that the lower growth rate of arms imports in the case of Iran is mainly a result of the imposed arms sanction. Furthermore, given the fact that most of Iran's arms imports are "illegal" in the context of international agreements, Iran has been probably paying higher black market prices for its arms imports. Therefore, the actual physical size of real Iranian arms imports might even be less than what is even reported here (unless there are vast unreported imports).

The information conveyed by Figure 4.5 is also significant as it points to the fact that arms imports are responsible for a growing share of total imports for all Persian Gulf countries. Given that these countries are still in various stages of economic development, when arms imports are a growing share of total imports, the availability of hard currency resources for civilian imports is reduced, thus impairing the development process.

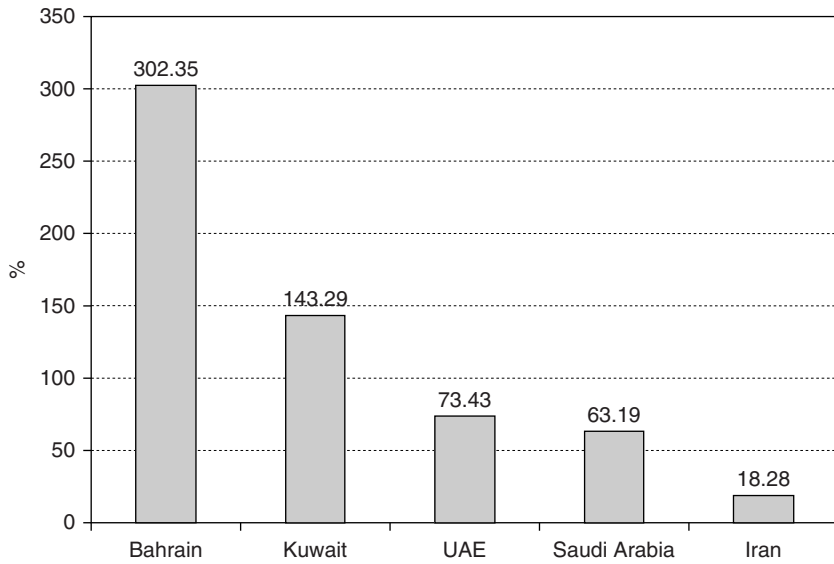


Figure 4.5 1988-2005 average annual growth rate of arms imports as a percentage of imports of goods and services

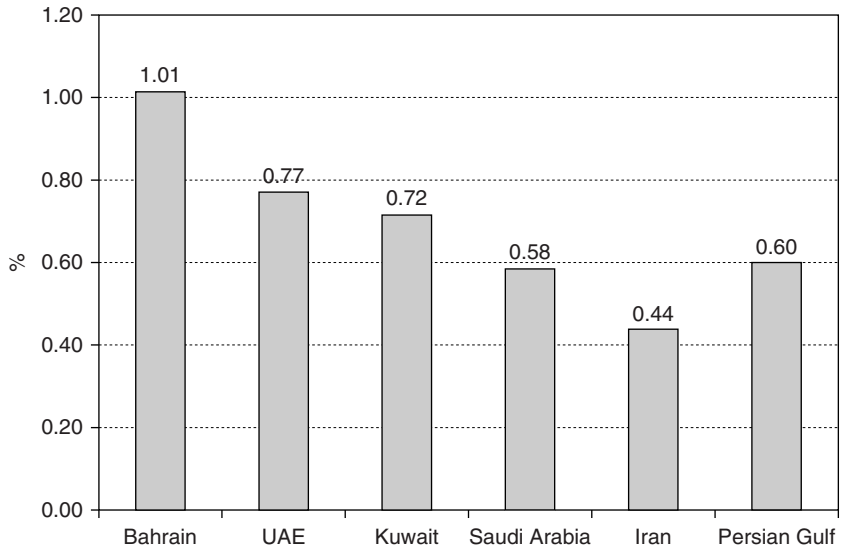


Figure 4.6 1988-2005 average annual ratio of arms imports to GDP

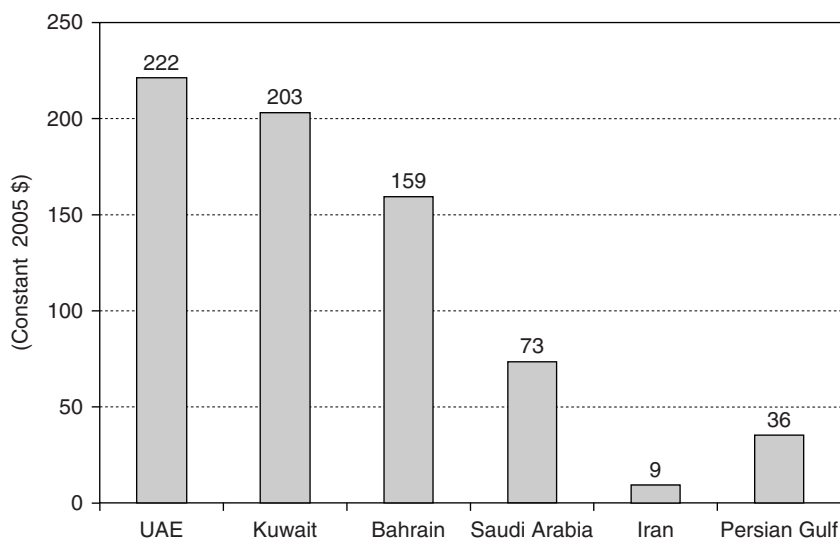


Figure 4.7 1988–2005 average annual arms imports per capita

Finally, during the period of 1988–2005 annual Persian Gulf arms imports per capita (Figure 4.7) averaged US\$36 per year, ranging from an annual average of US\$9 per capita (in the case of Iran) to an annual average of US\$222 per capita (in the case of the UAE). In the case of the UAE this indicator increases by four- to fivefold (to about US\$1000 per capita) if only the nationals of the UAE are taken into account, as 80 percent of the UAE's population is composed of immigrant workers. Again, when it comes to the growth rate of this indicator (Figure 4.8), the Arab countries of the Persian Gulf region (especially the smaller countries) have experienced much higher growth rates than Iran. This fact becomes even more significant when we note the fact that the population growth rate in Iran is much lower than that of the Arab countries of the Persian Gulf (Table 3.7).

A Short Note on Qatar and Iraq

Although Qatar and Iraq have been excluded from consideration in our discussion because of the shortage of consistent annual data, a brief overview of the available information for these two countries may still be useful:

1. Qatar: in the period of 1988–2003 Qatar imported more than US\$1.33 billion in arms, about 70 percent of which was between 1996 and 1998.

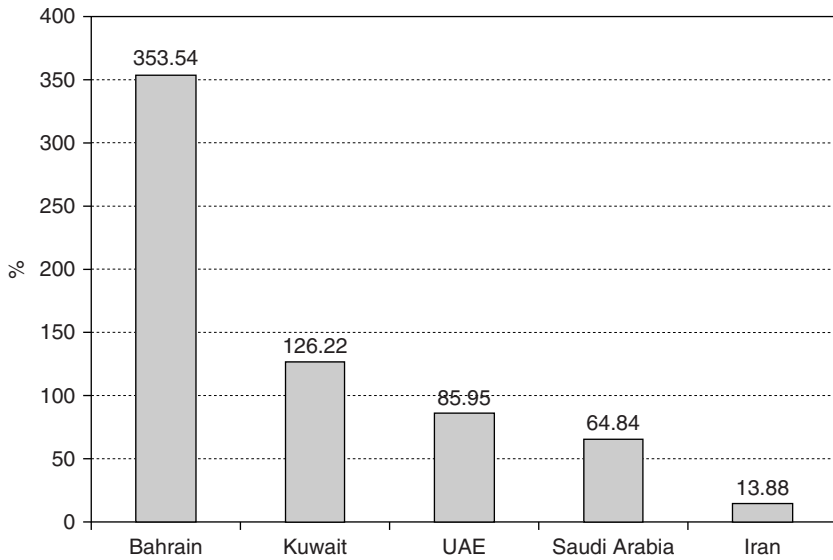


Figure 4.8 1988–2005 average annual growth rates of arms imports per capita

This would mean that average annual arms imports per capita would be about US\$100 for Qatar, a figure that is higher than for Saudi Arabia and smaller than for Bahrain.

2. Iraq: Iraqi arms imports between 1988 and 1990 are recorded to be more than US\$5.1 billion. Clearly such massive amounts of arms imports were the prerequisites of the Iraqi invasion of Kuwait in 1990. During these three years where data are available, the average annual arms imports per capita were about US\$91, a figure just below that of Qatar and above that of Saudi Arabia.

If we were in a position to include comprehensive data for Qatar and Iraq into Persian Gulf arms import figures, many of our indicators would be significantly higher for the Persian Gulf as a region.

Summary

The regional findings could be summarized as follows:

1. Saudi Arabia was responsible for more than 40 percent of total Persian Gulf total arms imports in the period 1988–2005.

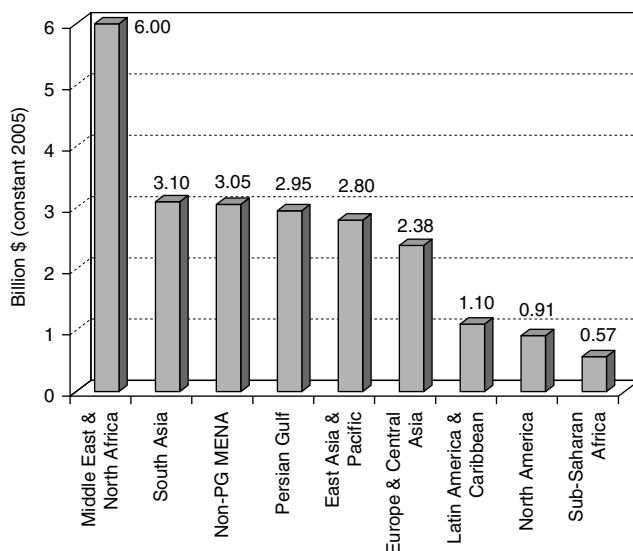


Figure 4.9 1988–2005 average annual arms imports by world regions

2. During the period 1988–2005, Arab countries of the Persian Gulf region, especially the smaller ones, have had much higher growth rates in arms imports than Iran.
3. Iran’s low growth rate in arms imports is most likely due to the three-decade-long international economic and arms embargo.

4.4 PERSIAN GULF MILITARY IMPORTS: A GLOBAL PERSPECTIVE

Arms Imports in Absolute Terms

In absolute terms the Persian Gulf region has been importing arms at an annual average of US\$2.95 billion, the third-highest ranking region in the world, following closely the South Asia and Non-PG MENA (Middle East and North Africa) regions. As seen in Figure 4.9, the larger MENA (which includes the Persian Gulf) region’s average annual imports have been at about US\$6 billion per year and there is a significant gap between this and other regions. The MENA and Persian Gulf figures would increase significantly beyond their already high levels if we had and could include reliable data for Iraq and Qatar.

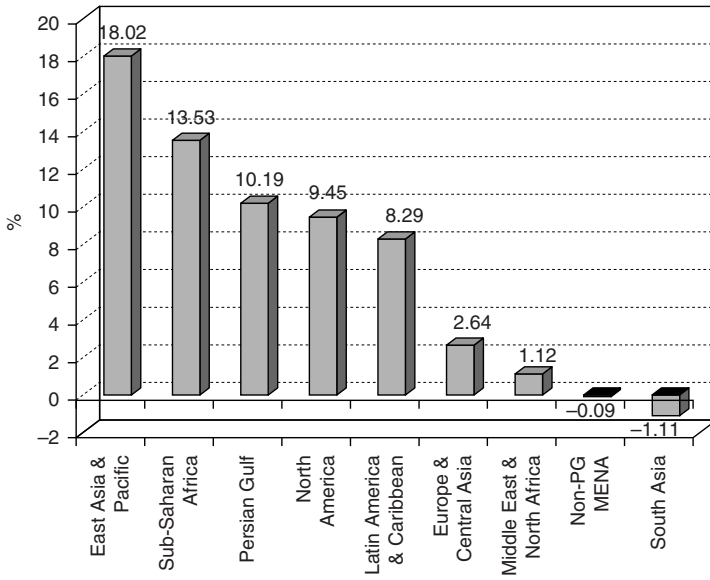


Figure 4.10 1988–2005 average annual growth rate of arms imports

In terms of the growth rate of arms imports (Figure 4.10), the Persian Gulf region has the third-highest rate in the world. As can be seen in Figure 4.9, sub-Saharan Africa arms imports are about one-fifth of the Persian Gulf's figure, thus a slight increase in arms imports would in comparison register as a much higher growth rate for the sub-Saharan Africa region. For example, when sub-Saharan Africa experienced an increase in arms imports from US\$0.13 to US\$0.28 billion in 1996, this growth rate registered as 115 percent but the same increase would only be considered as about a 6 percent growth rate for the Persian Gulf in the same year. Due to their considerably smaller amounts of arms imports, the same reasoning could be appropriately applied to Latin America, the Caribbean, and North America.

Arms Imports and Total Imports of Goods and Services

As indicated by Figure 4.11, during 1988–2005 the Persian Gulf region had the third-highest average annual arms imports as a percentage of total imports of goods and services.

It is interesting to note the wide gap between South Asia and the Non-PG MENA and Persian Gulf regions as well as the wide gap between

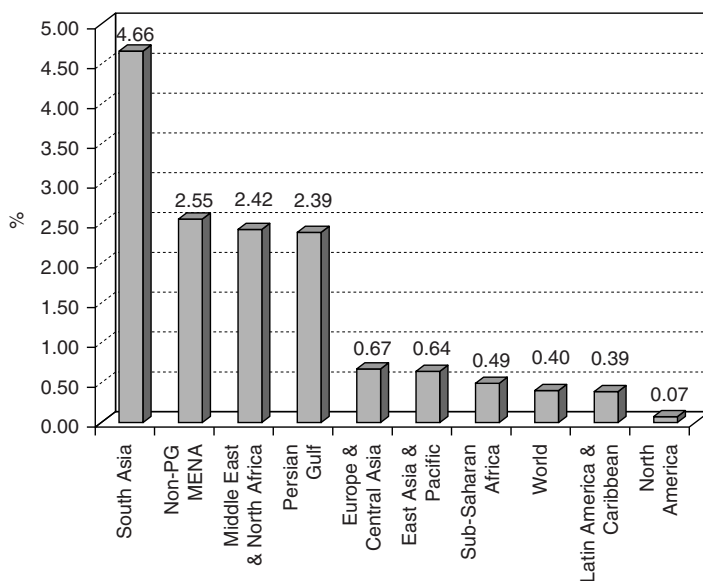


Figure 4.11 1988–2005 average annual ratio of arms imports to imports of goods and services

the two latter regions and the rest of the globe. Again, the Persian Gulf region has experienced an annual average growth rate of 2.5 percent for this indicator, while noting the fact that the Persian Gulf region’s arms imports have been responsible for larger portions of its total imports of goods and services.

Arms Imports and Military Expenditures

On average, between 1988 and 2005, military imports have constituted more than 10 percent of total military expenditures in the Persian Gulf region (Figure 4.12), or about four times that of the global average. This is detrimental to the economic development programs of Persian Gulf countries and others including South Asia and Non-PG MENA because such large arms imports reduce the availability of limited resources for non-military imports.

Arms Imports and GDP

As seen in Figure 4.13, on average, annual Persian Gulf arms imports have been about 0.6 percent of gross product (GDP). Again the gap between

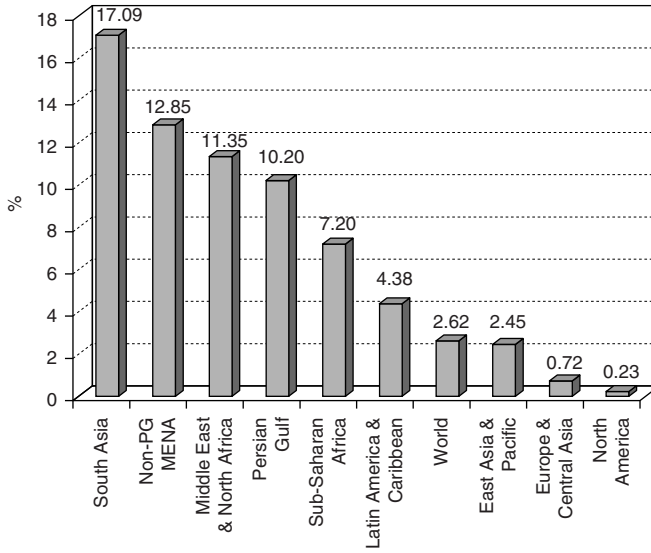


Figure 4.12 1988–2005 average annual ratio of arms imports to military expenditures

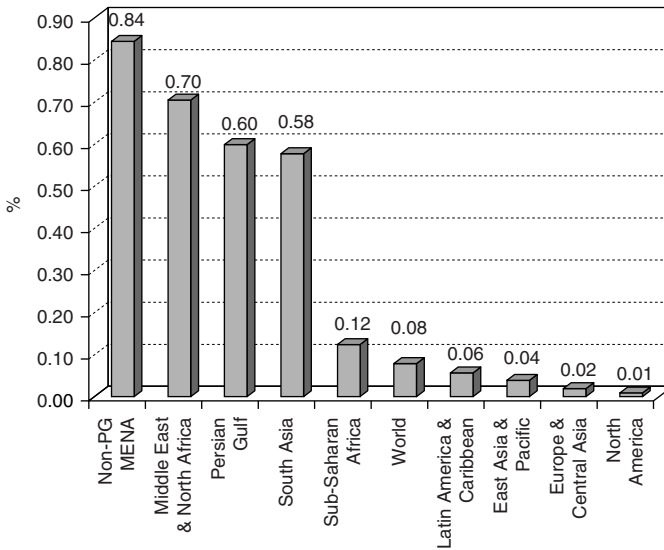


Figure 4.13 1988–2005 average annual ratio of arms imports to GDP

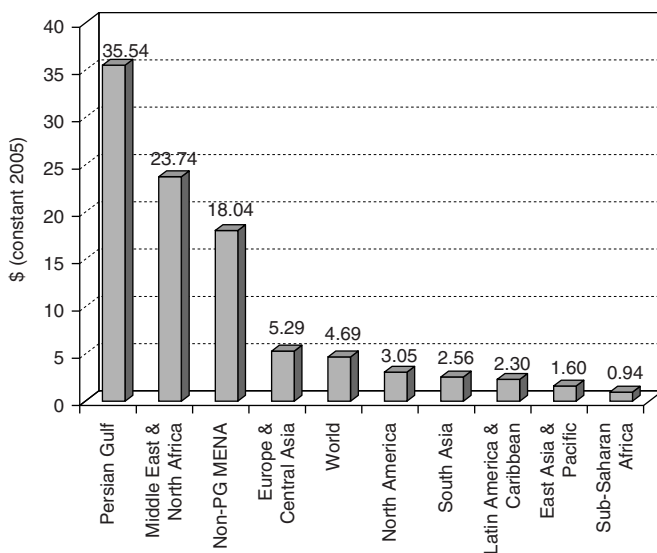


Figure 4.14 1988–2005 average annual arms imports per capita

Non-PG MENA, the Persian Gulf, and South Asia and the rest of the world is noticeable.

Arms Imports and Population

The Persian Gulf region has the highest annual average arms imports per capita (Figure 4.14). At more than US\$35, the Persian Gulf’s per capita average annual arms imports are more than seven times that of the world average.

Following the Persian Gulf, the larger MENA has the second-highest value in per capita arms imports. The considerable gap between these two regions and the rest of the world is worrisome, as it points to the intensity of arms imports in the Persian Gulf and the larger MENA region. Figure 4.15 presents the intensity of arms imports to population and it clearly shows the high levels of such intensity for the Persian Gulf and larger MENA regions.

Furthermore, the available data indicate that the growth rate of arms imports in the Persian Gulf region is much higher than the growth rate of its population, leading to an average annual growth rate of 8 percent for its per capita arms imports in the period of 1988–2005.

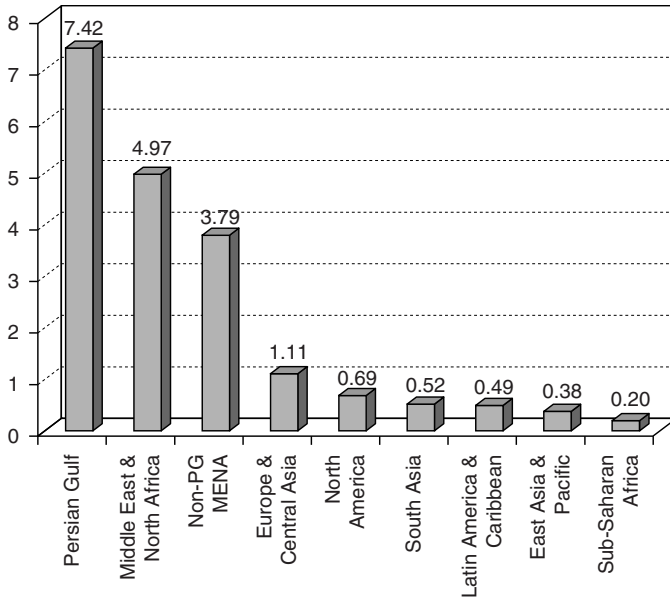


Figure 4.15 1988–2005 average annual intensity of arms imports to population

Summary

The Persian Gulf region has one of the highest rates of arms imports in absolute terms and has by far the highest per capita arms imports for the period of 1988–2005. Moreover, there is a considerable gap between the Persian Gulf and MENA regions, and other regions. Given the positive high growth rates of arms imports of the Persian Gulf and MENA regions, there is no expectation of a narrowing gap in the foreseeable future.

4.5 CONCLUSION

The Persian Gulf countries are characterized by high levels of arms imports in comparison to the size of their population, GDP, military expenditures, and total imports of goods and services. For example, as seen in Table 4.2 three out of the ten top arms importers between 1974 and 2006 are countries in the Persian Gulf region. Moreover, among developing nations, Saudi Arabia and the UAE were responsible for over

Table 4.2 1974–2006 top 10 arms importers (TIV)^a

Rank	Recipient	TIV
1	India	63 232
2	Japan	42 936
3	Iraq	40 724
4	Saudi Arabia	40 117
5	Iran	37 973
6	Turkey	33 891
7	Egypt	30 075
8	Libya	29 707
9	Taiwan	29 646
10	Greece	29 204
	Others	640 554
	World total	1 018 023
	Persian Gulf total	148 074
	Share of Persian Gulf	15%

Note:

- a. Trend Indicator Values (TIV) is an indicator used by SIPRI: “TIVs are expressed in US\$ m. at constant (1990) prices. However, although figures are expressed in US\$, TIVs do not represent the financial value of goods transferred. Instead, TIVs are an indication of the volume of arms transferred. Hence, TIVs can be used to measure trends in international arms transfers, such as changes in the total flow of weapons and the geographic pattern of arms exports or imports.” (Source: SIPRI website at http://www.sipri.org/contents/armstrad/output_types_TIV.html)

Source: Information from the SIPRI Arms Transfers Database, <http://armstrade.sipri.org>.

43 percent of total arms deliveries between 1999 and 2006, with Saudi Arabia being the first delivery destination among developing nations (Table 4.3).

As emphasized on several occasions, arms imports are synonymous (unless financed by external grants) with the outflow of hard currency from Persian Gulf countries to arms-producing nations (often developed economies such as the US and European countries). As the trend of arms imports is on the rise in the Persian Gulf region, the negative consequences of such capital outflow are also on the rise. As will be seen in Chapter 7, the only beneficiaries of arms imports are arms-producing companies, over 95 percent of which are headquartered in the US and Europe.

Finally, another issue that has attracted attention is that at least five of the top ten arms importers are nations associated with the Islamic

Table 4.3 1999–2006 developing nation leading arms recipients (current US\$ million)

Rank	Recipient	Deliveries ^a value 1999–2006
1	Saudi Arabia	45 800
2	China	17 100
3	Egypt	10 900
4	UAE	10 300
5	India	10 100
6	Taiwan	10 000
7	Israel	9 700
8	South Korea	7 800
9	Pakistan	4 600
10	Malaysia	3 700
Share of Saudi Arabia and UAE		43%

Note:

- a. Note that “deliveries” are different from “transfer agreements.” Deliveries are the actual deliveries that have taken place, but the transfer agreements are just the agreements that are delivered by the arms exporters.

Source: Information from the SIPRI Arms Transfers Database, <http://armstrade.sipri.org>.

faith. This is highly contradictory, given the fact that Islamic teachings are clearly against the use of force and violence, except in forms of self-defense. This issue will be addressed in more detail in Chapter 7.

NOTES

1. All dollar figures in this chapter are based on constant 2005 dollars, unless mentioned otherwise.
2. Grimmett, R., “Conventional Arms Transfer to Developing Nations, 1999–2006,” CRS report for Congress, p. 4.
3. *Ibid.* p. 2.
4. *Ibid.* p. 4.
5. BBC News Online Network, “Business: The Company File: Arms Sales Fuel BAe’s profits,” http://news.bbc.co.uk/1/hi/business/the_company_file/285963.stm.

5. Military personnel in the Persian Gulf

5.1 INTRODUCTION

A commonly used indicator of military strength is the number of a country's or group's military personnel, defined as "active duty military personnel, including paramilitary forces if the training, organization, equipment, and control suggest they may be used to support or replace regular military forces."¹ In 2006, there were more than 27 million² military personnel around the globe, while in the same year there was an estimated "shortage of 2.3 million physicians, nurses and midwives."³ In fact in 2006, the number of physicians around the world was about 8 million,⁴ or about 30 percent of the number of military personnel. In a number of countries, military expenditures per person under arms over a six-year period (the average time to train a physician) exceeded the cost of training a physician. Furthermore, after six years of training and expenditures, military personnel afforded little economic or social value to society in comparison to a physician's potential contributions. Although this observation is disturbing, it is not unexpected because, as pointed to in Chapter 2, high levels of military expenditures create a strong bias towards the military sector in both the labor and capital markets, by providing higher returns to these factors of production in comparison to those in other sectors.

In Chapters 3 and 4 we examined military expenditures and arms imports in the Persian Gulf and found out that the region is heavily militarized and is becoming increasingly so. In this chapter, we analyze yet another aspect of militarization in the Persian Gulf, persons under arms.

5.2 PERSIAN GULF MILITARY PERSONNEL: A REGIONAL PERSPECTIVE

As opposed to military expenditures and arms imports, the number of Iran's military personnel exceeds that of other Persian Gulf countries. In fact, the number of Iran's military personnel is more than double the combined number of military personnel in the Gulf Cooperation Council (GCC)

Table 5.1 1990–2005 annual average size of Persian Gulf military personnel

Military personnel	Mean
Iran	629975
Saudi Arabia	189325
UAE	60000
Kuwait	18019
Bahrain	16741
Persian Gulf total	914059

countries (that is, the six-country grouping which excludes Iraq, a country for which we have no reliable and continuous data). As seen in Table 5.1 and Figure 5.1, between 1990 and 2005, the aggregate number of Persian Gulf military personnel was more than 914000, 68 percent of which was attributable to Iran. Iran's military personnel was: (1) more than three times that of Saudi Arabia; (2) more than ten times that of the UAE; (3) about 35 times that of Kuwait; and (4) about 37 times that of Bahrain.

The fact that the number of Iran's military personnel is much higher than all Arab countries of the Persian Gulf combined (again, excluding Iraq) is an important factor in explaining Iran's relatively lower per capita military expenditures. The relatively large size of Iran's military force reduces the need for the imports of sophisticated Western weaponry in an effort to protect the regime and the homeland. This is not to say that Iran does not have a desire for more advanced weaponry. To the contrary, as will be shown in Chapter 6, Iran is the only country in the Persian Gulf with a relatively sophisticated indigenous military industry. The point here is that countries with larger military forces can, under most circumstances, safeguard their security with less sophisticated weapons than countries that have smaller armed forces. Put differently, a nation with smaller military force has to employ more sophisticated weaponry (a more capital-intensive military sector) in order to enhance its military strength against countries that have much larger military manpower. Furthermore, large military imports simultaneously buy varying degrees of protection from the countries that supply the sophisticated weaponry.

A high number of military personnel in the Persian Gulf region proves to be a disturbing factor as its growth rate has been high. Between 1990 and 2005 the number of the Persian Gulf's military personnel increased by about 34 percent.

During this period, all countries except the UAE experienced a positive growth rate in number of military personnel (Figure 5.2), pointing to the

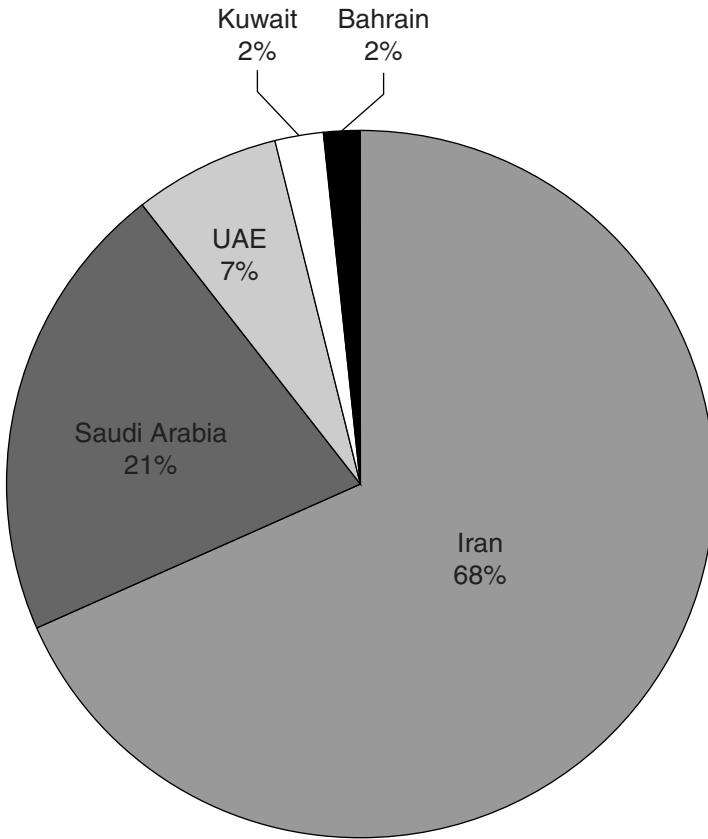


Figure 5.1 1990–2005 average national shares of Persian Gulf military personnel

fact that more and more of the Persian Gulf’s population is attracted (or in some cases forced) towards the military sector, which again is not surprising given the high levels of military expenditures, conflicts and unemployment in these countries.

Figures 5.3 and 5.4 below provide more evidence of the prominence of the military sector in the Persian Gulf countries. As seen in Figure 5.3, more than 1 percent of the Persian Gulf’s population is in the military sector, with Bahrain and the UAE having considerably higher ratios. If one considers the fact that about 80 percent of the UAE’s population are expatriate workers, the ratio of military personnel to native population would jump up to about 11.5 percent, a number that is significantly higher than other countries of the Persian Gulf and may be the highest such ratio

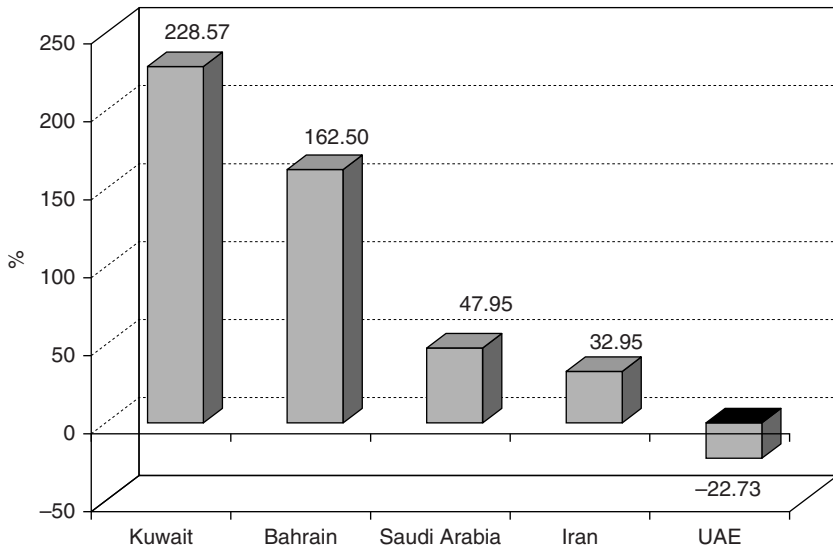


Figure 5.2 1990–2005 growth rate of military personnel

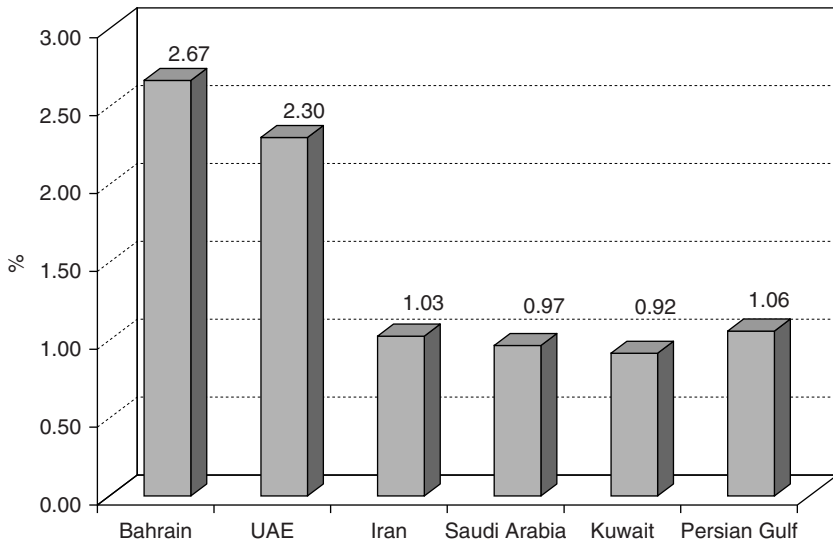


Figure 5.3 1990–2005 average annual ratio of military personnel to population

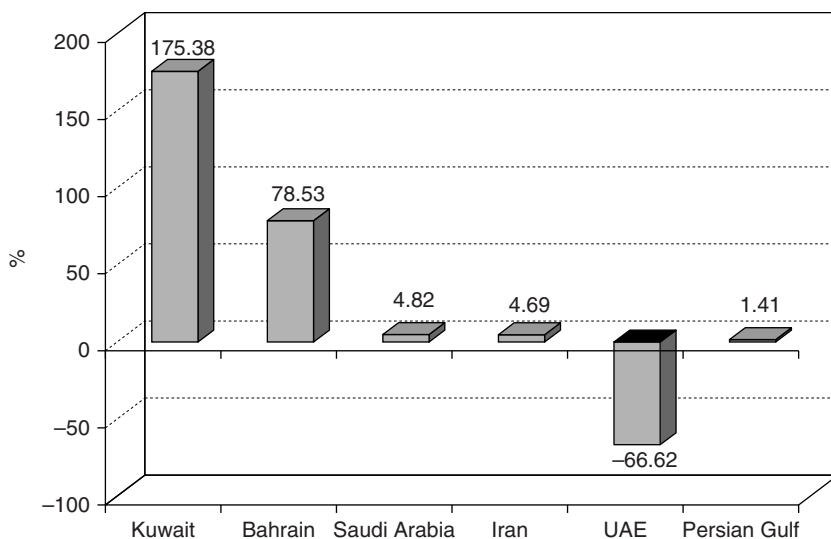


Figure 5.4 1990–2005 growth rate for ratio of military personnel to population

in the world. The reasons for such a high figure for the UAE are quite understandable. The UAE is rich; foreigners make up about 80 percent of the labor force and do most of the work, especially the work that natives cannot, or will not, do; domestic security is fragile; citizens need employment; and foreigners cannot be trusted to provide security and defense.

The growth rate of the percentage of the population in the military is presented in Figure 5.4. The positive growth rate for the Persian Gulf region as a whole is indicative of the fact that the growth rate of the number of military personnel is larger than the growth rate of the population, with Kuwait and Bahrain having significantly larger growth rates. The significant negative growth rate of the UAE is due to a combination of factors: the decreasing number of its military personnel, an increasingly capital-intensive military sector (that is, more sophisticated imported weaponry), international defense agreements (principally with the United States), and its rapidly increasing population resulting from the massive inflow of low-skilled labor from South Asia in 1988–2005.

Another interesting statistic (Figure 5.5) is the ratio of military personnel to labor force. It is clear from these figures that the military sector in the Persian Gulf attracts, both through mandatory military services and through providing much better employment opportunities and benefits, a significant portion of the population and thus the labor force. For many

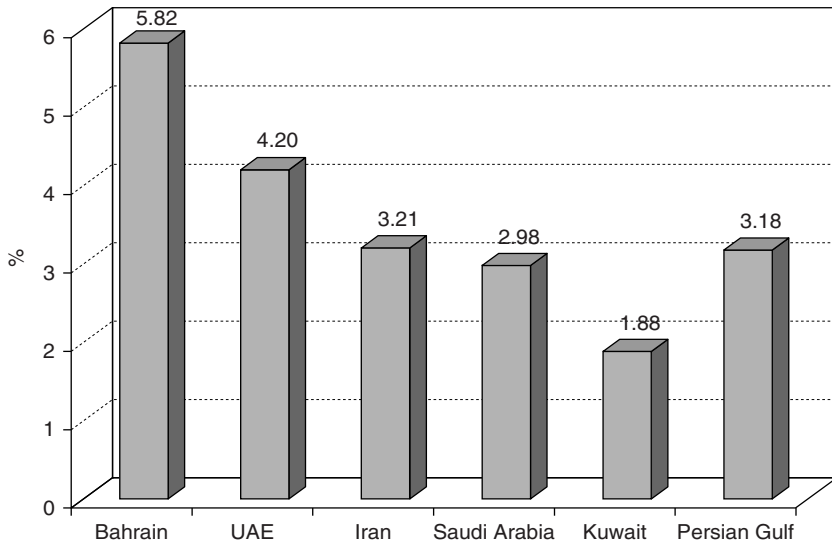


Figure 5.5 1990–2005 average annual ratio of military personnel to labor force

scientists and engineers in the Persian Gulf region, the military sector is the only sector that has adequate funding and capital providing them with access to cutting-edge technology and research facilities. Therefore, there is a strong bias towards the military sector for the technically educated citizens of the Persian Gulf. Moreover, in many Persian Gulf countries, employment in the military sector is often associated with prestige, unchallenged power and influence over civilians, translating into a higher standard of living, through both legal and illegal means.

The Structure of Persian Gulf Military Forces

Although between 1990 and 2005 more than 80 percent of Persian Gulf's active duty military forces were employed in the army and paramilitary branches (Figure 5.6), currently Persian Gulf governments are shifting their resources away from land forces and towards navy and air forces. As seen in Figure 5.7, while the Persian Gulf's army and paramilitary forces experienced a 0.18 percent decline in growth rate during 1990–2005, its navy and air forces grew by 0.80 percent and 1.71 percent respectively. Therefore, there has been a clear shift in the Persian Gulf towards strengthening their navies and air forces. Indeed, this observation goes hand in hand with increasing military expenditures and arms imports in the Persian Gulf.

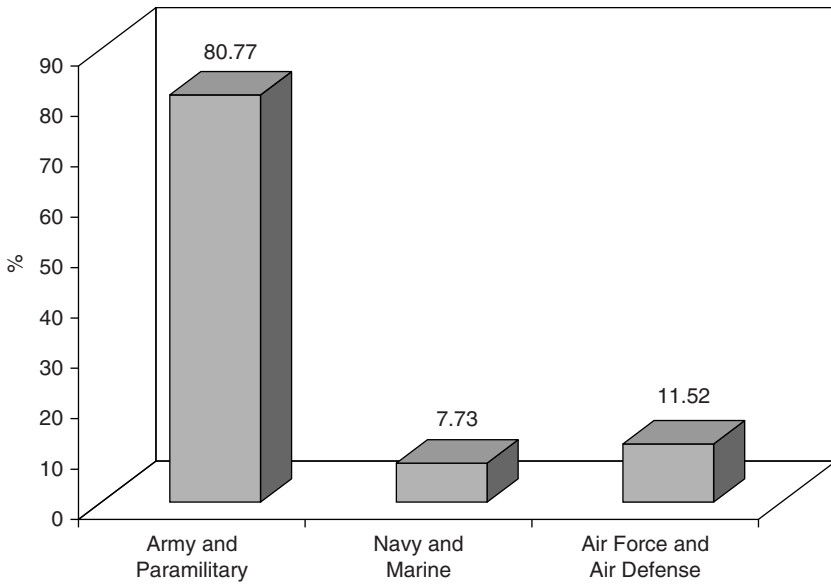


Figure 5.6 1990–2005 composition of active forces in the Persian Gulf

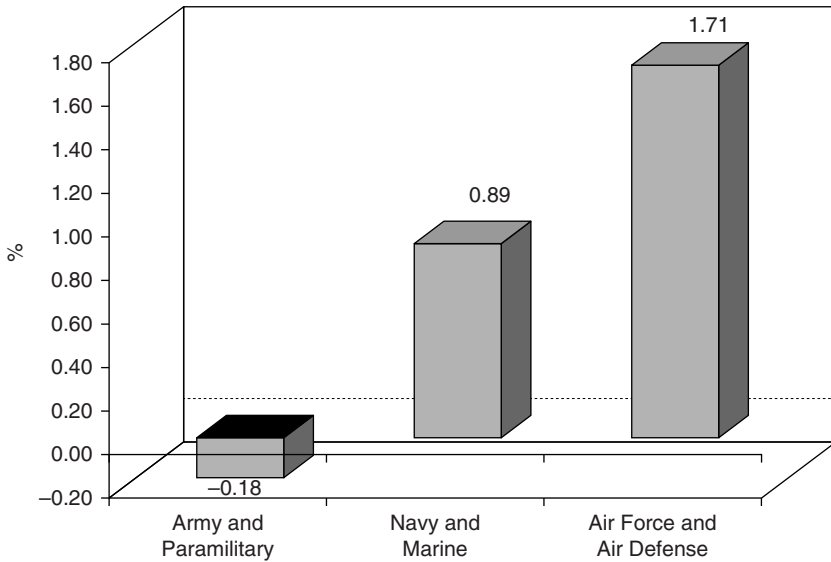


Figure 5.7 1990–2005 average growth rate of active military forces in the Persian Gulf

As the Persian Gulf governments attempt to increase their degree of arms sophistication and military strength, there has been a structural shift towards their air forces where most of the global military research and development (R&D), and thus technical sophistication, are taking place. For example, the highlights of the US\$20 billion arms deal with Arab nations of the Persian Gulf in 2007 were the sale of 900 satellite-guided missiles and the delivery of F-35 Lightning II (stealth-enabled Joint Strike Fighter jets) to Saudi Arabia. Moreover, as part of the same deal, Kuwait and the UAE are to receive several types of missiles and bombs.⁵ Furthermore, Iran has been increasing its domestic R&D on fighter jets and missiles, which is evident through an increasing number of missile varieties and the production of its domestic fighter jets in 1988–2005.⁶

Furthermore, with increasing tensions in the waters of the Persian Gulf and its continuously increasing importance in the regional and global economy, the Persian Gulf countries, most notably Iran and the UAE which have territorial disputes over three strategic islands in the Persian Gulf waters, have embarked on projects to boost the power of their navies in the region. For example, in 1988–2005 Iran was able to purchase several submarines from Russia and has increased the number of its gunboats many times over. Similarly, as will become more evident in Chapter 6, the UAE has established a naval manufacturing center, where several types of militarily oriented boats are produced.

5.3 PERSIAN GULF MILITARY PERSONNEL: A GLOBAL PERSPECTIVE

Although during the period 1990–2005 the absolute number of military personnel in the Persian Gulf region was, on average, the lowest in comparison to other regions (Figure 5.8), it was the second-highest, following the Non-PG MENA very closely, in terms of military personnel as a percentage of population (Figure 5.9) and was more than double the world average.

Furthermore, having an almost 50 percent higher growth rate of the number of military personnel than the world average, the Persian Gulf region had the fourth-highest growth rate of the number of military personnel on the international scene (Figure 5.10). However, a closer look at the growth rate of number of military personnel in the world reveals the following facts in comparing the relative position of the Persian Gulf:

1. Regarding the growth rate figure for Europe and Central Asia: there was a considerable jump in the number of military personnel from 1991 to 1992. This reflects the inclusion of Central Asian countries in

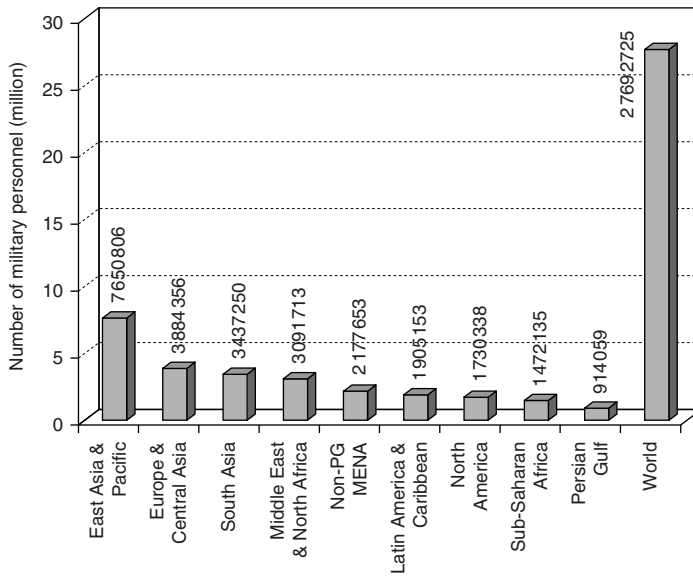


Figure 5.8 1990–2005 average annual size of military personnel

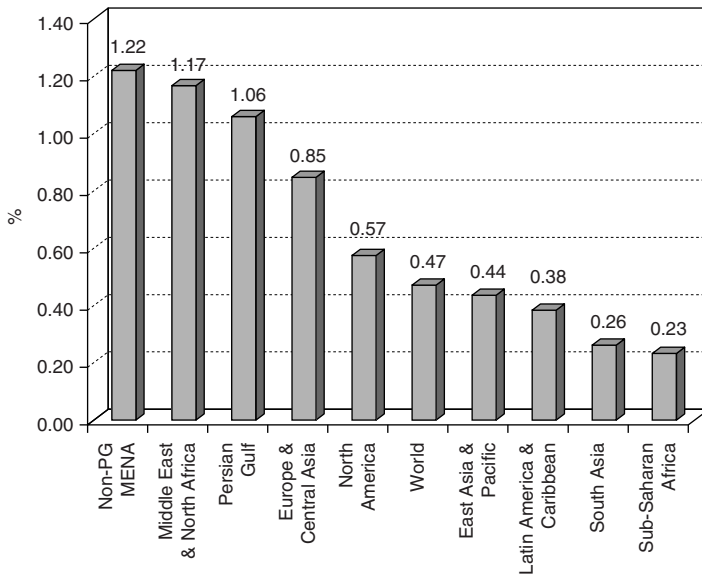


Figure 5.9 1990–2005 average annual ratio of military personnel to population

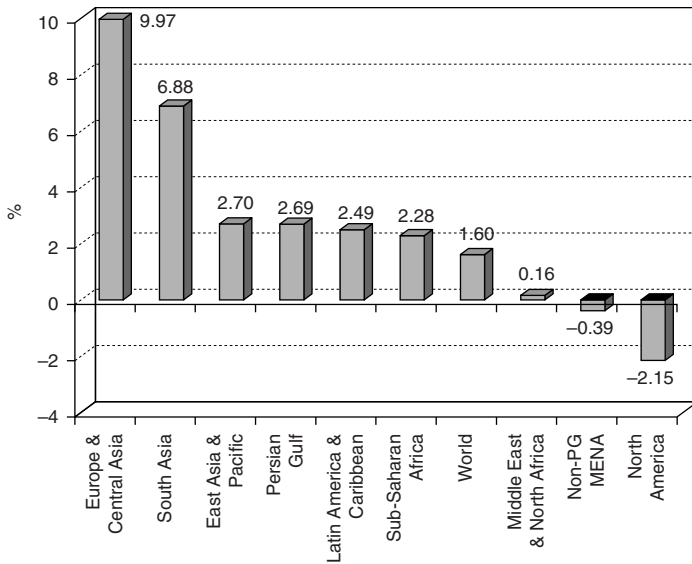


Figure 5.10 1990–2005 average annual growth rate of number of military personnel

the dataset alongside with Europe. Therefore, if the huge growth rate of 1992 were left out, the average annual growth rate for the period of 1990–2005 would be -0.53 percent.

- Regarding the growth rate figure for South Asia, which includes India and Pakistan: due to their long-standing animosity, both of these countries have been increasing their military size rapidly. This has become especially the case after both countries gained access to nuclear weapons. The data indicate that during 1990–2005, Pakistan had an average growth of 4 percent per year while India had an average growth rate of 7 percent per year.
- Regarding the growth rate figure for Latin American and Caribbean, which includes Brazil: the indicated positive growth rate for Latin America is mainly due to the surge in the number of Brazilian military personnel in 1995. From 1994 to 1995 Brazil experienced a 130 percent increase in the number of its military personnel. If one excludes Brazil from the analysis, one sees that the rest of Latin America and the Caribbean has actually been experiencing an average decline of -0.72 percent per year.

In light of these observations, we may conclude that although the Persian Gulf region has the fourth-highest growth rate of number of

military personnel, this regional ranking would be much higher had it not been for special and non-systematic factors in the three other regions mentioned above.

5.4 CONCLUSION

In comparison to other regions of the world, the Persian Gulf has almost the highest ratio of military personnel to total population, second only to the broader Middle East, and has had one of the highest growth rates of its numbers of military personnel. Given its population, Iran has the highest number of military personnel in the region, but the UAE and Bahrain have by far the highest ratios of military personnel to population because of their small indigenous populations and substantial wealth.

These facts fit the overall pattern of the militarization of the region; as we saw in Chapters 3 and 4, in the Persian Gulf a considerable amount of capital is allocated to the military sector. Given that in all models of economic growth and development, capital, labor, and technology are essential inputs for economic growth, the size of military expenditures and number of personnel in these countries is reducing the availability of at least two essential factors for private sector growth. As we will see in the next chapter, the growth of an indigenous military industrial complex may be reducing the availability of technical manpower, and thus civilian technology also, for the private civilian sector. It is, therefore, no wonder that economic growth and development has been impaired in the region. These facts, when combined with the cost of regional conflicts, may point to one of the major causes for the sub-par economic growth of the region and the resulting social malaise.

NOTES

1. World Bank, *World Development Indicators 2007*.
2. Ibid.
3. Kinfu, Yohannes, Jenny X. Liu, Mario R. Dal Poz and Richard M. Scheffler, "Forecasting the Global Shortage of Physicians: An Economic- and Needs-Based Approach," *Bulletin of the World Health Organization*, Vol. 86, No. 7, pp. 497–576.
4. Country data are from the World Health Organization, and the authors have done the calculations (Source: *ibid.*).
5. Pincus, Walter, "A New Arms Race in the Gulf," *Washington Post*, p. A13.
6. This issue will be discussed in some detail in Chapter 6.

6. Indigenous military sectors in the Persian Gulf

6.1 INTRODUCTION

Among the five countries under analysis in the Persian Gulf (Bahrain, Iran, Kuwait, Saudi Arabia, and the UAE), three countries, namely Iran, Saudi Arabia, and the UAE, are rapidly developing their domestic military industrial capacity. Iran has by far the most advanced domestic military sector in the Persian Gulf and one of the most developed in the Middle East and North Africa (MENA) region. Before analyzing each country's domestic military industry, two tables are presented as a broad introduction.

In Table 6.1 we present the level of long-term full-time employment in the arms industries of the Persian Gulf countries. Clearly, this table indicates that Iran is heavily promoting its domestic arms industry in comparison to other Persian Gulf countries. The most important motivation for this phenomenon has been the three-decade-long US-led international trade embargo of Iran, pushing Iran toward self-reliance on a number of technological fronts, including the arms industry in an effort to reduce its dependence on foreign military equipment.

Table 6.2 is indicative of the fact that the Arab countries of the Persian Gulf are responsible for the majority of the arms exports during the period 1988–2005. This might seem contradictory to the statement that Iran's domestic arms industry is the most advanced in the Persian Gulf. This contradiction is resolved when one is reminded of the various sanctions, including a trade embargo, imposed on Iran after the US hostage crisis in 1980 until now, and that a higher amount of arms exports does not necessarily indicate a more advanced domestic arms industry. It could very well be the case that the Arab Persian Gulf countries sell their used military hardware to less developed countries, which is recorded as exports of arms in their trade balance. The evidence for this claim is that:

1. Between 1988 and 2005, Bahrain is only recorded to have arms exports for 2001.
2. Between 1988 and 2005, Kuwait is only recorded to have a huge arms export for 1998.

Table 6.1 1990–2002 employment in the arms industry

Employment in the arms industry	1990–2002
Bahrain	0
Iran	45000
Kuwait	0
Saudi Arabia	5000
UAE	0
Persian Gulf	50000

Source: Staelenheimer et al. (2008).

Table 6.2 1988–2005 arms exports (constant 2005 US\$ million)

Arms exports (constant 2005 US\$ million)	1988–2005
Bahrain	2.16
Iran	16.23
Kuwait	107.13
Saudi Arabia	41.12
UAE	99.55
Persian Gulf	277.02

3. Between 1988 and 2005, Saudi Arabia is only recorded to have arms exports for 1996 and 2005.
4. Between 1988 and 2005, the UAE is recorded to have arms exports for the years 1990, 1995–97, and 2004–05.
5. Between 1988 and 2005, Iran is recorded to have arms exports for the years 1988–97, 2002, and 2004–05.

Therefore, one can clearly see that although much smaller in quantity, Iran has been exporting arms to other countries on a more or less continuous systematic basis in comparison to the Arab Persian Gulf countries. There are also unconfirmed indications that the exports of Arab countries consist largely of re-exports of second-hand equipment. In the following short analysis we will argue that Iran's domestic arms industry is the most advanced in the Persian Gulf region, followed by Saudi Arabia and the UAE.

A note is in order here. The data presented above for Iran might not be accurate they are based on Iran's claims and on available news articles. The above data are only presented as a starting point and more needs to be done to determine a more reliable figure for the military exports of the

Persian Gulf countries (especially that of Iran which is under economic embargo and is secretive about its arms trade) and their military industrial employment.

6.2 IRAN

General

The United Nations Security Council's (UNSC) 2007 Resolution 1747 bans Iran's arms exports;¹ however, Iran claims that it annually exports more than US\$100 million-worth of military equipment.² According to Iranian Defense Minister General Mostafa Mohammad-Najjar, Iran is exporting military equipment to 57 countries in the world,³ including members of the North Atlantic Treaty Organization (NATO).⁴ Mohammad-Najjar has stated that the equipment and weapons are of advanced quality, attracting customers from around the world. He explained that sanctions have not led to negative effects, but rather have allowed Iran to become highly motivated and self-sufficient in its military and defense industries.⁵

Furthermore, assistance from Russia, China, Pakistan, and North Korea has created a powerful military-industrial complex, which employs directly and indirectly more than 200 000 engineers, researchers, technicians and skilled workers (a much higher figure than that reported in Table 6.1 because of the contractual and thus short-term employment nature of many of the military research and development projects). According to the London-based International Institute of Strategic Studies (IISS), Iran today produces almost 2000 defense items, such as munitions, aircraft, missile boats, and satellites.⁶

After the Iran-Iraq War, Iran felt vulnerable and threatened. As a result, Iran embarked on a rapid program to produce various military, land, sea, and air equipment, some of which are listed below.

Ammunition⁷

Iran became heavily active in the production of ammunition after the mid-1980s due to the Iran-Iraq war. Today, various kinds of the following ammunitions are being produced by Iran's Defense Industries Organization (DIO): small arms cartridges, cannons, medium caliber, mortar bombs, tank and anti-tank ammunitions, field artillery ammunition, heat cargo shells, signals, hand grenades, mines, fuzes, demolition materials, and commercial blasting.

Small (Man-Portable) Arms⁸

Iran's DIO has been producing a wide range of small arms. The list includes but is not limited to the following: mortar launchers, anti-tank missiles, sub rifles, assault rifles, machine-guns, sub-machine-guns, pistols, shot-guns, sniper rifles, and man-portable rocket launchers.

It is reported that Iran's DIO will become a significant player in the production of RPG-7s. Iranian licensed production of the RPG-7 will account for 4.25 percent of all new man-portable anti-armor and bunker buster weapons production, worth 2.88 percent of the total market value, through 2014.⁹

Land (Heavy) Equipment¹⁰

1. BORAQ personnel carrier.
2. Main battle tanks.
3. Infantry combat vehicle.
4. RAKHSH 4×4 wheeled APC.
5. Tactical vehicle at 5/4, 3/4, and 1/4 tons.
6. Self-propelled gun-howitzer.
7. TAFTAN mine cleaner.
8. Composite armor.
9. Rocket launchers.
10. Gun howitzer.
11. Cannons.
12. Anti-tank guns.
13. Safir jeep.

Naval¹¹

1. Nahang and Ghadir class submarines.¹²
2. Torpedo boat.
3. Fast patrol crafts.
4. Multi-purpose patrol boats.
5. Rocket launcher patrol boat.
6. Moudge class frigate: similar to British Saam class.

Aircraft, Helicopters, and Air Defense

Since 1997 Iran has been mass manufacturing different models of fighter jets, military training aircrafts, civilian aircraft, and helicopters, some of which are listed below:

1. Azarakhsh (Lightning) fighter jet.¹³
2. Saeqeh (Thunderbolt) fighter jet: similar to F-5 and F-18.¹⁴
3. Dorna and Parasto training planes¹⁵
4. Simorgh training plane: similar to Northrop F-5A and F-5B.¹⁶
5. Panha 2091: similar to US AH-1 Cobra attack helicopter.¹⁷
6. Shabaviz (Owl) 2–75 utility helicopter, similar to US Agusta-Bell 205.¹⁸
7. Ababil and Mohajer I/II/III/IV unmanned aerial vehicles (UAVs).¹⁹
8. Mithaq-1: similar to Chinese QW-1, man-portable low to very low altitude surface-to-air missile.²⁰
9. Sayyad-1: similar to Chinese HQ-2, range of 30 miles, surface-to-air missile²¹
10. Fajr-8: surface-to-air missile, similar to S-200.²²
11. Fajr-27: aerial range of 4.4 miles and surface range of 10.5 miles, 8576 mm shell per minute.²³
12. Samavat: anti-aircraft and anti-missile cannon, optically controlled firing system, 1100 rounds per minute.²⁴
13. Various components for its US-made fighter jet fleets.
 - a. Flight avionics and communications gear, two types of engines, airframes, in-flight refueling gear, and flight simulators.²⁵
 - b. “Dumb” (unguided) and “smart” (guided) bombs.²⁶
 - c. Air-to-air, air-to-ground, and surface-to-air missiles.²⁷

Missiles, Bombs, and Torpedoes

1. Short range (<625 miles):
 - a. Shahab-1: range of 205 miles, similar to Soviet SS-1c/Scud-B.²⁸
 - b. Shahab-2: range of 440 miles, similar to Soviet SS-1d/Scud-C.²⁹
 - c. Fateh 110: range of 107–137 miles, based on solid-fuel technology.³⁰
 - d. Zelzal-2: range of 125 miles, similar to FROG-7.³¹
 - e. Fajr-3 and Fajr-5: range of 25 and 45 miles respectively.
2. Medium range (625–1900 miles):
 - a. Fajr-3: range of 1250 miles, avoid radar, hit multiple targets.³²
 - b. Shahab-3: range of 1250 miles, 700 Kg warhead.³³
 - c. Ghadr-110: range of 1600–1900 miles, based on solid-fuel technology.³⁴
 - d. Ahoura: range 1250 miles.³⁵
3. Air-to-air missiles:
 - a. Fatter: similar to US AIM-9 Sidewinder.³⁶
 - b. Sedjil: similar to US MIM-23 Hawk, upgraded to be carried by aircraft.³⁷

4. Naval missiles:
 - a. Thaqeb: submarine-to-surface missile.³⁸
 - b. Kosar: anti-ship stealth (radar-avoiding) missile.³⁹
5. Bombs:
 - a. Qadr: electro-optically guided glide-bomb, similar to US MK-84.⁴⁰
 - b. Zoobin: electro-optically guided glide-bomb, similar to US M-117.⁴¹
6. Torpedo:
 - a. Hoot: similar to Russian VA-111 Shkval, speed of 223 mph (four times a normal torpedo).⁴²

Assistance from China, Russia, Ukraine, and North Korea

Although Iranian engineers have often developed most of the above equipment through copying and reverse engineering from existing models of more technologically advanced military industries from around the world, some exceptions are noteworthy and deserve mention.

While it is unclear whether Beijing continues to provide solid-fuel assistance to Tehran; in the past, Iran's development of a solid-fuel motor industry is believed to have benefited significantly from Chinese assistance. The 1998 Commission to Assess Ballistic Missile Threats to the United States stated that China "has carried out extensive transfers to Iran's solid-fueled ballistic missile program." Solid-fuel propellants offer a number of advantages over those relying on liquid fuel, and most advanced ballistic missile systems rely on solid-fuel technology. Among the advantages are a shorter launch time, easier handling and storage, and the possibility of deploying smaller missiles.⁴³

Even though Russia had made an agreement with the United States in June 1995 not to sign new weapons deals with Iran and to complete delivery of all previously sold arms by the end of 1999, Moscow told Washington in November 2000 that it no longer planned to abide by the agreement. Russian President Vladimir Putin said: "If our Western partners can offer to compensate us for the possible losses if we stopped our activities in the sphere of military-technical cooperation, we can think about it." In a 2001 visit to Russia, Iranian Defense Minister Admiral Ali Shamkhani signed a military cooperation agreement that would reportedly result in hundreds of millions of dollars of new arms deals between the two countries. Though details were not given for the framework document, press reports and analysts from both countries stated that the agreement would pave the way for future Russian sales of fighter jets, tanks, missiles, and naval ships to Iran that could be worth US\$300 million annually.⁴⁴

Iran also cooperated with Ukraine in a transfer of 12 Kh-55 medium-range air-launched cruise missiles capable of carrying nuclear warheads. US officials expressed particular concern about the technical information the countries could likely gain as a result of the transaction.⁴⁵

North Korea has also long been known to be a key supplier of missile technology to Iran. It is reported that Tehran obtained Scud B and Scud C missiles from North Korea during the 1980s. In addition to material assistance, Pyongyang also provided Tehran with technical advice for its ballistic missile programs, according to current and former US officials. Shahab-3 is a 53-foot long, liquid-fueled, road-mobile missile derived from both the North Korean Scud-C and No Dong-1 and constructed with significant Russian technological and material assistance.⁴⁶

Iran's Missile Program and its Capabilities

Iran has an active missile research and development (R&D) program based at the Shahid Hemmat Missile Industries Complex in Tehran. It also has considerable experience with missile development and production. With the initial assistance of North Korea and Russia, Iran successfully developed the Shahab-3 and is believed to have produced at least dozens of these missiles. This missile infrastructure could enable Iran to develop more powerful, intercontinental-range missiles, but it is unclear whether Iran could build and field many such missiles by 2012–15 because missile development can take at least five years. Iran has a well-developed technological and industrial capability to build short-range and medium-range missiles on a large scale, but it must still cross a number of technological thresholds concerning stage separation, propulsion systems, re-entry vehicles, and guidance systems before it could successfully test an intercontinental ballistic missile (ICBM).

The development of these technologies and of a new long-range missile may take at least five years, as was the case for India for its Agni-3. Assuming that Iran begins allocating significant resources toward an ICBM program around 2010, after it has completed the development of its current medium-range Ghadr and Shahab-3B projects, it could possibly test its first ICBM by 2015. Iran would still have to flight-test any new ICBM at least a few times, over perhaps two to three years, before having confidence in this system. In addition, it would initially build only a small number of such missiles. Thus, although Iran might be able to test a rudimentary prototype 10000-kilometer-range ICBM by 2015, it would still take a few additional years after its first test to perfect and deploy a modest number of such missiles that would be a more significant threat to the United States.⁴⁷

Quality of Iranian Arms and Military Technical Advancement

Iran is self-sufficient in manufacturing air defense and radar systems required for its defense, although it may import more sophisticated systems from Russia in the near future as the threat of the US rises. In 2008 Iran started production of a new generation of fighter jets equipped with radar-evading systems. Iran's Air Force Commander Brigadier General Ahmad Miqani said on 4 February 2008 that Iran has completed designing the generation 5 of the fighter jets and has since begun their production. Iran has also successfully designed, produced, and flown the domestically built fighter jet, Azarakhsh (Lightning), and its new generation, the single-seater fighter jet, Saeqeh (Thunderbolt).⁴⁸

In 2005 the Iranian-developed Saeqeh was displayed flying in active formation with (Islamic Republic of Iran Air Force) IRIAF Northrop F-5s. The Iranian-designed and built aircraft is almost a carbon copy of the F-5. It uses the same J-85 engine as its propulsion system but has a twin, outwardly canted vertical tail similar to the Boeing F/A-18. While the Saeqeh is a more than 90 percent copy of the F-5, Iran's Malek Ashtar University of Technology in Tehran has been working for a number of years on a fighter design called the Shafaq. Billed as an "all Iranian" design, this project was advanced under the guise of being an educational exchange program with Russia. The Shafaq is a subsonic aircraft with an empty weight of around 5000 kg, an overall length of about 14 meters and a 12-meter wingspan. It was designed primarily as an attack aircraft and is equipped with seven stores hardpoints—three beneath each wing and one beneath the aircraft's fuselage centerline. It will be powered by one Klimov RD-33 engine—not surprisingly, the same powerplant that is in the MiG-29.⁴⁹

The Iranian Air Force defense specialists have also optimized and successfully test-fired the S-200 surface-to-air missile system. The optimized missile system was successfully test-fired in 2008 in the presence of senior army personnel and government officials. Elaborating on the significant capabilities and advanced features of the S-200 missile, the commander of the Iranian Air Force, Brigadier General Ahmad Miqani described the project's main objectives as examining the efficiency level of passive defense systems against probable threats as well as improving the level of skill and knowledge of the staff.⁵⁰

Customers of the Iranian Arms Industry

Although it is unlikely that Iran will begin exporting a serious quantity of sophisticated arms systems in the near future, Business Monitor

International (BMI) expects significant arms exports to third-world countries, particularly in Africa.⁵¹

In 2006, there were reports detailing illegal shipments of 1000 machine-guns, 45 surface-to-air missiles, M-79 rocket launchers and land mines from Iran to Somalia. The United Nations (UN) stated that Iran promised the Somali Islamists further weapons in return for uranium, presumably for use in Iran's nuclear program. Two Iranians were sent to the Somali town of Dhusa Mareb to negotiate this deal.⁵²

Limited and infrequent sales have also been recorded between Iran and Sudan. In 2008 Iran exported Katyusha 122mm multiple rocket launchers to Sudan.⁵³

Iran has provided Tajikistan with defense facilities. As stated by Iranian Defense Minister Rear Admiral Ali Shamkhani, Iran has agreed to repair Tajikistan's military instruments and train its military staff.⁵⁴

6.3 SAUDI ARABIA

General

Saudi Arabia plans to develop a military industry that would reduce the Kingdom's dependence on foreign suppliers. In 2006 the Saudi Defense Ministry drafted a plan for the development of an industry that would produce and supply spare parts for a range of platforms to the Saudi military and security forces. The plan called for the industry to be established in cooperation with the private sector. "The plan would drastically reduce the cost of military programs by reducing the need to buy spare parts and maintenance at premium prices," an official said. "It would also maintain control over the cost of major projects." Deputy Defense Minister Prince Khaled Bin Sultan has briefed Saudi commanders and senior executives regarding the plan. Prince Khaled has called for the Saudi military to stipulate its requirements to leading companies in the kingdom for the creation of an industry to produce spare parts.⁵⁵

Land Heavy Equipment

Al-Faris armored personnel carriers (APC) production was halted, yet Al-Fahd APCs have been produced and are currently being used by the militaries of Saudi Arabia, Lebanon, Kuwait, Pakistan, and Bangladesh.

6.4 UAE

General

The UAE is steadily increasing its industrial capabilities. From warships to aerial targets and UAVs, the UAE is becoming a source not only to meet the needs of its armed forces but also those of its Arab neighbors.⁵⁶ The 2007 launch of Caracal International LLC, a defense hardware manufacturer, made the UAE an arms manufacturing country.⁵⁷

Major US defense contractors plan to establish a defense industry in the UAE. Boeing and Lockheed Martin have reached separate agreements with the UAE to invest in an aerospace and defense industry in Abu Dhabi. The two US companies would help build facilities and provide training and technology to establish an infrastructure for the maintenance and production of weapons systems. Boeing and the state-owned UAE company, Mubadala Development, signed a memorandum of understanding at the Paris Air Show. Executives stated that Mubadala was selected by Abu Dhabi to lead the UAE defense industry project.⁵⁸

The UAE has secured access to advanced military technology through determined negotiations and by an unprecedented investment in the development of US and European weapons systems that is unique among the Gulf Cooperation Council (GCC) countries. The GCC federation helped fund development of the Black Shaheen cruise missile built by the Anglo-French Matra BAE Dynamics. In January 2000, it signed a memorandum of understanding with the European Aeronautic Defence and Space company (EADS) for possible collaboration on developing the AT-2000 Mako trainer.⁵⁹

The UAE is also moving quickly in laying the groundwork for its new aerospace industry. The state-owned Dubai Aerospace Enterprise said it has acquired investments of up to 20.18 billion dirham, or US\$5.5 billion, in an effort to develop an aerospace industry in Dubai. In 2007, DAE said it would invest up to US\$2.07 billion for a majority stake in New Zealand's Auckland International Airport Ltd., Middle East Newline reported. Executives said DAE also intends to acquire two North American companies, Landmark Aviation and Standard Aero, from the US-based Carlyle Group for US\$1.8 billion.⁶⁰

Small Arms

Caracal-C and Caracal-F semi-automatic handguns: produced by Caracal LLC.⁶¹

Naval

All the products below are produced by Abu Dhabi Ship Building (ADSB) and the information regarding each product is taken directly from their website.⁶²

1. Assault boats: provide effective interception and policing for coastline duty.
2. Landing craft: typical use includes amphibious support operations, vehicle transportation (tanks, trucks, APCs), accommodation for 56 troops and general supply missions.
3. Fast troop carrier: troop deployment.
4. Baynunah corvettes: patrol and surveillance, mine detection and avoidance, helicopter operations, as well as anti-air and anti-surface capabilities.

6.5 QATAR

In 2007, Qatar decided to develop a defense industry that would generate indigenous capabilities in maintenance and production. Government sources said Qatar would institute regulations that require foreign bidders for military contracts to guarantee co-production and technology transfer. The sources said Doha would invite foreign militaries and companies to train a local work force in defense technology. “We don’t simply want to buy weapons off the shelf,” a government source said. “That model is outdated and just reinforces a dependency. We want every major military project to increase our technological base.”⁶³

Qatar has been negotiating with several governments and companies to launch the development of a defense industry. Qatari officials have said that India has already agreed to establish military production and maintenance facilities in Qatar as part of weapons deals. “I believe Qatar wants to break the norm and open the region for new arms suppliers outside the usual Western market that has been dominating the area for a long time,” Abdel Wahab Al Qassab, a strategic adviser at the Qatar Armed Forces Strategic Studies Center, told the *World Tribune*. “India is regarded by most Arab countries as a technologically advanced country with a lot of potential.” Under the accord, India would supply Qatar with technology, expertise, training, and weaponry. Qatar has also discussed similar arrangements with Britain, France, and the US.⁶⁴

6.6 CONCLUSION

Among the Persian Gulf countries, Iran's military industry is by far the most advanced. The main reason for this advancement, as has been pointed out by domestic and foreign scholars and policymakers, has been the US-led trade and arms embargo and Iran's brutal experience during the course of the Iran–Iraq War. Due to the arms embargo and because of a shortage of supplies during the Iran–Iraq War, Iran was forced to re-establish its own military industry, initially established in the early 1970s during the Shah's reign. After the end of its war with Iraq in 1988, Iran was faced with a depleted military stock. In an effort to bring the country into a desired level of military pre-preparedness and power in the region, alongside heavy imports of arms, Iran launched several large-scale R&D and production projects in small arms, heavy land equipment, and air defense industries in the early 1990s. By the mid-1990s, Iran had started its R&D and production cycles in aircraft repair and production and missile technologies. By the end of the 1990s Iran's missile capabilities were internationally recognized. Of course, in its early phases of arms development, Iran benefited greatly from cooperation with China, Russia, North Korea, and Central Asian countries. Furthermore, in its early phases of development, Iran's military industry mainly embarked on copying and reverse-engineering Western and Eastern military equipment. In 1988–2005, Iran has become less and less dependent on arms imports and technical assistance from foreign countries, while Iranian military products are being produced. At the time of writing, not only can Iran supply its domestic conventional military needs, but it is also exporting military equipment to more than 30 countries, the majority of which are in Asia, the Middle East, and Africa.

Based on the reaction of various international actors towards Iran's military industrial development, especially in the area of missile and aerial technology, one can conclude that Iran's military industry is the second most advanced military industry in the Middle East, second to Israel. Iran has been producing its own home-made fighters since the late 1990s. Furthermore, in response to Iran's growing missile capabilities, the Arab Persian Gulf countries, such as the UAE, have purchased sophisticated anti-missile defense system from the US. This, by itself, is an indicator of the threat of Iranian-made missiles.

Indeed both domestic and foreign commentators agree that Iran has accomplished major milestones in its arms industry in the face of tightening arms and economic sanctions. Due to the existing sanctions and recent United Nations Security Council (UNSC) Resolution 1747 banning Iran's arms exports, there are no data on the value of Iran's arms exports

and who its clients are. There is verified evidence that Tajikistan, Sudan, Somalia, and Hezbollah of Lebanon have in the past received Iranian-made arms and/or know-how. Furthermore, the sanctions also prevent accurate information on the quality of Iranian-made military equipment.

In short, one can strongly argue that if it were not for sanctions, Iran's domestic military industry would not have had the opportunity to grow to its current level of sophistication and independence and would have been, at best, only somewhat more advanced than those of the other Persian Gulf countries. Moreover, the continuation of sanctions and Iran's isolation will make Iran more determined and technologically advanced not only in the field of arms technology, but also in other civilian fields such as genetic and biological engineering (which again is worrisome to Western powers due to its potential use in biological warfare).

When it comes to other Persian Gulf countries, Saudi Arabia and the UAE are the only two countries that have some form of domestic military industry, but these are not comparable to Iran. Saudi Arabia has been able to produce an APC, which is being used by only five countries. It is not clear whether the production line of this APC is still active. The UAE has been more active in its naval industry, but has not produced any exports. All the Arab Persian Gulf countries depend heavily on imports, especially from Western countries, to supply their military needs, from the most basic (ammunitions and rifles) to the most sophisticated (missiles and aircrafts). In July 2007 a US\$20 billion deal was signed at state level between the US and the GCC to update the GCC's military equipment in an effort to balance the growing power of Iran in the region. Finally, in recent years all of the Arab Persian Gulf countries have shown the desire and interest to develop their own domestic military industries in an effort to reduce their dependence on foreign arms suppliers. It is not clear how much political will is behind such desires and whether the arms industries of the Arab Persian Gulf countries will develop rapidly in the coming decades.

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7. Militarization of the Persian Gulf: why?

7.1 INTRODUCTION

The reasons for militarization for any region or country are both numerous and different. In Chapter 2, we surveyed the literature on the broad determinants of military expenditures around the globe. In Chapters 3–5, we saw that on a number of dimensions the Persian Gulf region is one of the most, if not the most, militarized region in the world. In this chapter, our purpose is to discuss why this region is so highly militarized. A good place to start is to ask what sets this region and countries apart from others; specifically, we will discuss the “special” characteristics and features of the countries in this region.

As we have mentioned before, this region is known, above all, for its vast oil and gas reserves and the opulent lifestyles of its rulers and privileged class. In large part because of the region’s oil and gas wealth, foreign powers have historically meddled, and continue to meddle, in the internal affairs of these countries. None of the countries are perceived as democratic and pluralistic. The region has been home to some of the worst conflicts since 1980. All the countries are adherents to the Islamic faith and there is a popular Western view that the region is the source of extremism and terrorism. Much of this list would seem to provide sufficient fodder for military expenditures and conflict. All of these factors and more may have affected the region’s economic performance, which has been less than stellar over the period 1975–2005. Let us turn to the potential impact of some of these factors on military expenditures in the region.

7.2 OIL AND GAS RESERVES

The Persian Gulf is home to 61 percent and 42 percent of the world’s proven oil and gas reserves, respectively, and provides 37 percent of the world’s exports of oil.¹ The importance of Persian Gulf energy supplies is increasing on a daily basis because of the region’s share of global reserves

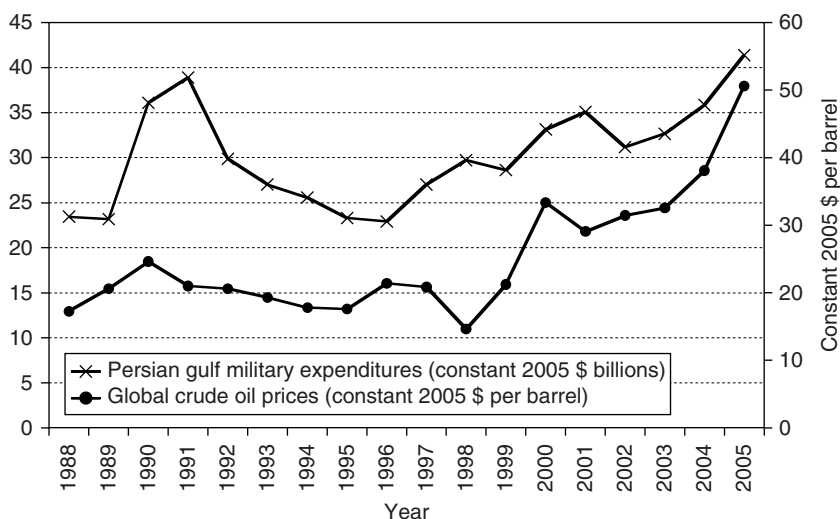


Figure 7.1 Crude oil price and military expenditures: Persian Gulf (1988–2005)

and declining production in a number of other regions, notably in the US and in the North Sea.

At the same time, oil and gas play a critical role in the economies of the Persian Gulf countries. The dependence of these countries on oil and gas, though varied, has been and continues to be significant and multi-dimensional.² Their economic growth has depended on oil prices and oil revenues. Oil and gas export revenues represents over 80 percent of export receipts. Oil and gas is the major source of revenues for the governments as only one of them, Iran, has an income tax system (though not effectively enforced).

What are the channels from oil and gas revenues to military expenditures? There are a number of possible reasons why high oil and gas revenues and reserves may lead to high military expenditures.

First, and most simply, higher oil revenues enable governments to increase all expenditures, which include military expenditures. In turn, oil and gas revenues are so substantial for some of these countries that the resulting military expenditures are also disproportional for the gross domestic product (GDP) and population of these countries in comparison to other countries. In Figure 7.1 we plot real oil prices and real military expenditures in the Persian Gulf; their close relationship is unmistakable.

Second, oil-exporting countries are in a position to spend more money on the military because government revenues are not tax based. As a

result, the citizenry does not feel the financial burden of military expenditures in the same manner as in other countries. Consequently, the government has a freer hand to spend oil and gas revenues on the military sector.

Third, Kuwait, Qatar, and the UAE are the richest oil- and gas-exporting countries on a per capita basis, which allows them freely to make military expenditures.

Fourth, the uneven distribution of oil and gas reserves (and thus revenues) within the region have presented and may continue to present an inviting target to interstate aggression (in the case of Iraq's invasion of Kuwait). The oil and gas reserves of the Persian Gulf countries and their populations are given in Table 7.1.

Assuming oil prices are around US\$60 per barrel (taking the uncertainties in the Persian Gulf region into consideration), Iran and Saudi Arabia's oil and gas wealth would be in the neighborhood of US\$18 trillion each, followed by Qatar (US\$10.8 trillion), Iraq and the UAE (US\$8.4 trillion each) and Kuwait (US\$6.6 trillion).

Such valuable assets present a tempting prize to countries in the more heavily populated areas in the Persian Gulf and to countries outside the region that need oil and natural gas or that are poor. For example, Iraq was more populous and powerful than Kuwait, yet had less in terms of per capita energy reserves. As such, Iraq invaded Kuwait in an attempt to control the energy reserves of Kuwait. Currently, Qatar, Kuwait, and the UAE present attractive targets for aggressors.

Fifth, given their country's large energy wealth, rulers want to remain in power at all costs. This desire probably increases with the size of per capita oil wealth and the degree of autocratic rule. In particular, in countries that are under family rule and are wealthy, namely Kuwait, Qatar, Saudi Arabia, and the UAE, the family rulers diligently work to maintain absolute power and control the distribution of wealth. In their continual quest for more wealth, family rulers resort to military expenditures for three reasons: to "buy" the support of foreign powers (as protection against external attacks and against popular domestic uprising); to keep their military content, to suppress their people; and to use it as yet another avenue to acquire more illegal commissions.

7.3 FOREIGN INTERFERENCE

In large part because of the region's oil and gas reserves, foreign powers have attempted to control the region's oil wealth from the beginning of the twentieth century to the present. This quest began in Iran in 1901

Table 7.1 Oil and gas reserves and population

Persian Gulf countries	Oil reserves (billions of barrels)	Gas reserves (trillion cubic meters)	Oil and gas reserves (billion barrels of oil equivalent)	Population (millions)	Oil reserves per capita (thousands of barrels)	Gas reserves per capita (million cubic meters)	Oil and gas reserves per capita (thousands of barrels)
Iran	138.4	27.58	311.88	65.5	2.11	0.42	4.76
Iraq	115.0	3.17	134.94	24.1	4.77	0.15	6.00
Kuwait	101.5	1.78	112.70	2.3	44.13	0.77	49.00
Oman	5.6	0.69	9.94	2.7	2.07	0.26	3.68
Qatar	27.9	2.564	189.18	0.6	46.50	42.73	315.30
Saudi Arabia	264.3	7.07	308.77	21.9	12.07	0.32	14.10
UAE	97.8	6.11	136.23	3.2	30.56	1.91	42.57

with William Knox D'Arcy who signed an agreement giving him the rights for 60 years to oil deposits in most of Iran (except the north) for the "un princely" sum of £10 000 and 16 percent of the company's profit. Oil was found in 1908 in Masjed Suleiman. In 1909 the Anglo-Persian Oil Company (APOC), also sometimes referred to as the Anglo-Iranian Oil Company (AIOC), the precursor to British Petroleum (BP), was formed. Up until 1948, British taxes on APOC's profits exceeded Iran's share of the profits. The National Iranian Oil Company (NIOC) was formed in 1948 when Mohammad Mossadeq nationalized Iran's oil. In 1953, British and US operatives working hand in hand overthrew Mohammad Mossadeq, Iran's legally elected Prime Minister. After the overthrow of Mossadeq, a consortium was formed, with 40 percent owned by APOC, five American oil companies holding another 40 percent, and Royal Dutch Shell and Compagnie Francaise de Petroles holding 10 percent each, to control Iran's oil.

In 1912, the Turkish Petroleum Company (TPC) was formed to explore for oil in Iraq, with APOC owning 50 percent of the shares and Royal Dutch Shell as another major shareholder. In 1929, oil was discovered and the TPC was renamed the Iraq Petroleum Company (IPC). The IPC held on to Iraqi oil concessions until 1961 when it lost 99.5 percent of its concessions and was totally nationalized in 1971 when the Iraq National Oil Company (INOC) was formed.

The origins of the Arabian American Oil Company (Aramco) go back to the 1933 signing of an oil concession agreement between Saudi Arabia and Standard Oil of California (SOCAL, now Chevron). In 1936 Texas Company (Texaco) joined SOCAL. Oil was discovered in 1938. In January 1944, at the suggestion of the State Department, Texaco changed the name of its operating company to the Arabian American Oil Company or Aramco. Aramco became the operating entity representing Saudi Arabia's interests with the operating companies and with the US government.

In 1945, realizing that his country needed external support for keeping his family in power, and foreign expertise and capital to develop its oil, Abdul-Aziz Al-Saud met President Roosevelt aboard a US ship. The United States would protect the Al-Sauds against internal upheaval and external aggression in return for preferential access to Saudi oil. That was the essence of their understanding, an understanding that has endured the test of time. In 1948, two new partners, Standard Oil of New Jersey and Socony Vacuum, were added to the consortium to bring the operating companies to four. In 1973, the Saudi Arabian government acquired a 25 percent share in Aramco, increased it to 60 percent by 1974 and acquired full control by 1980. In 1988 the company changed its name

from Arabian American Oil Company to Saudi Arabian Oil Company (or Saudi Aramco).

In the Persian Gulf sheikdoms it was difficult for any company to gain access to oil and gas reserves without the approval of the British government because in 1913 the British government had signed an agreement with Kuwait to grant concessions only to companies approved by the British government. After much US pressure, however, the British government agreed to the formation of Kuwait Oil Company (KOC), a 50–50 partnership between the Anglo-Persian Oil Company and Gulf Oil from the US. After World War II, other companies received smaller concessions, principally in the “neutral zone” between Saudi Arabia and Kuwait and in the offshore areas. In 1934 Kuwait’s ruler signed a concession agreement with the KOC. Oil was discovered in 1938. Kuwait started its own oil industry when it formed the Kuwait National Petroleum Company (KNPC) in 1960 with the expressed goal of developing into an integrated oil company. It began with 60 percent government ownership, with the remaining shares held by private Kuwaiti investors. The government bought out the private investors in 1975 and nationalized its oil industry in 1976.

Attacks on British-owned shipping by pirates operating in the Gulf region led to an 1853 treaty between the United Kingdom and Arab sheikdoms. Under this treaty, the sheiks of the “Trucial Sheikdoms” agreed to refrain from piracy in return for British military protection. Oil was discovered in Abu Dhabi in the 1958, which gave the local economy a rapid boost. In 1967 Sheik Zayed bin Sultan Al Nahyan became ruler of Abu Dhabi and the British began losing their oil investments and contracts to US oil companies. In 1971 the British decided to end the treaty relationships with the seven “Trucial Sheikdoms,” thus leading the sheikdoms to unify as the independent state of the United Arab Emirates.

While the historical reasons for foreign interference in the Persian Gulf clearly point to oil, the reasons for the more recent interventions in the region have been more debatable. In the case of the First Gulf War, or the liberation of Kuwait, the US government’s official reason for intervention was to liberate Kuwait from Saddam Hussein’s aggression. The US officially states that its reasons for intervention were independent of the fact that Kuwait has oil. However, three explanations support the hypothesis that US intervention in Kuwait was indeed for oil. First, US intervention has enhanced US interests in Kuwait, at least with the ruling Al-Sabbahs and their cronies. The US did not intervene in Africa when clear and massive genocide occurred. Second, Kuwaiti, Saudi Arabian, and Emirati oil paid for every cent of US costs for liberating Kuwait. Third, the US intervention reassured other Gulf Cooperation Council (GCC) rulers that

the US could keep them in power, enhancing US oil and gas interests far beyond Kuwait.

The US claims that its 2003 invasion of Iraq was motivated by the following factors: getting rid of a tyrant and liberating the people of Iraq; establishing a beacon for democracy in the Muslim Middle East; and getting rid of Saddam Hussein's weapons of mass destruction and thereby reducing an imminent threat against the US and Iraq's neighbors. However, amongst the stated motivations, oil was never mentioned as a driving factor, even though US actions prove otherwise. First, US and other Western interests had supported Saddam Hussein for years, giving him banned chemical and biological weapons, and intelligence. Second, the US talks about democracy but supports all manner of absolute rulers and dictators to further its short-term energy interests. Third, the International Atomic Energy Agency (IAEA) found no evidence of weapons of mass destruction in Iraq. Even if it had, Saddam Hussein had no delivery system to threaten the US, and pointedly he had used weapons of mass destruction on Iran with Western support. However, in what might have been a lapse during the mid-term congressional elections in 2006, President Bush stated that US forces would remain in Iraq for reasons related to oil, and indeed in our opinion, those concerns most likely prompted the campaign to begin with.³

Given America's vast military power, seizing control of such vast energy resources, the lifeblood of the global economy, may appear both alluring and viable. Such a prospect would also allow the US to secure lucrative business contracts. More importantly, by controlling global energy supplies the US would assert hegemony over the entire world without having to invade more countries. But there is even more to the quest for oil and gas.

China's rise has further strengthened the oil calculus, raising the geopolitical and economic stakes even higher. China poses the most prominent challenge to US global domination. Energy could be the key to thwarting Chinese ambitions and keeping Beijing in check, again without firing a shot. Oil could be the strategic weapon of the twenty-first century for asserting global hegemony and control, with Iraq as the key to this quest.

The US hopes that by controlling Iraq and surrounding Iran on all sides, oil- and gas-rich Iran will become more compliant. With the United States in Iraq and with Iran under control, the obliging Arab states would also continue to toe the US line on oil for the foreseeable future. The US could retain all Persian Gulf oil and gas and keep Chinese ambitions at a minimum. The US would thus get a direct financial return from its control of Persian Gulf oil and gas as well as an indirect benefit by keeping China boxed in without military confrontation.

Table 7.2 Arms transfer agreements with developing nations, by supplier, 1999–2006 (constant 2006 US\$ millions)

Supplier	Value (constant 2006 US\$ millions)	%
United States	79 533	37.80
Russia	51 159	24.31
France	14 639	6.96
United Kingdom	13 042	6.20
China	10 119	4.81
Germany	6 146	2.92
Italy	2 645	1.26
All other Europe	18 398	8.74
All others	14 746	7.01
Total	210 427	

Source: Grimmett (2007), p. 48.

7.4 WESTERN SUPPLIERS

There are always two sides to any given transaction: supplier (seller) and demander (buyer). So far, we have analyzed the determinants of military expenditures in the Persian Gulf region from the demand-side dynamics. In order to obtain a more accurate picture of military expenditures in the Persian Gulf, the supply-side factors should also be analyzed.

Based on the September 2007 CRS Report for Congress on Conventional Arms Transfers to Developing Nations: “During the years 1999–2006, the value of arms transfer agreements with developing nations comprised 66.4 percent of all such agreements worldwide.”⁴ As seen in Table 7.2, US and Russian suppliers together were responsible for more than 62 percent of total arms transfer agreements with developing nations during 1999–2006. Moreover, more than one-fourth of such transfer agreements were accounted for by European arms suppliers.

During the same period the Persian Gulf region imported a total of US\$38.8 billion in conventional arms, about 52 percent and 34 percent of which were supplied by US and European arms producers respectively (Table 7.3).

Furthermore, Table 7.4 points to the fact that the Persian Gulf region is responsible for 12 percent of worldwide arms transfer agreements. Furthermore, this region is the destination of more than 16 percent and

Table 7.3 1999–2006 conventional arms transfer to Persian Gulf countries (constant 2006 US\$ millions)

	US	Russia	China	Europe	All Others	Total
Bahrain	700	0	0	100	0	800
Iran	0	1 600	500	100	800	3 000
Iraq	1 000	100	0	1 100	300	2 500
Kuwait	2 900	100	200	0	300	3 500
Qatar	0	0	0	0	100	100
Saudi Arabia	7 200	0	200	8 900	100	16 400
UAE	8 300	800	0	3 000	400	12 500
Total	20 100	2 600	900	13 200	2 000	38 800
%	51.80	6.70	2.32	34.02	5.15	

Source: Grimmett (2007), p. 48.

Table 7.4 1999–2006 suppliers' worldwide and Persian Gulf conventional arms transfer agreements (constant 2006 US\$ millions)

	Worldwide	Persian Gulf	Persian Gulf %
US	123 544	20 100	16
Russia	54 315	2 600	5
Europe	107 772	13 200	12
China	10 861	900	8
All others	20 274	2 000	10
Total	316 766	38 800	12

12 percent of all US and European worldwide arms transfer agreements respectively.

Clearly, then, Persian Gulf countries have been among the most important customers of the global military industrial complex, mainly that of the US. In fact, the arms producers of various nations compete vigorously to the gain access to Persian Gulf arms market due to its frequent and lucrative purchases. As seen in Table 7.2, US and European arms producers control the majority of the arms market in the Persian Gulf. In a report prepared by the Stockholder International Peace Research Institute (SIPRI), 99 out of 100 of the world's largest arms producers are headquartered in the US and Europe. Furthermore, 15 out of 20 of world's largest arms producers are US-based companies.⁵

Therefore, it would be reasonable to expect that various arms producers

in these two regions would try their best to influence the politics of their respective nations in an effort to gain more access to the highly lucrative Persian Gulf arms market. Moreover, given the immense profits associated with arms sales and given the necessity of arms sales in increasing the productivity and efficiency of the arms industry,⁶ the politicians in various developed nations are also motivated to increase their countries' share of the global arms market, 12 percent of which is accounted for by the Persian Gulf countries. Also, military exports to the Persian Gulf are the most effective manner to recycle the petrodollars back into the US economy.⁷ Therefore, the US military industry has experienced increasing growth since 1999. During the 1988–2006 period the revenues of the US arms industry accounted for more than 1.3 percent of US GDP, while the share of the US arms industry in US GDP grew at an annual average of 6.1 percent in the same period.⁸ As a result, it is not unusual that such transfer agreements are managed and brokered by high-level government officials. For example a recent US\$20 billion arms transfer agreement with Arab nations in the Persian Gulf was finalized by the US Secretary of State and Defense Secretary.⁹

Similar to any other industry, an immediate result of such competition among arms-producing companies and their respective governments is easier and faster access of Persian Gulf governments to the latest available technology in the arms industry. Although it could be argued that the main motive behind such competition is purely economic and profit-driven, one cannot ignore the political motives and dynamics behind increasing arms sales to the Persian Gulf region. Such political dynamics was even more strongly present in the Cold War era when Soviet arms producers competed fiercely with North Atlantic Treaty Organization (NATO) arms producers in an effort to gain political influence and alliance in the Persian Gulf region. In short, the increasing willingness and eagerness of arms suppliers and their respective governments (especially that of the US, and to a lesser degree those of Europe) has a significant effect on military expenditures of the Persian Gulf region.

7.5 POLITICAL STRUCTURE

Families largely rule the Persian Gulf countries, the exceptions being Iran and Iraq. While none of the countries can be classified as democratic governments, only Iran and Iraq can claim some degree of electoral legitimacy, and Kuwait a representative parliament with limited powers. In most of the family-ruled countries, especially Qatar, Saudi Arabia, and the UAE, there is no wall between state coffers (oil revenues and sovereign

wealth funds) and the personal accounts and needs of the rulers, affording the rulers unlimited wealth.

In such a political and financial environment, the urge to keep a tight grip on power is undeniable if absolute family rule is to continue. Rulers are not answerable to their people or an effective parliament; thus, the desire to maintain absolute power and the absence of any checks on policies allows rulers to spend as they wish. Military expenditures promote their rule in a number of ways as mentioned earlier: they enable them to buy support of their foreign backers (military contracts for their companies, reduction in the unit cost of military hardware for their own military, and pre-positioned equipment in the Persian Gulf for their own military's use), and support from their own military, and dissuade and fight internal opposition to their rule.

7.6 REGIONAL CONFLICTS

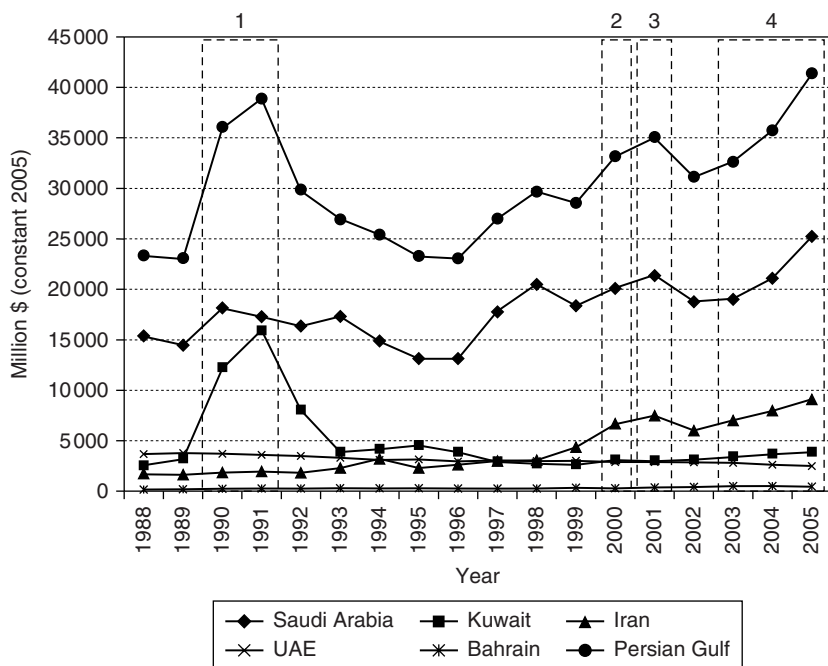
Regional conflicts (discussed in more detail in Chapter 8) have fueled military expenditures, which in turn have fueled regional conflicts (see Figure 7.2). Countries may have still fought wars without sophisticated arms and weapons of mass destruction, and with smaller armies, but the economic and social devastation would have been more limited. The economic costs of these conflicts are discussed in Chapter 8.

7.7 ISLAMIC FAITH

While some observers simplistically connect Islam to authoritarian rule, terrorism, and heavy military expenditures, nothing could be further from the truth. Superficially, some countries that profess the Islamic faith have authoritarian rulers, have high military expenditures, and suppress their people; however, such rulers are not acting according to the tenets of Islam. In actuality, the actions of such authoritarian rulers are a perversion of Islam.

The Islamic treatments of the conscience, free will, and tolerance toward other religions have preoccupied many scholars.¹⁰ Before proceeding to their place in Islam, it may be instructive to begin with one summary of the Western perspective on these topics:

[Human beings] are purposeful and deliberative rather than simply passive, externally determined creatures. It is to believe that the right to religious freedom and conscience rests upon the deep conviction that human beings are



Notes:

1. Iraqi invasion of Kuwait and First Gulf War.
2. Start of the Second Palestinian Intifada (Uprising).
3. September 11 attacks and US invasion of Afghanistan.
4. US invasion of Iraq and its continued presence in the Persian Gulf Region.

Figure 7.2 *Military expenditures and significant conflicts in the Persian Gulf*

fulfilled in being guided by “reasons” and by persuasion, rather than by external “causes” and controls. In short, to conceive of human beings in terms of an indefeasible “right to freedom of thought, conscience, religion and belief, in the words of the Declaration against Intolerance, is itself to affirm and to seek to guarantee the “natural” irreducibility of the human spirit.¹¹

As for the Islamic perspective on this topic, the same authors conclude:

the Qur’an posits, or contains evidence for, a kind of universal guidance which, in its availability to all humanity seems parallel to the Western-Christian idea of a natural moral law. Similarly, careful study of the Qur’an seems to indicate that several notions combine to suggest a personal capacity to know and act on the good that is analogous to Western-Christian conscience . . . [the Qur’an] implies the personal, inward nature of faith, or of the choosing of faith, which

in the hands of some Christian theologians has produced the doctrine of religious liberty. This idea, made explicit in such Qur'anic verses as "There is no compulsion in religion" (2:256), would seem to be at the heart of Qur'anic teaching on the relation between God and humanity. It would also seem to have important implications for any Islamic polity; it certainly suggests a number of possibilities for the discussion of human rights in relation to the cultures of the West and Islam.¹²

And in comparing the two religions: "And thus Christianity presents us with problems as well as possibilities for human rights discussion no less, it seems, than does Islam."¹³

The basic Islamic doctrine that forms the foundation of religious and democratic pluralism is that mankind is but a single community. This assertion is best illustrated by quoting Sachedina on the subject:

In the citation that introduces this Chapter (K. 2:213), three facets emerge: the unity of humankind under One God; the particularity of religions brought by the prophets; and the role of revelation (the Book) in resolving the differences that touch communities of faith. All three are fundamental to the Koranic conception of religious pluralism. On the one hand, it does not deny the specificity of various religions and the contradictions that might exist among them in matters touching on correct belief and practice; on the other, it emphasizes the need to recognize the oneness of humanity in creation and to work toward better understanding among peoples of faith.

The major argument for religious pluralism in the Koran is based on the relationship between private faith and its public projection in the Islamic polity. Whereas in matters of private faith, the position of the Koran is non-interventionist (i.e., human authority in any form must defer to the individual's internal convictions), in the public projection of that faith the Koranic stance is based on the principle of coexistence, the willingness of a dominant community to recognize self-governing communities free to run their internal affairs and coexist with Muslims.¹⁴

Sachedina further elaborates:

Instead of regarding this diversity as a source of inevitable tensions, the Koran suggests that human variety is indispensable for a particular tradition to define its common beliefs, values, and the traditions for its community life:

"O humankind, We have created you male and female, and appointed you races and tribes, that you may know one another."¹⁵ (K. 49:14)

And:

Instead of denying the validity of other human experiences of transcendence, Islam recognizes and even confirms its salvific efficacy within the wider boundaries of monotheism:

“Surely they that believe, and those of Jewry, and the Christians, and those Sabaeans, whoso believes in God and the Last Day, and works righteousness—their wage awaits them with their Lord and no fear shall be on them, neither shall they sorrow.”¹⁶ (K. 2:62)

And as Sachedina rightly concludes: “The unique characteristic of Islam is its conviction that belief in the oneness of God unites the Muslim community with all humanity because God is the creator of all humans, irrespective of their religious traditions.”¹⁷

Islam, if practiced as written in the Quran, is an inclusive and not an exclusive religion. Tolerance towards other religions is at the root of Islam. Yet today and throughout recent history, Muslim fundamentalists, both those who rule and those who aspire to rule, have adopted a posture that is exclusivist and thus in our view anti-Islamic. As Sachedina points out, Muslims must embrace the principle of Quranic coexistence if they are to realize the civil society that was encouraged by the Prophet.

The Quran stresses that all members of the human race, regardless of any differences in gender, religion, and ethnicity, share the same essence (*nafs*)¹⁸ and are considered by God to be inherently identical.¹⁹ Any form of discrimination against members of the Muslim community or *ummah*—including any non-Muslims living within it—is therefore strongly condemned and prohibited by Islamic law.²⁰ Non-Muslim communities living within the *ummah* have the same social, economic and religious rights as Muslims. They may adhere to their own religious laws and customs, and can set up their own religious institutions.²¹ No individual is required to practice or convert to the Islamic faith if he or she is living under the auspices of a predominantly Muslim state.²² The *ummah* must uphold the safety and security of its non-Muslim communities, and is expected to confer and cooperate with them on public policy issues.²³ Ali Ibn-Abitalib, the fourth Caliph of the Islamic society after the demise of the Prophet, wrote the following in a letter to his newly appointed Governor of Egypt:

Remember Maalik that amongst your governed there are two kinds of people: those who have the same religion as you have; they are brothers to you in religion, and those who have religions other than that of yours, they are human beings like you. Men of either category suffer from the same weaknesses and disabilities that human beings are inclined to, they commit sins, indulge in vices either intentionally or foolishly and unintentionally without realizing the enormity of their deeds. Let your mercy and compassion come to their rescue and help in the same way and to the same extent that you expect Allah to show mercy and forgiveness to you.²⁴

Thus culturally, ethnically and religiously distinct communities may live freely within an Islamic state and have the same economic and social rights

as the Muslim *ummah* and their rights should be protected by the Islamic government.

The Quran grants men and women equal religious, social, and economic rights. Both sexes are expected to adhere to Islamic ethical standards,²⁵ participate in civil society, and play a role in the formation of public policy.²⁶ Men and women may both own property, and must be granted equal access to education and social benefits. Both genders must strive to enhance their intellectual capacity, maintain their health, and contribute to the social and economic development of the state.²⁷ They are both expected to work—and are permitted by Islam to work in virtually every field of work—and have the right to become financially independent.²⁸

There is little disagreement when it comes to the role of the state in Islam. For example in Ul Haq's words the message is:

The purpose of the Islamic political order or the objectives of the Islamic state can be summarized as follows: to prevent injustice and to establish all-encompassing justice—legal, social, economic, and political; to ensure freedom, dignity and equality of all; to enable all Muslim men and women to realize the ethical goals of Islam, not only in their beliefs, but also in the practical spheres of their lives; to ensure to all non-Muslim citizens complete physical security as well as complete freedom of religion, of culture, and of social development; to defend the country against internal subversion and external aggression; and to create an environment conducive to the teaching and the preaching of Islam.²⁹

No matter which school of thought one subscribes to, rulers in many instances are responsible for failure in Muslim societies. Rulers and governments earn legitimacy to the extent that they uphold Islamic principles. For Islamic society to succeed, there is the presumption of justice and ethical order on earth. There is a clear sense that rulers should be chosen by the people. But there is no detailed clear-cut prescription as to how this should be done. For instance, it would be perfectly permissible in Islam to have a democratic vote. And yes, women should have a vote and should be eligible for any public office. A modern-day example of the importance of choosing rulers was the insistence of Grand Ayatollah Ali Sistani on direct elections in Iraq in 2005. Elections in Iran, for example, present the following problem: in that country it is argued that candidates who do not possess proper Islamic credentials should be excluded from candidacy. The practical problem with this interpretation of Islam is that it is open to human corruption; the unelected committee (the Council of Guardians) that excludes candidates can be (and is) motivated by political as opposed to religious considerations. Moreover, an educated electorate (an Islamic requirement of the state) could decide for itself on the qualification of candidates. While these serious questions of representation do

exist, Islam in its purest form dictates that the people should choose their rulers. Although governments should be chosen by the people and rules obeyed in Islam, there is clearly room for dissent. Ul Haq provides a good summary in this regard:

The limits of allegiance to a government have also been given by the Prophet. He states: "No obedience is due in sinful matters; behold obedience is due only in the way of righteousness" and "No obedience is due to him who does not obey God." For such situations as outright immoral and illegal behavior or unjust policies on the part of government, the Prophet has made it virtually obligatory for Muslims to speak up and stand up for justice: "The highest kind of self-exertion (*jihad*) is to speak the truth in the face of a government that deviates from the right path."³⁰

As Islam preaches the coexistence of different races and religions, so it also advocates the peaceful resolution of differences. In Islam war is seen as an illness and the worst thing known to man.³¹ Similarly, the killing of innocent people and violence are antithetical to Islam. The taking of innocent hostages as pawns, and terrorist attacks on innocent civilians, are clearly forbidden in Islam. Conflicts are always to be resolved through dialogue and peaceful means, not through hostilities and war. Only peace and the pursuit of peace are great achievements to be praised and rewarded.

If these are the preaching of the Quran and of the Prophet Mohammad, then how can anyone connect Islam to heavy military expenditures, violence, and wars?

7.8 SUMMARY

Although we have not built a sophisticated econometric model to explain military expenditures in the Persian Gulf, in our view the fundamental reasons are numerous and evident from an examination of the data.

First, the availability of significant oil, and more recently gas, revenues has provided a seemingly simple source of funding for military expenditures. Second, because the per capita distribution of oil and gas reserves is so varied in the region, there is a built-in source of instability in the region, which is reinforced by a number of other considerations. Third, family and undemocratic rulers have embraced high levels of military expenditures to subdue their citizenry, to win foreign support and backing, and for aggression or legitimate defense. Fourth, as the home of more than 60 and 40 percent, respectively, of global oil and gas reserves, the region is a target for foreign states who insist on securing their own energy and commercial interests. Fifth, in such a setting devastating conflicts have been frequent;

conflicts have been fueled by sophisticated military hardware, with conflicts and the destruction of hardware encouraging further military expenditures, a veritable vicious cycle. Sixth, this cycle has exacerbated the attainment of economic and social progress, in turn fueling further dissatisfaction and conflict. Seventh, foreign powers have encouraged heavy military expenditures on the part of their client states as pre-positioning for their own regional intervention and commercial considerations.

Given such a vicious cycle of military expenditures, conflict, and further military expenditures, the Persian Gulf will need a truly concerted effort, with the support of outside powers, if it is to turn this vicious cycle into a virtuous one. Before we look at such an effort in Chapter 9, we turn next to the far-reaching effects of military expenditures and conflicts, in Chapter 8.

NOTES

1. All energy data in this chapter are from British Petroleum, *BP Statistical Review of World Energy June 2008*.
2. For details see Askari, Hossein, *The Middle East Oil Exporters: What Happened to Economic Development*.
3. Baker, Peter, "Bush Says US Pullout Would Let Iraq Radicals Use Oil as a Weapon," *Washington Post* (Source: <http://www.washingtonpost.com/wp-dyn/content/article/2006/11/04/AR2006110401025.html>).
4. Staelenheimer et al. *SIPRI YearBook 2008*, pp. 374–82.
5. Grimmett, R., "Conventional Arms Transfer to Developing Nations, 1999–2006," *CRS Report for Congress*, p. 4.
6. Foreign arms markets create the extra demand needed for the increases in efficiency and productivity which are often associated with economies of scale.
7. Many economists (Chan, 1980; Bobrow, 1977; Ray, 1976; Willrich, 1975) argue that in the face of increasing dependence on Persian Gulf oil, and crude's increasing prices, the most effective means for the US government to address its increasing trade deficit with this region has been by increasing arms exports to this region.
8. Source: www.defensenews.com.
9. Wright, Robin, "US Plans New Arms Sales to Gulf Allies: \$20 Billion Deal Includes Weapons For Saudi Arabia," *Washington Post*, 28 July 2007, p. A01.
10. This section is taken and adopted from Askari, Hossein, *The Middle East Oil Exporters: What Happened to Economic Development?*
11. Little, David, John Kelsey and Abdulaziz A. Sachedina, *Human Rights and The Conflicts of Culture: Western and Islamic Perspectives on Religious Liberty*, p. 26.
12. *Ibid.*, pp. 91–2.
13. *Ibid.*, p. 94.
14. Sachedina, Abdulaziz A., *The Islamic Roots of Democratic Pluralism*, pp. 23–4.
15. *Ibid.*, p. 27.
16. *Ibid.*, pp. 27–8.
17. *Ibid.* p. 28.
18. *Nafs* may also be defined as "self; person; soul; life" (*ibid.*).
19. Mirakhor, Abbas, "Outline of an Islamic Economic System," *Zahid Husain Memorial Lecture Series—No. 11*. Verses supporting this assertion, Quran 49:13: "Behold, We have created you all out of a male and a female, and have made you into nations and

tribes, so that you might come to know one another.” Also see the Prophetic verse (*hadith*): “We are all children of Adam and Adam was of dust.” (Source: Ul Haq, Irfan, *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*.)

20. The Prophet is reported to have said: “Those who commit an act of aggression against a member of the non-Muslims, who usurp his rights, who make any demand upon him which is beyond his capacity to fulfill, or who forcibly obtain anything from him against his wishes, I will be his [that is, the oppressed’s] advocate on the Day of Judgment.” He is also reported to have said: “He who harms a non-Muslim harms me, and he who harms me, harms God” (Source: Ul Haq, Irfan, *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*).

See also Quran 29:46: “And do not argue with the followers of earlier revelation otherwise than in a most kindly manner—unless it be such of them as are bent on evildoing—and say: ‘We believe in that which has been bestowed upon you: for our God and your God is one and the same, and it is unto Him that We [all] surrender ourselves.’” The Prophet is also reported to have said: “He who kills a man from the People of the Dhimma [Non-Muslims living under the protection of an Islamic system of government] will be forbidden Paradise the perfume of which can be smelled at a distance of twelve years traveling.” See Quran 6:108: “But do not revile those [beings] whom they invoke instead of God, lest they revile God out of spite, and in ignorance” (Source: Shirazi, Imam Muhammad, *War, Peace, and Non-Violence: An Islamic Perspective*).

See Quran 2:12: “Nay, but *whosoever* submits his will to God, while being a good-doer, his wage is with the Lord, and no fear shall be on them, neither shall they sorrow.” (Source: Sachedina, Abdulaziz A., *The Just Ruler in Sh’ite Islam*.) Quran 2:23: “And if you doubt any part of what We have bestowed from on high, step by step, upon Our servant [Muhammad], then produce a *surah* of similar merit, and call upon any other than God to bear witness for you—if what you say is true!” This verse can literally be translated as: “come forward with a *surah* like it, and call upon your witnesses other than God . . . to attest that your hypothetical literary effort could be deemed equal to any part of the Quran.”

21. Support in the *Sunnah*: The Prophet granted the Jewish community autonomous status while drafting the constitution of the Islamic state of Medina, and did the same for the Christian community when it came under Islamic dominion. Future Muslim caliphs followed this precedent (Source: Ul Haq, Irfan, *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*).
22. See Quran: 2: 256: “There shall be no coercion in matters of faith.” Quran 9:1: “Disavowal by God and His Apostle [is herewith announced] unto those who describe divinity to aught beside God, [and] with whom you [O believers] have made a covenant.” Disavowal in this context means immunity. Background: the majority of the Meccan population remained polytheistic after Mecca became a Muslim state. The Prophet did not pressure them to convert; they were allowed to live as a religiously autonomous unit within the Muslim community (Source: Shirazi, Imam Muhammad, *War, Peace, and Non-Violence: An Islamic Perspective*).
23. Ul Haq, Irfan, *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*.
24. Nahjul-Balageh, Letter 53: <http://www.balaghah.net/books/nahjulbalaga/letters/letter53.htm#letter53>.
25. Quran 4:124: “. . . anyone—be it man or woman—who does [whatever he can] of good deeds and is a believer withal, shall enter paradise, and shall not be wronged by as much as [would fill] the groove of a date-stone.” See also Quran 40:40, 16:97, 9:71: “And [as for] the believers, both men and women—they are friends and protectors of one another: they [all] enjoin the doing of what is right and forbid the doing of what is wrong, and are constant in prayer, and render the purifying dues [*zakah*], and pay

- heed unto God and His Apostle” (Source: Ul Haq, Irfan, *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*).
26. See Quran 3:195: “I shall not lose sight of the labor of any of you who labors [in My way], be it man or woman: you are all members of one and the same human race, and therefore equal to one another” (literal interpretation). In the *Sunnah* it is reported that Muslim women played an active role in the administration of community life during the early Islamic period in Medina (Source: *ibid.*).
 27. The Prophet deemed “striving after knowledge” to be “a religious duty of *all Muslims*” (Source: *ibid.*).
 28. See Quran 4:32: “Men shall have a benefit from what they earn, and women shall have a benefit from what they earn.” No Quranic verses speak against women working, earning a living, or becoming financially independent; Islam has left it up to society to determine what types of work and training promote growth and development during a specific time period and within a particular socio-economic context (Source: *ibid.*).
 29. Ul Haq, Irfan, *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*, p. 69.
 30. *Ibid.*, p. 73.
 31. Shirazi, Imam Muhammad, *War, Peace and Non-Violence: An Islamic Perspective*.

8. Militarization of the Persian Gulf: the consequences

8.1 INTRODUCTION

In Chapter 2 we argued that, on balance, the negative effects of military expenditures on economic performance are overwhelming. These negative effects include: (1) lower investment in the civilian sector; (2) lower expenditures on health and education; (3) higher civilian unemployment; (4) allocative inefficiencies; (5) lower civilian research and development (R&D); (6) higher budget deficit; (7) higher public debt; (8) higher inflation rate; (9) lower growth rate; (10) more corruption; (11) increased chance of armed conflict; and thus (12) higher rate of destruction of human life and physical capital. We further reasoned that military expenditures in the form of military imports, a high component of military expenditures in the Persian Gulf, have additional negative effects through the balance of payments. At the same time, in cases where there is a positive relationship between higher military expenditures and higher rates of economic growth, it could very well be the case that higher economic growth rates lead to higher military expenditures and not the other way around. While the direction of causation does vary from country to country and time to time, our overall conclusion is that military expenditures have negative effects on national welfare through numerous channels and have little or no economic justification. What have been the fallouts of heavy military expenditures in the Persian Gulf region?

In this chapter, we argue that heavy military expenditures have: fueled costly regional conflicts; placed pressure on government budgets and balance of payments, thus reducing the availability of financial resources for domestic investment and growth; and have increased regional instability with the result that investment, and in particular foreign direct investment, has been adversely affected. All of these factors have contributed to what some might refer to as the region's sub-par, in our opinion disastrous, economic performance.

8.2 MILITARY EXPENDITURES AND REGIONAL CONFLICTS¹

There have been a number of high-profile conflicts in the Persian Gulf region since 1979: (1) the Iran–Iraq War; (2) Iraq’s invasion of Kuwait; (3) Desert Shield; (4) Desert Storm; followed by (5) the US invasion of Iraq in 2003. Military expenditures grew rapidly before, during, and after these conflicts. In turn, these conflicts inflicted heavy economic and social damage on the warring parties and even on other parties who supported (largely through financial means) one side or the other.

From 1975 to 1979 (in the years leading up to Iraq’s invasion of Iran), Iraq dedicated an average of nearly 60 percent of its oil revenues to military spending. Within one year of the Iranian Revolution, Iraqi military expenditures increased by nearly 55 percent, so that by the time Iraq invaded Iran in 1980, it was acquiring almost five times the amount of Iranian arms purchases, spending more than 20 percent of its gross domestic product (GDP) on its military, and had 45,000 more men-under-arms than Iran.

Despite Iraq’s apparent military advantage over Iran, the war between the two countries lasted for eight years before ending in a stalemate in 1988. The combined cost of the war to both countries is estimated to have been well over US\$1.3 trillion²—160 percent of all combined Iranian and Iraqi oil revenues earned from 1975 through 2000, and 2.6 times the amount of all oil revenues earned by both Iran and Iraq from the beginning of the twentieth century until the end of the war.³ Such costs could not have been inflicted without deadly military hardware. Sophisticated military arms and heavy military expenditures, including large armies, fueled these costs.

The estimated economic cost inflicted on Iran is US\$790 billion.⁴ This estimated cost does not include a monetary figure for the loss of human life. At a cost of over US\$4.9 billion per month from September 1980 to July 1988, the war cost about 150 percent of aggregate 1980 to 1988 Iranian GDP and around 160 percent of all oil revenues earned by Iran from 1975 through 2000. Damage to Iran’s infrastructure—which is estimated at US\$257 billion—was equal to almost half of the country’s aggregate GDP from 1980 to 1988.

From September 1980 to July 1988, Iraq suffered an estimated average economic loss (again excluding a monetary figure for human loss) of more than US\$980 million per month, with total economic damage amounting to US\$555 billion.⁵ The war cost Iraq more than 100 percent of its aggregate GDP from 1975 to 2000, and 157 percent of all oil revenues earned during the same 25-year period. Infrastructural damage is estimated at

US\$82 billion—equal to about 60 percent of aggregate oil revenues for 1980 to 1988. Iraq's foreign debt alone amounted to roughly US\$105 billion⁶ by the end of the war—240 percent of Iraqi GDP in 1990, and 116 percent of all oil revenues the country later earned from 1992 to 2000. Thus on the eve of the country's invasion of Kuwait, Iraqi foreign debt by itself was equal to more than two years of 1990 GDP, and the country had suffered war costs amounting to about 1700 percent of all oil revenues earned from 1989 to 1990 and about 130 percent of aggregate GDP from 1980 to 1990.⁷

On August 2, 1990, Iraq invaded Kuwait. The year before its invasion of Kuwait, Iraq spent 61 percent of its central government expenditures (CGE) and 94 percent of its petroleum revenues on the military. By 1990, the country had increased its armed forces by 390 000 servicemen, bringing the total Iraqi armed forces to nearly 1.4 million. Kuwait, despite having increased its level of military expenditures by US\$0.77 billion to 6 percent of GDP from 1988 to 1989, had begun to reduce its number of armed forces following the end of the Iran–Iraq War. Kuwait had only 7000 men-under-arms on the eve of Iraq's invasion, and was swiftly occupied and annexed by Iraq. Between 1989 and 1990, Kuwait increased its military spending by 555 percent. From 1990 through 1992, Kuwait spent a total of US\$56.2 billion on its military, and thus spent an average US\$1.98 million in military expenditures per serviceman during this period. From 1990 to 1992, the country spent an average 101 percent of CGE and 77 percent of GDP on its military. Kuwait's military expenditures alone from 1990 to 1991 were equal to 1083 percent of all oil revenues earned during the same period.

Under Operation Desert Shield, the United States sent troops to protect Saudi Arabia, which had become wary of potential Iraqi encroachment on eastern Saudi oil fields. On January 16, 1990, the United States—with the support of a United Nations coalition of forces that included Arab states (Egypt, Oman and Syria)⁸—began Operation Desert Storm with an aerial bombing campaign that destroyed more than 90 percent of Iraq's power-generating capacity and virtually obliterated the country's infrastructure.⁹ Before consenting to an official ceasefire, Iraqi troops set more than 60 percent of Kuwaiti oil wells on fire, effectively cutting off the economic “lifeline” of the Kuwaiti economy,¹⁰ and inflicting approximately US\$6 billion-worth of damage on the country's oil installations.¹¹ US-led Operations Desert Shield and Desert Storm cost an estimated US\$72 billion, approximately US\$63 billion of which was paid for by other countries: Kuwait, Saudi Arabia, and the other Arab countries of the Persian Gulf (US\$42.6 billion), and Germany and Japan (US\$18.9 billion).¹² Other countries in the region suffered US\$710 billion in lost GDP as a direct result of the war.¹³

The Iraqi occupation and annexation of Kuwait from 1990 to 1991 cost Kuwait US\$130 billion in public and private sector losses, excluding the cost of foregone oil revenues.¹⁴ At the end of the war in 1991, Kuwait was left with reparation costs equal to 1250 percent of its 1991 GDP and almost half of all its oil revenues from 1975 to 2000. The financial cost of the oilfield fires set by Iraq before its withdrawal alone amounted to 56 percent of 1991 GDP and 74 percent of all oil revenues earned by Kuwait from 1990 to 1991, excluding the cost of any foregone oil revenues and lost oil reserves. In 1992, with war damages of 554 percent of 1992 GDP, Kuwait spent US\$22 billion (77 percent of GDP) on military expenditures and began to increase the country's number of armed forces. In 2000, the financial cost of the economic and environmental devastation suffered by Kuwait during the Gulf War and Iraqi occupation (excluding foregone oil revenues and payments made for Operations Desert Shield and Desert Storm) was still about 350 percent of 2000 GDP.

The lesson is clear. The economic costs of these conflicts alone (besides the tremendous human cost) have been unimaginable, and additionally military expenditures increase after wars, whether to replace equipment or to prepare for the next conflict.

The US-led aerial bombing campaign against Iraq inflicted US\$255 billion in economic damage on the country.¹⁵ The cost to replace Iraq's power-generating system alone amounted to US\$24 billion—equivalent to 120 percent of 1992 GDP. Thus in only 43 days, Iraq suffered economic damage that is estimated to be equivalent to about 1100 percent of its 1999 GDP. From 1980 to 1991, Iraq suffered a total loss of US\$809 billion in economic damage, of which total infrastructural damage (resulting from both wars) accounted for US\$106 billion.¹⁶ The economic devastation Iraq suffered on account of these two wars is equal to 6950 percent of the country's oil revenues for the year 2000, and 98 percent of combined Iraqi and Iranian oil revenues earned throughout the entire twentieth century. Thus in only 11 years, excluding the costs of foregone oil revenues, foreign debt, and UN economic sanctions imposed soon after the country's invasion of Kuwait, Iraq incurred damages worth almost one century of oil revenues from two major oil-producing countries. How can any country progress economically under such duress?

Between 1990 and 1999, Iraq's armed forces were reduced by 70 percent to a total of 420 000 servicemen (19.1 per 1000 people). From 1994 to 1999, Iraq spent an average US\$1.4 billion a year on its military—equivalent to an annual average figure of US\$3200 in military expenditures per member of the Iraqi armed forces. In both 1997 and 1999, the country spent 0.1 percent of oil revenues (US\$5 million) on arms imports, so that arms imports accounted for 0.2 percent and 0.1 percent of total imports

during the same years respectively. On March 19, 2003, an international coalition led by the US invaded Iraq in an effort to locate and disarm the country of its suspected weapons of mass destruction.

Iraq, never able to fully restore its infrastructure because of import limitations from UN sanctions, was in dire economic straits on the eve of the war. The economic and social damage wrought by the invasion, which led to the destruction of the country's water and sanitation system, network of fuel supply lines, sewage treatment facilities¹⁷ and most, if not all, of Iraq's social, economic, and scientific establishments, drove the Iraqi economy to an extreme "backward stage."¹⁸ The war instigated a considerable drop in Iraq's oil and electricity production. Oil production, which was operating at a level of 2.5 million barrels a day in the run-up to the war, had virtually ceased by April 2003 and oil was not exported again until June 2003.¹⁹ As of the same year, a reported US\$45.3 billion, excluding cash and gold stolen from bank safes, was looted from banks throughout the country.²⁰ Heavy looting of Iraq's Central Bank and Central Statistical Office after the US invasion makes it virtually impossible to gauge the impact of the war on private economic activity, although it is almost certainly negative.²¹ The Joint Iraq Needs Assessment, which was convened by the UN Development Group and the World Bank Group (with support from the International Monetary Fund) shortly after the major combat ended, in October 2003 determined that Iraq's reconstruction needs from 2004 through 2007 would cost approximately US\$37.4 billion.²² However, the insurgency that ensued against the US-led coalition's occupation of the country after the end of major combat operations has inflicted massive losses in oil revenues that are steadily destroying the country's economy.²³ Iraq's energy infrastructure (including the country's pipeline system) suffered an estimated 123 attacks from April 2003 through September 2004, so that as of June 2005, the country's reconstruction costs were set at a minimum of US\$100 billion.²⁴ The reconstruction of the country's power sector alone will cost an estimated US\$35 billion.²⁵ Thus the economic devastation suffered by Iraq has undeniably increased since the official end of the invasion (May 2003), and will surely have a calamitous impact on the rest of the region's developing economies.²⁶ Within the first 24 days of the invasion of Iraq, the Under-Secretary-General of the UN predicted that the war would ultimately generate a regional loss of wealth worth approximately US\$1 trillion of Middle Eastern GDP.²⁷

An additional factor since the end of the Cold War influencing heavy military expenditures in the region has been the changing relationship of the gross Cooperation Council (GCC) countries and the United States. The dependence of the Arab states of the Persian Gulf on American military support instigated a monumental shift in US military strategy toward

the Middle East and the Gulf region in particular. It quickly became apparent that the end of the Cold War had given rise to the appearance of long-standing ethnic and regional disputes that in turn increased the likely need for coalition defense operations. Thus in order to ensure smooth interoperability between the US and its allies in the Gulf, it was decided that bilateral and multilateral military cooperation between the two would have to be enhanced through the establishment of training and security assistance programs, joint exercises, increased military communication, and foreign military sales.²⁸ Equipment to be used for rapid deployment was soon pre-positioned on numerous American military bases throughout the Persian Gulf region,²⁹ and the number of joint US–Gulf Arab military exercises underwent a considerable increase. US–Kuwaiti exercises, for example, rose from 14 in 1990 to 71 in 1993.³⁰ Moreover, with the reduction in military purchases undertaken by the Pentagon, Saudi Arabia soon became the “largest single customer for American military contractors,” and “almost single-handedly kept alive” at least two US military product lines.³¹

While it is unknown to what extent heavy military expenditures contributed to these phenomenal economic costs, the fact that they contributed to these costs and resulted in continuing military expenditures is undeniable. This is part of a vicious cycle that has devastated a large part of this region and has adversely affected most of its population.

8.3 MILITARY EXPENDITURES AND THE BUDGETARY IMPACT ON PERSIAN GULF COUNTRIES

Military expenditures in the first instance reduce the availability of government resources for productive investment and expenditures, and can contribute to budgetary deficits. Such effects are particularly ominous for countries that rely heavily on oil and gas depletion as a source of budgetary revenues and GDP. Let us start out by explaining the economic implications for an economy of heavy dependence on oil and gas depletion.³²

The owner of a successful income-generating company will have a continuous source of income while maintaining his productive base or asset, namely, the company. An art collector may be rich but have no income whatsoever; he must find a way to generate income from his art collection (charging art enthusiasts to look at his art, for example) or, if this is not possible, he must transform at least some of the wealth that is locked up in art into income-generating assets. If he sells his art collection and spends all the proceeds having a good time, then he will have nothing left and will

no longer be rich. While the company owner is unlike the oil exporter, the art owner's dilemma, the quest for income, is quite similar to the dilemma faced by an oil exporter.

Countries that own large pools of oil are rich in oil but not rich in the normal sense of the word (income generation for all future time), unless they do something productive with their oil. Unfortunately, they have even fewer options than even the rich art collector, because no one in their right mind is likely to pay very much just to look at oil. They thus need to transform their oil into income-generating assets. If they just deplete their oil and build no alternative sources of income, they will enjoy their oil riches and later be poor. In the extreme, if a country such as Saudi Arabia produced all of its oil this year and spent its revenues on consumption, then its national output next year would be significantly lower, because it would have no oil revenues and no alternative sources of income to take the place of oil.

In economies that do not rely heavily on a depletable resource such as oil, economic output, or net national product (NNP), does not diminish with time but indeed can normally be expected to increase with time. In an oil-based economy, if the income from oil is consumed (and, as is the practice, if oil output is counted as a part of NNP), then NNP declines as oil reserves are depleted. So at least a part of current oil revenues must be saved and invested, domestically or abroad, to even out NNP and thus to avoid a decline in national output in the future.³³ Put differently, the conventionally measured NNP in an oil-producing country diverges from the "theoretically correct" measure of NNP for a country that has no depleting resource such as oil. In a sense the conventionally measured NNP for a depletable resource-based economy usually overstates³⁴ theoretically correct NNP because at some point in the future the depletable resource will run out and will no longer contribute to NNP.

While oil (and gas) depletion has implications for economic output over time, it also has important implications for equity across generations. If one generation were to deplete a country's oil and gas reserves and provide little for future generations, then one generation would have robbed all future generations. The issue of equity is thus an important consideration for countries with large and heavy dependence on oil and gas resources.

In the case of the oil-exporting countries of the Persian Gulf, Islam plays the central role in addressing such issues. Islam is very clear in its treatment of land and the depletion of minerals. God created the earth and, as a result, land in its natural form, namely, with no improvements by man, belongs to society at large. Thus if a piece of land is still in its original God-created state, its price must be zero when it is sold.³⁵ Man can only charge a price for land that is equivalent to improvements made on that land since

its creation by God. Most schools of Islamic thought support some variant of the above when it comes to land. When it comes to resources below the ground, Islam is even more unambiguous. Anything underground belongs to society at large: that is, all citizens should have an equal share in the fruits of what is under the land; this applies to both current and future generations. The task for Muslim governments is clear but difficult. First, governments must take control of all minerals. Second, governments must make sure that they do not waste depleting mineral resources, because they are the birthright of all citizens and must be used productively. Third, as minerals are depleted, governments must make sure that they use their revenues in such a way—through consumption and investment—that all citizens today and for all future time receive similar benefits.

While the dictates of Islam are clear, it is evident to every student of the Middle East that no Middle Eastern oil-exporting country has practiced anything remotely approaching Islamic doctrine when it comes to the management of oil resources. Most oil exporters in the region have wasted revenues from oil extraction beyond imagination; this waste is most obvious in the form of costly military expenditures and conflicts, and the corruption and opulent lifestyles of rulers and their cronies. Such expenditures do not provide non-oil sources of income for future generations, much less on an equitable basis.

If governments had managed the exploitation of their oil and the ensuing oil revenues according to Islamic principles, the economic landscape today would be significantly more favorable. Broad social and economic conditions would be far more equitable, affording all citizens among the current generation similar benefits. Their failure will also have implications in years to come: future generations will not reap similar benefits or enjoy comparable opportunities, as do some among the current generation. Fortunately, it is still not too late for the major oil exporters to reverse their policies, because most of them still have significant oil and gas reserves.

From the above brief discussion, our expectation is that during the depletion phase of oil and gas reserves, the expectation is that the countries would have high savings rates, accompanied by current account and budgetary surpluses. How do budgetary balances in these countries compare to those in other countries?³⁶

In Table 8.1 we give a summary of the state of government finances by key indicators for the oil exporters of the Persian Gulf; and in Table 8.2 we provide budgetary balance data for these and some comparator countries and country groups.

A number of the Persian Gulf oil exporters (PGOEs) have had fiscal deficits (as opposed to surpluses) since 1975. This is all the more troublesome

Table 8.1 Central government finances of PGOE: summary snapshot

PGOE countries	1975	1980	1985	1990	1995	2000	2006
Iran, Islamic Rep.							
Revenues (% of GDP)	48.2	21.6	18.8	18.1	25.1	21.0	36.2
Oil as % of revenues (ONLINE)	..	62.1**	40.0**	50.5**	25.2**	67.5**	..
Expenditure (as % of GDP)	47.8	35.7	22.7	19.9	24	21.9	24.8
Current	71.4	77.6	79.4	75.2	67.5	79.4	..
Investment	..	8.6**	4.6**	4.8**	7.2**	5.2**	..
Budget surplus (deficit) as % of GDP	0.4	-13.8	-3.8	-1.8	1.3	-0.6	3.3
Kuwait							
Revenues (% of GDP)	71.6	89.3	58.8	58.7	37.7	80.2**	37.2
Oil as % of revenues	..	69.8	69.7	76.6 ²	68.9*	69.6*	..
Expenditure (as % of GDP)	23.5	27.7	47.7	55.3	51.6	37.0**	26.2
Current	..	59	66.1	88.9 ²	46.8** ³	36.2**	..
Investment	..	17	23.6	11.1 ²	5.4** ³	3.2**	..
Budget surplus (deficit) as % of GDP	41.7	58.7	7.8	0.0	-13.9	32.7**	8.2
Qatar							
Revenues (% of GDP)	72.2	66.4	43.3	47.5 ²	42.2**	38.6**	..
Oil as % of revenues	..	87.8	84.5	70.4 ²	61.9*	78.4*	..
Expenditure (as % of GDP)	53.7	38.2	69.6	50.3 ²	47.4**	31.4**	..
Current	..	71.8	75.6	89.2 ²	39.9**	28.2**	..
Investment	..	28.2	24.3	10.8 ²	7.5**	3.0**	..
Budget surplus (deficit) as % of GDP	18.5	28.1	-26.3	-3.4 ²	-5.3	7.2	..

Table 8.1 (continued)

PGOE countries	1975	1980	1985	1990	1995	2000	2006
Saudi Arabia							
Revenues (% of GDP)	..	70.7	42.5	36.2 ²	31.1**	36.5**	..
Oil as % of revenues	..	75.5	66.2	76.8 ²	72.2*	83.1*	..
Expenditure (as % of GDP)	62.1**	54.7	58.6	39.7 ²	37.0**	33.3**	..
Current	..	48.8	40.5	69.2 ²	28.0**	29.5**	..
Investment	..	51.2	48.8	17.4 ²	5.4**	3.8**	..
Budget surplus (deficit) as % of GDP	..	21.5	-16.1	-8.9 ²	-5.8**	3.2**	..
UAE							
Revenues (% of GDP)	0.1	0.2	1.1	1.6	2.6	44.5**	..
Oil as % of revenues	85.3	95.5	83.3	88.4 ²	55.8*	55.7*	..
Expenditure (as % of GDP)	2.9	12.1	16.2	11.5	12.1	32.0**	..
Current	..	40.6	49.8	63.9 ²	78.1	26.9**	..
Investment	..	50.1	36.1	21.8 ²	..	..	..
Budget surplus (deficit) as % of GDP	1.5	2.1	-0.5	0.4	-0.8	12.5**	..

Notes:

- 1 excludes grants,
- 2 1992,
- 3 1996 data.

Sources: World Bank (2008), numbers in italics are sourced from Askari et al. (1997).

* Okugu (2003).

** Relevant IMF Country Reports or other IMF Data.

Table 8.2 Central government balance (including grants) as a percentage of GDP

	1975	1980	1985	1990	1995	2000	2002	2005
MEOE (Middle East Oil Exporters) Region								
Iran, Islamic Rep.	-0.8	-14.7	-3.7	-2.4	-3.4	8.6	-2.4	6.0
Iraq	..	..	..	..	..	..	..	..
Kuwait	47.6	58.5	7.8	-32.0	-1.9	32.7	20.9	8.2
Qatar	19.2	28.2	0.1	2.8	-5.1	7.2	7.9	9.7
Saudi Arabia	19.8	22.5	-16.1	-14.7	-5.8	3.2	-5.9	..
United Arab Emirates	3.0	0.0	-0.5	0.4	0.5	-0.2	0.0	..
In-region countries								
Egypt, Arab Rep.	-18.9	-9.6	-19.8	-12.6	-1.2	-3.9	-5.9	-5.0
Jordan	-27.9	-24.5	-8.1	-6.4	-3.9	-4.7	-5.0	-5.1
Morocco	-6.2	-11.2	-7.7	-0.6	-5.5	-6.4	-4.6	-4.9
Syrian Arab Republic	-20.5	-5.1	-13.9	-3.9	-3.8	-1.4	-1.6	..
Tunisia	-3.4	-3.3	-5.7	-5.7	-5.2	-3.7	-3.1	-3.2
Out-of-region countries								
Chile	2.6	4.8	-3.2	3.2	3.3	-0.6	-1.2	4.5
Korea, Rep.	-0.02	-0.03	-0.01	-0.01	0.00	0.01	0.02	0.70
Malaysia	-4.0	-2.4	-3.8	-2.9	0.8	-5.7	-5.6	..
Singapore	-0.3	0.7	8.1	11.5	12.2	8.0	4.1	7.0

Sources: Various IMF and national sources.

because these deficits are not reflected in high investment and economic growth as can be seen in the last section of this chapter. Such dissaving is against the interests of future generations. Deficits are also observed for non-oil exporters in the Middle East and North Africa (MENA) region. The overall MENA average deficit was roughly 7.6 percent of GDP in the 1980s and 1990s, compared to 4.4 percent for developing countries as a whole.³⁷ In 1999, the combined budget deficit of the Arab countries was almost US\$31 billion,³⁸ representing almost 5.7 percent of combined GDP. In 2002, however, only Saudi Arabia and Iran—the biggest economies of the region—recorded budget deficits, representing 5.9 percent and 2.4 percent of GDP respectively. Kuwait recorded mostly surpluses, except during the time of its occupation by Iraq, and also had the highest surplus for the region. Of course with significantly higher oil prices from 2003 to 2006, all of these oil-exporting countries, as expected, had budget surpluses, but yet again confirming their overdependence on oil; if oil does well, they do well.

For oil-exporting countries it is expected that the rate of return on investment should at least equal expected oil price increases. The only possible justification for a budget deficit in oil-exporting countries occurs when countries are spending heavily on building and developing national infrastructure—roads, telecommunications, and public works—on social improvements and, additionally, on improvements to spur private sector activity. These expectations are not confirmed by the share of capital expenditures and especially by GDP growth rates. But even then the question of equitable benefits from oil extraction for all generations would have to be faced.

A number of issues in fiscal management remain: the size of the public sector, a poorly administered tax system, a revenue structure that remains heavily skewed in favor of non-tax revenues, and high military expenditures.

Countries resort to borrowing in order to close the gap between expenditures and available resources. They can borrow domestically or from external sources. Table 8.3 shows gross central government debt as a percentage of GDP. It is apparent that these oil exporters have in the past had high levels of debt, with the exception of the UAE. As a major oil exporter, Saudi Arabia's level of debt was quite high in the past, at 97 percent of GDP in 2002. Qatar in the past was at more modest levels with about 50 percent of GDP. In light of recent oil price increases (from 2003 to 2008), however, many countries have sought to pay down their debt and to reduce levels of borrowing. Saudi Arabia, for instance, has brought down its debt-to-GDP ratio dramatically.

For the oil-producing countries of the Persian Gulf region the surge in

Table 8.3 Central government debt (gross) as a percentage of GDP

	1975	1980	1985	1990	1995	2000	2002	2006
Iran	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..
Iraq	0.00	0.00	0.00	0.00	..	..	..	..
Kuwait	0.00	0.00	0.00	0.00	0.00	0.00	0.00	..
Qatar	..	..	..	10.71	43.59	54.86	53.10	..
Saudi Arabia	..	..	..	22.30	74.71	87.19	97.06	..
UAE	..	2.73	5.54	27.15	8.02	4.57	5.56	..
Egypt				99.98	60.29	65.38	92.93	..
Jordan	36.03	40.10	56.36	133.27	105.06	93.65	..	77.55
Morocco	24.55	41.70	83.59	89.16	90.62	81.46	71.39	43.72
Syria	..	..	..	57.27	42.46	22.18	27.92	27.92
Tunisia	28.72	34.19	45.49	54.77	58.69	60.68	61.55	55.10
Chile	..	..	..	47.27	19.57	13.72	16.49	16.49
Malaysia	45.86	42.64	80.98	..	41.56	36.73	45.74	45.74
S. Korea	14.72	14.10	15.68	8.35	8.36	0.00	0.00	0.00
Singapore	47.26	64.71	86.26	76.87	72.70	85.21	100.68	100.68

Source: Numbers in italics are from World Bank (2004); others are from various IMF and national sources.

oil prices from 2003 to 2008 has undoubtedly helped turn fiscal deficits into surpluses. However, dependence on the vagaries of the oil markets to serve as an antidote to internal economic woes and to balance books has always proved an unsustainable and risky strategy. All wasteful expenditures, including those of the military, should be reduced rapidly in these countries.

8.4 MILITARY EXPENDITURES AND THE IMPACT ON THE BALANCE OF PAYMENTS

A natural expectation for the current account position of the major oil exporters would be a surplus during the early years when oil depletion is at a significant rate, unless there are exceptional domestic investment opportunities. So why would a country borrow from the rest of the world (that is, incur a current account deficit) during the period it was depleting its resources? This could only be justified if the country could invest the borrowed resources at a higher rate of return at home (note that the rate of return must account for any and all subsidies, and is more correctly the social rate of return) than the cost of financing from abroad. However, according to available data, this condition of higher domestic return has not been the case. In the case of the richer oil exporters (those with high oil or gas revenues per capita, limited domestic investment opportunities, and the implicit desire to become welfare states relying on investment income) we expect significant current account surpluses as they accumulate foreign investments with their surplus oil revenues.

The facts do not support these expectations with regard to the oil exporters' current account positions (tables 8.4 and 8.5). During years when their oil revenues fell, they continued to pursue wasteful government programs and financed indiscriminate subsidies and military expenditures, incurring large budget and current account deficits. Current account deficits were a prominent feature of the Saudi Arabian economy during the 1980s and early 1990s, a time when oil revenues dropped sharply but the ruling family decided to maintain expenditures in order to assure their own survival. Although data is generally unavailable for Iraq, it has had continuous current account deficits (an assertion clearly supported by Iraq's rising external debt) because of conflicts and broad economic mismanagement. Iran incurred large current account deficits after its war with Iraq when it attempted to initiate rapid growth. Most of the borrowed resources were either wasted or stolen by corrupt officials and instead of rapid growth, Iran quickly incurred an external debt of over US\$30 billion. The small and rich oil exporters have enjoyed continued large current account

Table 8.4 Trends in current account balance, BOP (in current USD billions)

	1975	1980	1985	1990	1995	2000	2002	2006
MEOE Region								
Iran, Islamic Rep.	7.66* ¹	-2.44	-0.48	0.33	3.36	12.65	3.58*	..
Iraq	2.50* ¹	..	..	..	..	..	..	..
Kuwait	5.93	15.30	4.80	3.89	5.02	14.67	4.19	51.00
Qatar	..	8.36*	3.90*	-0.74*	-2.22*	3.21*	3.26*	..
Saudi Arabia	14.38	41.50	-12.93	-4.15	-5.33	14.34	11.70	99.07
United Arab Emirates	2.95	10.09*	6.91*	7.94*	2.18*	12.16*	3.53*	..
In-region countries								
Egypt, Arab Rep.	-1.20* ²	-0.44	-1.82	2.33	-0.25	-0.97	0.62	2.64
Jordan	0.04	0.37	-0.26	-0.23	-0.26	0.06	0.47	-1.91
Morocco	-0.5	-1.41	-0.89	-0.2	-1.19	-0.47	1.48	1.85
Syrian Arab Republic	-0.17* ²	0.25	-0.96	1.76	0.26	1.06	1.38*	0.92
Tunisia	-0.40* ¹	-0.35	-0.58	-0.46	-0.77	-0.82	-0.75	-0.63
Out-of-region countries								
Chile	-0.49	-1.97	-1.41	-0.48	-1.35	-0.77	-0.55	5.26
Korea, Rep.	-0.31* ¹	-5.31	-0.8	-2	-8.51	12.24	6.09	6.09
Malaysia	-0.49	-0.27	-0.6	-0.87	-8.64	8.49	7.19	25.49
Singapore	-0.58	-1.56	0	3.12	14.8	13.28	18.7	36.33

Note:

1 1976 figure,

2 1977 figure.

Source: World Bank (2008), *IMF (2008a, b, c) and other IMF sources.

Table 8.5 Current account balance as percentage of GDP

	1975	1980	1985	1990	1995	2000	2002	2006
MEOE Region								
Iran, Islamic Rep.	1.1 ¹	-2.63	-0.26	0.27	3.84	12.45	3.10*	..
Iraq	12.90 ¹	..	..	..	..	..	..	..
Kuwait	49.33	53.43	22.37	21.09	18.89	39.63	11.85	..
Qatar	..	106.80*	62.30*	-10.10*	-27.30*	18.00*	16.50*	..
Saudi Arabia	30.92	25.26	-12.45	-3.56	-3.74	7.6	6.21	0.28
United Arab Emirates	29.74	34.10*	25.30*	23.60*	5.10*	17.30*	4.90*	..
In-region countries								
Egypt, Arab Rep.	-8.20 ²	-1.9	-5.24	5.4	-0.42	-0.98	0.69	0.02
Jordan	3.28	9.44	-5.09	-5.65	-3.84	0.69	5.03	-0.14
Morocco	-5.61	-7.47	-6.92	-0.76	-3.6	-1.42	4.09	0.03
Syrian Arab Republic	-2.21 ²	1.92	-5.84	14.32	2.31	5.89	6.70*	0.03
Tunisia	-8.87 ¹	-4.04	-6.91	-3.77	-4.3	-4.22	-3.55	-0.02
Out-of-region countries								
Chile	-6.78	-7.15	-8.57	-1.6	-2.07	-1.01	-0.86	0.04
Korea, Rep.	-1.05 ¹	-8.54	-0.85	-0.79	-1.74	2.65	1.28	0.007
Malaysia	-4.97	-1.07	-1.89	-1.98	-9.73	9.41	7.58	0.17
Singapore	-10.3	-13.34	-0.02	8.46	17.63	14.52	21.51	0.27

Note:

1 1976 figure,

2 1977 figure.

Source: World Bank (2008).

surpluses, with the exception of Kuwait in the aftermath of the Iraqi invasion. In sum, indiscriminate subsidies, waste, corruption, military expenditures, and wars and conflicts have been the source of current account deficits where surpluses would have been expected.

8.5 MILITARY EXPENDITURES AND FOREIGN DIRECT INVESTMENT (FDI)

A high level of military expenditures and costly conflicts can convey political and economic instability; and this in turn could lead to foreign investors shunning investment opportunities in regions that exhibit these traits.

In a survey conducted by AT Kearney,³⁹ a fundamental shift in investor outlook and risk perception was apparent with a significant majority (69 percent) of leading executives expressing more optimism about the global economy. Investors were most optimistic about India, China, Russia, Brazil, and Mexico as attractive FDI destinations.

The AT Kearney survey also lists the chief global developments that are most likely to influence FDI decisions. Leading the list was the recovery of the US economy (60 percent) and dollar volatility (41 percent). These can be termed “originating” factors. But leading the list of “destination” factors—namely, those pertaining to the destination of FDI—were increased government regulation (34 percent), corporate governance issues (28 percent), security concerns and terrorism (26 percent), and military conflict in the Middle East (22 percent); given the last factor on the list as a determinant of overall FDI flows, it is hardly surprising that the Middle East fares so badly in attracting FDI inflows.

Investment follows the simple path of the best available risk–return opportunity; by the same reasoning those sectors, countries and regions that offer excellent investment potential and pose low investment risk attract the most investments. This is a fairly simple paradigm. The obstacles to attracting investment can be assessed in light of oft-cited investor concerns about investing in the Middle East region. These include:

1. Lack of a stable political environment (the region has instead been renowned for conflicts, wars, and instability since 1979).
2. Lack of healthy and sound macroeconomic environments with well-developed and liberalized capital markets and private sector activity.
3. Absence of rationalized tax frameworks.
4. Lack of transparency and disclosure with internationally recognized reporting, auditing, and accounting standards.

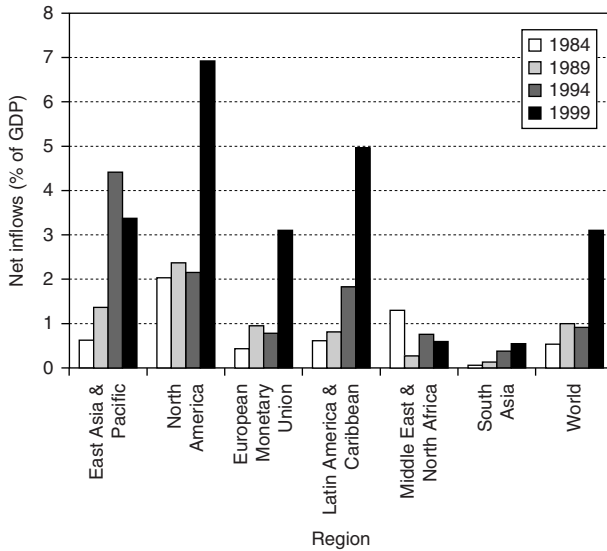
5. Underdeveloped market infrastructure, including clearing and payment mechanisms, back office support, technology, and settlement systems, and so on.
6. Absence of sound corporate governance and strong institutions (including legal systems) for enforcing contract and property rights, corporate governance practices, and shareholder rights embodied in corporate statutes, and rules regulating the structure of industrial and financial ownership, including competition policies and controls over self-dealing.
7. The dominant and overpowering role of the public sector.

As the 2004 United Nations Conference on Trade and Development (UNCTAD) *World Investment Report* indicates, developing countries need to strengthen their capabilities for the supply of competitive services in order to benefit from an increasingly integrated world economy. Under the right conditions, FDI can help to achieve this. While the level of FDI inflows may not always be a gauge of healthy investment prospects, a number of studies have shown the strong negative correlation between risk and instability, and business investment. The most important contribution of FDI is in bringing capital, best practices, and technological skills that developing countries especially need to create competitive services industries. This dictum applies not only to the new information technology (IT)-enabled services, but also to traditional services such as infrastructure and tourism. Further, as services become more tradable, FDI can help developing countries access international markets by linking them to global value chains in services and production networks. In this sense, FDI may be more critical than portfolio flows.

Given high military expenditures, conflicts, wars, and a well-publicized perception of instability, how has the Middle East, and in particular the Persian Gulf, fared in attracting FDI?

Various FDI measures illustrate the Middle East oil exporters' relatively weak integration within the global economy (Figure 8.1). Compared to a world average FDI per capita of US\$109.5, it is apparent that many countries among the Middle East oil exporters (MEOE) and in the group of in-region countries lag significantly behind. Much of this is also very disparate—with Qatar, the UAE, and Saudi Arabia commanding the lion's share of FDI inflows (largely in the oil, gas, and petrochemicals sectors) in the region (see Table 8.6). During the 1990s, when FDI soared to spectacular levels, inflows to the Middle East and North Africa region scarcely increased.

New FDI inflows to the MEOE region as a share of GDP were consistently lower than for comparable country groups.⁴⁰ In terms of absolute



Source: World Bank (2002).

Figure 8.1 FDI by geographic region

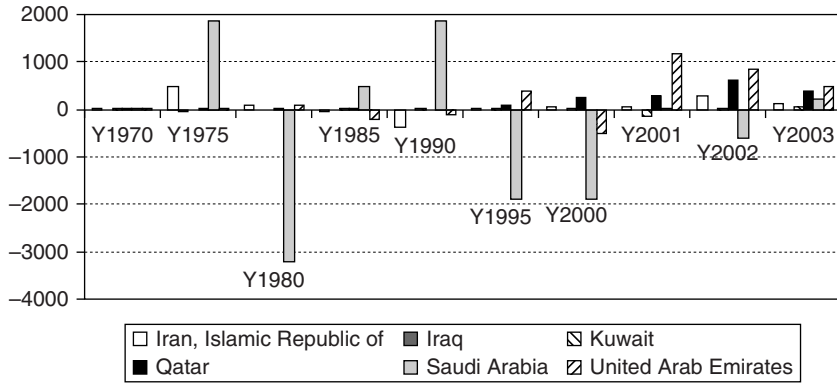
flows, FDI to the Middle East rose from US\$3.6 billion in 2002 to US\$4.1 billion in 2003.⁴¹ The main reason was higher investment in the oil and gas sector.

In 2002, the net inflows of FDI to the MEOE and to the in-region countries (excluding Iraq and Qatar), in sharp contrast, were less than half those to the out-of-region group (Figures 8.2, 8.3, and 8.4). In the case of the oil exporters, Qatar and the UAE followed by Saudi Arabia have been star performers in terms of attracting FDI. Because much of the investment in the oil-exporting countries is in the oil and gas industry, these countries have made some efforts to streamline their regulatory and financial sector environments in order to diversify investment potential.

Egypt has done reasonably well in recent years with about US\$1.18 billion in FDI (without the significant oil or gas deposits of the Persian Gulf countries) inflows in 2000, but the level has dramatically decreased since then. In 2000, Saudi Arabia and Egypt attracted the highest levels of FDI in the region. Tunisia also increased its FDI rapidly in the late 1990s by more than three times its level in 1995. After this, however, there was a slowdown in growth. Net foreign investment—both portfolio and direct—increased in textiles, energy-related industries, and privatized public sector

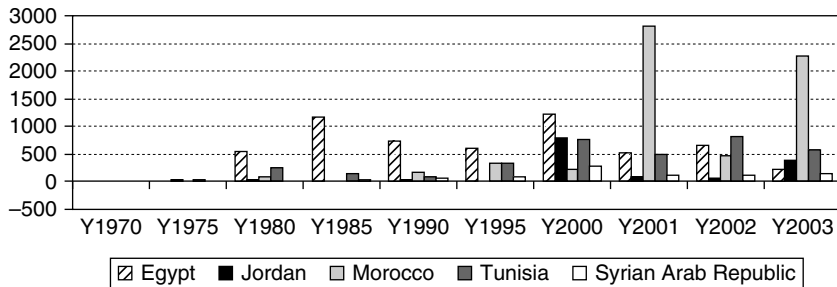
Table 8.6 FDI inflows by host region and economy, 1970–2007 (millions of USD)

Region/ economy	1970	1975	1980	1985	1990	1995	2000	2001	2002	2003	2007
MEOE Region	28	494.4	80.91	-38.15	-361.95	17	39	54.76	276.04	120	754
Iran, Islamic Republic of	-0.91	-44.92	1.53	0.39	0.42	2.4	-3.14	-6.45	-1.59	0.00001	448
Iraq	25.99	0.25	0.83	7.25	5.6	7	16.3	-147	7	67	123
Kuwait	5.69	9.12	10.84	7.97	4.88	93.56	251.6	295.52	631.42	400	1138
Qatar	7.36	1864.9	-3192.31	491.42	1863.82	-1877.17	-1883.58	19.67	-614.95	207.89	24318
Saudi Arabia	7.78	15.95	97.64	-220.96	-115.82	399.85	-514.56	1184.32	834.07	480.22	13253
United Arab Emirates											
In-region Countries	0.68	8	548.29	1177.57	734	595.2	1235.4	509.9	646.9	237.4	11578
Egypt	0.00001	25.64	33.83	24.95	37.65	13.31	786.6	100.28	55.85	378.6	1835
Jordan	20	-0.2	89.42	19.98	165	332	215.37	2824.55	480.69	2279.27	2577
Morocco	16	45	246.48	142.02	90.45	322.6	778.8	486.4	821.3	583.9	1618
Tunisia	-0.1	0.14	-0.04	36.92	71.46	100	270	110	115	150	885
Syrian Arab Republic											



Source: UNCTAD/ FDI/TNC database.

Figure 8.2 FDI inflows: MEOE region, 1970–2003 (USD millions)

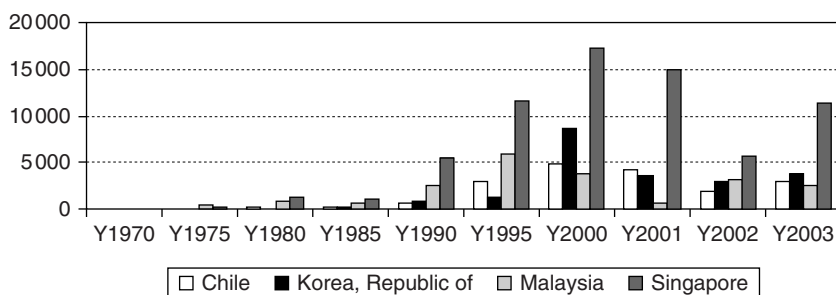


Source: UNCTAD/FDI/TNC database.

Figure 8.3 FDI inflows: in-region countries, 1970–2003 (in millions of US\$)

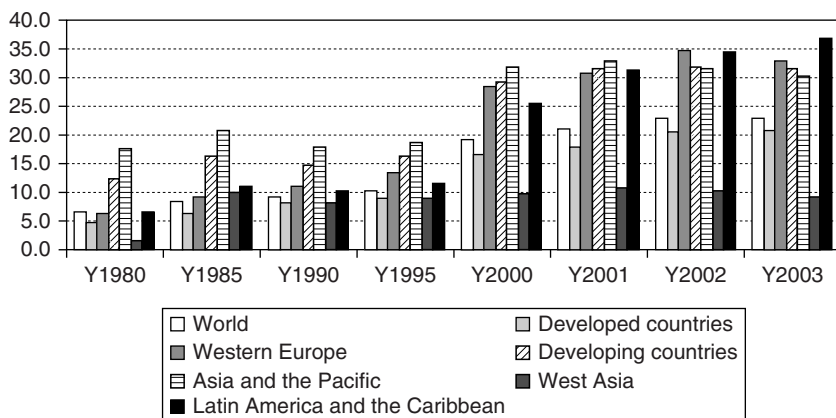
companies. FDI into Morocco was only 1.2 percent of GDP compared with a low-and middle-income countries average of 2.5 percent in 2002; inflows dropped sharply in 2000 as a consequence of the drought that afflicted the country.

If GDP were used as a consensus market determinant, the average inward FDI stock for the world would be 22.9 percent of GDP in 2003 (Figure 8.5 and Table 8.7). By comparison, corresponding numbers for the Middle East oil exporters were a dismal 2.2 percent for Iran, -0.2 percent for Iraq, 1.2 percent for Kuwait, 16 percent for Qatar, 12 percent for Saudi Arabia, and 4 percent for the UAE. The total developing



Source: UNCTAD – FDI/TNC Database.

Figure 8.4 FDI inflows: out-of-region countries, 1970–2003 (in millions of US\$)



Source: World Bank (2002).

Figure 8.5 Inward FDI stock as percentage of GDP, 1980–2003

countries’ inward FDI stock was 31.4 percent of GDP (2003), while the MENA region’s was 9.2 percent. This figure is so low as to be almost unbelievable given the region’s abundance of oil and gas, a sector which admittedly is largely closed to foreign investors. While Iran’s low figure may be attributed to sanctions, the figures for the others defy explanation. On a per capita basis, FDI inflows into the oil exporting countries do not compare favorably to the inflows into the in-region or into the comparator countries (Table 8.8).

When the reasons for poor investment flows are analyzed, it is apparent

Table 8.7 *Inward FDI stock as percentage of GDP, by host region/economy 1980–2007*

Region/economy	1980	1985	1990	1995	2000	2001	2002	2003	2007
World	6.6	8.3	9.3	10.2	19.3	20.9	23.0	22.9	27.8
Developed countries	4.9	6.2	8.2	8.9	16.6	18.0	20.5	20.7	27.2
Western Europe	6.2	9.3	11.0	13.3	28.5	30.7	34.6	33.0	44.4
Developing countries	12.4	16.3	14.7	16.3	29.3	31.7	31.9	31.4	29.2
West Asia	1.5	10.0	8.2	9.1	9.7	10.7	10.2	9.2	24.8
MEOE Region									
Iran, Islamic Republic of	3.2	3.7	2.2	2.5	2.5	2.1	2.5	2.2	1.7
Iraq	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	..
Kuwait	0.1	0.2	0.2	0.3	1.6	1.3	1.3	1.2	0.8
Qatar	1.1	1.5	1.0	5.5	10.8	12.9	16.3	16.0	10.9
Saudi Arabia	-3.9	25.2	21.5	17.5	13.8	14.2	13.5	12.1	19.8
United Arab Emirates	1.4	1.8	2.2	4.1	1.5	3.2	4.3	4.4	26.0
In-region countries									
Egypt	..	..	..	..	..	..	..	..	..
Jordan	3.9	9.6	15.3	9.3	26.7	26.5	25.7	28.3	89.4
Morocco	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	..	0.2	3.0	5.5	9.0	9.1	9.5	9.5	..
Tunisia	38.2	58.5	62.0	60.8	59.3	58.4	66.9	66.0	75.6
Out-of-region countries									
Chile	3.2	14.1	33.2	21.6	60.7	65.9	65.1	65.0	64.2
Korea, Republic of	2.1	2.3	2.1	1.8	7.3	8.5	8.0	7.8	12.7
Malaysia	20.7	23.3	23.4	32.3	58.5	60.6	59.5	57.2	43.1
Singapore	52.9	73.6	83.1	78.2	121.5	141.0	153.9	161.3	159.9

Source: UNCTAD/FDI/TNC Database, <http://www.unctad.org/Templates/Page.asp?intItemID=3137&lang=1>.

Table 8.8 FDI per capita comparison

	1975	1980	1985	1990	1995	2000	2002	2007
MEOE Region								
Iran, Islamic Rep.	14.9	2.1	-0.8	-6.7	0.3	0.6	4.2	10.5
Iraq	-4.1	0.1	0.0	0.0	0.1	-0.1	-0.1	..
Kuwait	0.2	0.6	4.2	2.6	3.9	7.4	3.0	37.2
Qatar	53.3	47.3	22.3	10.1	185.3	430.1	1035.1	1223.7
Saudi Arabia	257.2	-340.6	39.7	117.9	-103.1	-90.9	-28.1	1001.2
United Arab Emirates	31.6	93.6	-160.2	-62.8	170.8	-183.2	259.2	2953.0
In-region countries								
Egypt, Arab Rep.	0.2	13.4	25.3	14.0	10.2	19.3	9.7	157.4
Jordan	14.2	15.5	9.4	11.9	3.2	161.0	10.8	320.6
Morocco	0.0	4.6	0.9	6.9	12.6	7.5	16.2	83.1
Syrian Arab Republic	6.1	28.3	13.7	7.5	22.7	48.1	48.4	45.6
Tunisia	..	..	5.1	8.8	11.2	28.2	11.8	1158.2
Out-of-region countries								
Chile	3.6	25.7	13.7	50.5	208.0	319.5	121.1	119.4
Korea, R.ep.	0.2	0.4	5.3	17.7	27.7	182.4	61.7	45.6
Malaysia	28.6	67.9	44.3	143.4	282.1	162.8	131.8	63.8
Singapore	129.0	511.9	382.6	1829.6	3287.3	4284.9	1376.1	17.5

Source: Author's calculations; FDI Inflows/Population.

that the Middle East, and especially the oil-exporting region, remains an area of high potential that is as yet untapped. Still, a complicated mix of operational risks exist that could thwart investor optimism in the region. The overriding concern is investment risk. Until governments actively begin to calm investor fears about conflicts and wars, pursue growth-oriented policies, and court investment, the region will remain an unattractive destination for foreign capital and investment.

While the major oil exporters should have been net capital exporters because of the relative importance of oil in their economies and the implications of oil depletion for economic policy, this has been the case only for Kuwait, Saudi Arabia (not the public but the private sector), and the UAE, with Iran and especially Iraq as net capital importers, and Qatar on the margin as it has recently started its gas development and exports. As for inflows of FDI and portfolio capital, the oil exporters and the in-region countries have both showed significant sub-par performances. FDI has been largely limited to the oil, gas, and petrochemical sectors, and even in these sectors it has not been as high as it might have been. This is due to restrictive FDI rules and regulations (especially those in the energy sectors), slow economic growth, inconsistent economic policies, ineffective institutions, and conflicts and instability in the region. In fact, in our opinion conflicts and instability have been the greatest impediment to FDI and portfolio capital inflows. Simply said, capital avoids significant risk unless it expects to be rewarded with commensurately high returns. Again, we must stress the obvious: for a true turnaround in the region, there is a need for peace and stability, accompanied by better policies, more effective institutions, and political and social freedom with economic and social justice. Who would want to invest in a country that they are scared, or hate, to visit?

8.6 THE BROAD RESULT OF MILITARY EXPENDITURES: THE REGION'S ECONOMIC PERFORMANCE

Real GDP per capita growth in the oil-exporting countries was negative for the period 1975–2002 (Table 8.9). By comparison, growth in the in-region non-oil countries (that is, excluding Persian Gulf oil exporters within MENA) was positive, albeit not as high as that in our group of out-of-region countries and in the East Asia and Pacific region. What is also striking is that the erosion of real GDP per capita incomes in the oil-exporting is matched only by sub-Saharan Africa, despite vastly differing natural resource endowments and other country characteristics.

Table 8.9 Snapshot of economic performance 1975–2002

Country	GDP (2002)		GDP per capita (2002)		GDP per capita annual growth rate ^a %
	USD billions	PPP USD billions	USD	PPP USD	1975–2002
MEOE Region					
Iran	108.2	483.3	1 652	6 690	–0.4
Iraq	..	..	..	..	..
Kuwait	35.4	37.8	15 193	16 240	–1.2
Qatar	17.5	..	28 634	..	..
Saudi Arabia	188.5	276.9	8 612	12 650	–2.5
UAE	71	..	22 051	..	–2.8
In-region					
Egypt	89.9	252.6	1 354	3 810	2.8
Jordan	..	..	..	..	..
Morocco	36.1	112.9	1 218	3 810	1.3
Syria	20.8	61.5	1 224	3 620	0.9
Tunisia	21	66.2	2 149	6 760	2.1
Out-of-region					
Chile	64.2	153.1	4 115	9 820	4.1
S. Korea	476.7	807.3	10 006	16 950	6.1
Malaysia	94.9	221.7	3 905	9 120	4.0
Singapore	87	100.1	20 886	24 020	5.0
Comparators					
Developing countries	6 189.3	19 848.5	1 264	4 054	2.3
East Asia & Pacific	2 562.6	9 046.9	1 351	4 768	5.9
South Asia	757.1	3 898.7	516	2 658	2.4
OECD	26 298.9	28 491.5	22 987	24 904	2.0
World	31 927.2	48 151.1	5 174	7 804	1.3

Notes:

a. Growth rates calculated for HDR office by World Bank using least squares method.

b. Data refers to period shorter than specified.

Source: UNDP (2004). World Bank (2004).

We would expect the results to be somewhat different if we extend the period beyond 2002, a time of rising oil prices until the summer of 2008. Table 8.9 is extended by four years in Table 8.10. As expected the growth rates of the oil-exporting countries become positive, but still they do not compare favorably to other country groups. In Table 8.10 we notice another anomaly. For Saudi Arabia and the UAE the highest level of GDP per capita was achieved about 25 years earlier. But as might be expected, the highest level of real GDP per capita for all the other regions, including in-region, out-of-region and other comparison groups, occurs in 2006, indicating positive and ongoing growth; whereas at least two oil-exporting countries (with data for only four countries) record their highest GDP per capita levels in the period 1980–81. The period 1980–81 was a time of high real oil prices and these economies relied heavily on oil, as some of them continue to do even today. For the other oil exporters the higher levels of GDP per capita in recent years is due to higher oil prices; in fact if we had cut off the date at 2002, all oil exporters would have had their highest level of GDP per capita about 25 years earlier, a testimony to their continuing heavy reliance on oil and oil prices. The fact that Persian Gulf oil exporters have not fared well relative to other countries and that recent improvements are due to higher oil prices is undeniable.

8.7 CONCLUSION

Heavy military expenditures in one country of the Persian Gulf have undoubtedly motivated increased military expenditures in other Persian Gulf countries. Such expenditures, while not a motivation for conflict and war in and of themselves, may have been a catalyst for some of the conflicts, but have without a doubt made any ensuing conflict ever the more bloody and costly to the region. These military expenditures have directly reduced available funds for economic growth by reducing the availability of funds for investment and the availability of foreign exchange. They have indirectly affected economic prosperity through costly conflict and wars, thus inflicting a heavy cost in human and economic damage on warring parties and on those who have financed them, and through perceived instability reducing foreign direct investment in the region. The end result has been poor economic performance in the region, especially in Iraq followed by Iran (countries which are not as rich as others in per capita energy endowments), and a wasteful depletion of the region's oil and gas reserves.

Table 8.10 Snapshot of economic performance 1975–2006

Country	GDP (2006)		GDP per capita (2006)		GDP per capita annual growth rate ^a %	GDP per capita PPP USD	
	USD billions	PPP USD billions	USD	PPP USD		Highest value during 1975–2006	Year of highest value
MEOE Region							
Iran	138.62	672.92	1978	9600	3.06	9600	2006
Iraq	..	..	..	..	..	..	..
Kuwait	..	..	..	..	..	43 551 ^b	2005
Qatar	..	..	..	..	..	..	..
Saudi Arabia	237.83	511.65	10044	21 608	1.83	34 433	1980
UAE	..	..	..	..	..	59 893 ^b	1981
In-region							
Egypt	127.87	356.02	1724	4800	4.95	4800	2006
Jordan	12.04	24.84	2173	4485	3.29	4485	2006
Morocco	50.85	115.71	1667	3794	6.75	3794	2006
Syria	24.97	79.47	1287	4095	2.32	4095	2006
Tunisia	25.45	67.33	2513	6648	4.17	6648	2006
Out-of-region							
Chile	96.89	207.50	5896	12627	3.10	12627	2006
S.Korea	671.32	1078.67	13865	22278	4.72	22278	2006
Malaysia	118.44	317.26	4535	12149	4.03	12149	2006
Singapore	121.63	194.28	27125	43328	4.46	43328	2006
Comparators							
East Asia & Pacific	2801.00	8028.29	1475	4228	8.60	4228	2006
South Asia	905.35	3320.92	604	2215	7.00	2215	2006
OECD	27988.34	32421.08	29636	34330	2.15	34330	2006
World	37868.93	58639.13	5792	8969	2.63	8969	2006

Note:

- a. Growth rates calculated for HDR office by World Bank using least squares method.
- b. Data refers to period shorter than specified.

Source: UNDP (2004). World Bank (2008).

NOTES

1. Parts of this chapter are taken and adapted from Hossein Askari, *The Middle East Oil Exporters: What Happened to Economic Development?*
2. Mofid, Kamran, "Economic Reconstruction of Iraq: Financing the Peace," *Third World Quarterly*, Vol. 12, No. 1, p. 48. In 1990, Mofid estimated the total cost to be US\$1 trillion and US\$97 billion. The authors adjusted this value for inflation and calculated the numbers in US\$2000.
3. Mofid, Kamran, *The Economic Consequences of the Gulf War*. The authors made the first calculation using Mofid's data (adjusted for inflation) and the authors' petroleum revenue values for the 1975–2000 period. The second calculation was made using Mofid's data adjusted for inflation.
4. Mofid, Kamran, "Economic Reconstruction of Iraq: Financing the Peace," *Third World Quarterly*, Vol. 12, No. 1, p. 48. The authors adjusted Mofid's value for inflation in US\$2000.
5. Ibid. The authors adjusted Mofid's value for inflation into US\$2000.
6. Alnasrawi, Abbas, "Iraq: Economic Consequences of the 1991 Gulf War and Future Outlook," *Third World Quarterly*, Vol. 13, No. 2, p. 335. The authors adjusted Alnasrawi's values for inflation and added them to approximate total Iraqi foreign debt. By the end of the war, Iraq additionally had foreign debt (in US\$2000) totaling an estimated US\$42.9 billion to Western governments and banks, US\$13.5 billion to the Soviet Union and Eastern Europe, and approximately US\$49 billion to other Arab countries (mainly Saudi Arabia and Kuwait). Total foreign debt therefore amounted to roughly US\$105.4 billion.
7. Hossein Askari, in association with a number of colleagues, is in 2009 involved in a project to quantify more uniformly and more accurately the cost of all Persian Gulf hostilities beginning with the Iran–Iraq War.
8. Lee, Roger A., "The History Guy: The Persian Gulf War (1990–1991)" (Source: www.historyguy.com/GulfWar.html). The UN coalition also included Great Britain, France, the Netherlands, Israel, Afghanistan, Bangladesh, Canada, Belgium, Czechoslovakia, Germany, Honduras, Italy, Niger, Romania, and South Korea.
9. Alnasrawi, Abbas, "Iraq: Economic Consequences of the 1991 Gulf War and Future Outlook," *Third World Quarterly*, Vol. 13, No. 2, p. 335.
10. The authors obtained this information from various IMF documents.
11. The authors obtained this figure from a source involved in the Kuwaiti reconstruction effort.
12. Wikipedia "Gulf War" (Source: http://en.wikipedia.org/wiki/Gulf_War). The authors adjusted the values provided for inflation into US\$2000.
13. Deen, Thalif, "Iraq: Economic Damage Could Far Surpass 1991 War, UN Says," Inter Press Service News Agency (Source: www.ipsnews.net/print.asp?idnews=17585).
14. Emir Al-Sabah of Kuwait, "National Notations: Kuwait," *Peacekeeping and International Relations*, Vol. 23, No. 1, p. 6. After the war, the government of Emir Al-Sabah of Kuwait submitted a claim for reparations to the United Nations. The authors adjusted this value for inflation into US\$2000.
15. Alnasrawi, Abbas, "Iraq: Economic Consequences of the 1991 Gulf War and Future Outlook," *Third World Quarterly*, Vol. 13, No. 2, p. 335. This value, which the authors adjusted for inflation, represents the cost to replace all assets lost (including military equipment) during the 43-day bombing campaign.
16. The authors made this calculation by adding the cost of the Iran–Iraq War to Iraq and the First Persian Gulf War to Iraq.
17. UNICEE "At a Glance: Iraq—The Big Picture" (Source: <http://www.unicef.org/infobycountry/iraq.html>).
18. Abdel-Fadil, M., "Issues of Economic Reconstruction of Iraq: The Larger View," Study presented to the Economic and Social Commission for Western Asia.

19. Foote, Christopher, W. Bock, K. Crane, and S. Gray, "Economic Policy and Prospects in Iraq," *Journal of Economic Perspectives*, Vol. 18, No. 3, pp. 47–70.
20. Corm, Georges, "Identifying the Main Economic and Reconstruction Issues in Iraq: Workshop on Iraq After the War—Issues of Economic and Social Reconstruction," Economic and Social Commission for Western Asia.
21. Foote, Christopher, W. Bock, K. Crane, and S. Gray, "Economic Policy and Prospects in Iraq," *Journal of Economic Perspectives*, Vol. 18, No. 3, pp. 47–70.
22. United Nations, "UN/World Bank Present Iraq Reconstruction Needs to Core Group," World Bank/United Nations News Release No. 2004/100/S, October 2. The value for estimated reconstruction costs was obtained from the Iraq Needs Assessment website, and was adjusted for inflation by the authors from US\$2003 to US\$2005.
23. Sachs, Jeffrey D., "Donor Funds are Needed for Poverty, Not Iraq," Project Syndicate (Source: <http://www.projectsyndicate.org/commentary/sachs79/English>).
24. *Energy Information Administration*, "Country Analysis Briefs: Iraq" (Source: <http://www.eia.doe.gov/emeu/cabs/iraq.html>).
25. Ibid.
26. Deen, Thalif, "Iraq: Economic Damage Could Far Surpass 1991 War, UN says," Inter Press Service News Agency (Source: www.ipsnews.net/print.asp?idnews=17585).
27. Ibid.
28. Perry, William J., (1995b) "Roles of Military Power in US Defense Strategy," and (1995a) "Appendix J: Military Assistance." 1995 Annual Defense Report (to the President and Congress).
29. The Editors, "US Military Bases and Empire," *Monthly Review*, Vol. 53, No. 10 (Source: <http://www.globalsecurity.org/military/library/report/1995/ANA.htm>).
30. Bruce, James, "Land of Crisis and Upheaval," *Jane's Defence Weekly*, Vol. 22, No. 4, pp. 23–35.
31. Al-Saud, Captain Naef Ahmed, "Enhancing Saudi Arabia's National Defense in the Post Cold War Era: The Domestic and International Dimensions of Military Preparedness" (Source: <http://www.globalsecurity.org/military/library/report/1995/ANA.htm>).
32. For more details, see Askari, Hossein, *Saudi Arabia: Oil and the Search for Economic Development*.
33. The conceptual interpretation of NNP in an economy is that it represents the highest level of sustainable consumption. In the development of the conceptual framework of national income accounting, extractive industries were treated as any other source of national product. As a result, the value of the extracted resource was added to national product at the point of extraction. This method of valuing the contribution of extractive industries, as is now widely recognized, is ill-conceived and results in significant distortions. For the derivation of the required rate of savings see Askari, Hossein, *Saudi Arabia: Oil and the Search for Economic Development*, and for a calculation of the savings rate for individual oil exporting countries see Askari, Hossein, Vahid Nowshirvani, and Mohamed Jaber, *Economic Development in the Countries of the GCC: The Curse and Blessing of Oil*.
34. It is possible that conventionally measured NNP understates theoretically correct NNP for a country that has lots of oil and a low extraction rate.
35. For a detailed discussion see Mustafa, Ahmad and Hossein Askari, "Economic Implications of Land Ownership and Land Cultivation in Islam," Proceedings of the Second International Conference on Islamic Economics, Islamabad, Pakistan, published in Iqbal, Munawar, *Distributive Justice and Need Fulfillment in an Islamic Economy*.
36. For a calculation of the savings rate for individual oil-exporting countries see Askari, Hossein, Vahid Nowshirvani, and Mohamed Jaber, *Economic Development in the Countries of the GCC: The Curse and Blessing of Oil*.
37. International Monetary Fund (2002b), *World Economic Outlook*.

38. Economic Research Forum for the Arab Countries, Iran, and Turkey. *Economic Trends in the MENA Region, 2002*.
39. AT Kearney, "FDI Confidence Index Survey" (Source: www.atkearney.com/main.taf).
40. FDI flows include equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.
41. United Nations Trade and Development Conference, *World Investment Report 2004: The Shift Towards Services*.

9. Conclusion: the elements of fruitful demilitarization

The Persian Gulf could be classified on a number of dimensions as the most militarized region in the world.¹ Heavy military expenditures, in turn, have fueled costly conflicts and conflicts have taken a heavy human and economic toll on the region and its inhabitants. All the while, most if not all world leaders profess peaceful coexistence and economic and social progress for the Persian Gulf as a critical region for global stability and economic prosperity. How can this espoused “wish” be translated into reality? If their words were true, the task would be made all the easier. But in reality, it will take a Herculean effort on a number of fronts. If the global powers will not “walk the talk,” then it will be up to the citizenry of the region to demand change from their leaders to achieve peace and prosperity. In this quest, a dramatic reduction in military expenditures and arms imports, though necessary, will be insufficient to achieve regional peace and prosperity. To be successful a number of simultaneous steps, along with a dramatic reduction in military expenditures and arms imports, will be required.

President Ronald Reagan perhaps best summed up the reason for military expenditures, aggression, and war when he said: “History teaches that war begins when governments believe the price of aggression is cheap.” The goal must be to initiate a framework to reduce the means of aggression and to make the price of aggression expensive for all. If the price of aggression is increased, demand for military expenditures will decline accordingly.

No single country in the Persian Gulf on its own accord will reduce, far less eliminate, its wasteful military expenditures. No single country will unilaterally disavow aggression. The status quo can only be reversed with concerted and sustained international effort. Military expenditures, aggression, and conflict will be a part of the Middle Eastern landscape as long as countries are pressured into acquiring weapons, feel threatened, or feel that they can vanquish a weak neighbor with impunity. The Middle East needs a long, assured dose of peace. To help the region achieve long-lasting peace that enables a true blossoming of economic and social progress requires a number of simultaneous bold steps.

We should first take a few essential steps to enhance the environment for peace and then adopt elements of a system to deter aggression and reduce the demand for military expenditures and arms imports.

The United Nations (the Security Council), each Permanent Member of the Security Council and every country in the Middle East, individually and collectively, should guarantee the territorial integrity of every country in the region. This security umbrella must also be extended to Israel, and this leads to the next essential element. The “two-state” solution for resolving the Palestinian–Israeli dispute must be adopted immediately; this is the solution wherein: Israel keeps nothing of the West Bank unless it trades Israeli territory for it on a basis acceptable to the Palestinians; an international fund is set up to compensate Palestinians for their lost homes and land; and in the aftermath of such confidence-building measures, the status of Jerusalem and Palestinian refugees can then over time be resolved through peaceful means. Other existing territorial disputes in the region (Iran–Iraq, Saudi Arabia–Qatar to name but two) must be resolved under United Nations (UN) auspices. At the same time, the permanent members of the Security Council should state that they will not interfere in the internal affairs of any country in the region.

As an integral component of trying to bring peace to the Middle East, there must be a total arms embargo to the region, with the exception of riot and civil control equipment. It must be recognized that: whenever arms are acquired, they will eventually be used no matter what; arms always reduce available economic resources for development and growth; and arms kill people and destroy infrastructure and other valuable economic assets. The West must stop using the region as its greatest market for the sale of weapons and to reduce their own unit cost of weapons; the West must replace the sale of military goods with investment goods. Such a shift in exports should be viewed as akin to a shift in comparative advantage and the West can easily adjust to it with little long-term cost. In the case of nuclear weapons and all other weapons of mass destruction (WMD), all countries (no matter whether they are or are not signatories to the Nuclear Non-Proliferation Treaty NPT) must give up their arsenal if they want to be beneficiaries of the guarantees offered above and if they want to avoid UN sanctions, sanctions that should automatically be applied if they do not comply.

In the world that we live in, there are no effective and internationally sanctioned deterrents and mechanisms to resolve disputes before they become conflicts, to stop conflicts from leading to armed conflicts, and to deter all-out wars. This is especially evident when the powerful are a party to a dispute or conflict, as there is no international entity that has historically stood up to them. Any deterrent is ill-defined and is the prerogative

of the powerful to define and to enforce. The powerful have a free hand to do as they wish. All the while, the presumed guardian of global peace, the United Nations (effectively the United Nations Security Council), is controlled by the five major powers with veto powers, and if they do not get UN support for their actions they do as they wish anyway and with impunity. It would be naive to think that this setting for conflicts will ever change if we as citizens and non-governmental organizations (NGOs) idly stand by. There is no incentive for change. The world will continue as it has, but with an increasing likelihood of an unimaginable catastrophe and enhanced threat to all life on this earth.

Superpowers use their military and economic might to pursue their own interests; use the threat of force to cower nations into submission; continue their efforts to develop and acquire increasingly sophisticated weaponry; and selfishly guard their Security Council veto. No realistic leader would give up any advantage that his or her country enjoys. Similarly, weaker countries have little choice but to align themselves with a superpower for protection against other would-be aggressors. These weaker countries have no desire for change if they feel secure under the umbrella of their big brother, and that is especially so for absolute and corrupt rulers whose government are kept in power by their powerful backers. All the while the average citizen, especially in the less fortunate countries, suffers. This vicious circle is almost impregnable. The only imaginable way to break the circle would be if, by magic, every leader in the world simultaneously realized the insanity of military conflict and renounced all aggression. Even the naive realize that this will never occur.

In sum, there is no recognized penalty for an aggressor to a conflict. There is no formal system of enforcing penalties even if penalties were assessed. Most importantly, there is nothing that forces parties to a conflict, or at least affords them great incentive, to sit down and resolve their differences before they take up arms and embark on a path of senseless destruction and death. At best it is all ad hoc. Anything goes when it comes to conflicts and wars. And the powerful rule the waves.

While conflicts and wars take a heavy human, social, economic, and environmental toll, their legacy is invariably hatred and future conflicts and wars; and intra-religious, ethnic, and tribal conflicts within countries and across borders may result in even more passionate hatred for generations to come. Such a legacy magnifies the costs of conflicts and wars and makes reconciliation ever more difficult in the aftermath of a conflict, as compared to before armed conflict and war. While this is the undisputed legacy of conflicts and wars, the world stands by and does little to deter them. We accept this as the natural price of national borders, and religious, ethnic, and tribal differences, and hope that the United Nations

will tackle disputes, conflicts, and wars. How can this dismal reality be changed for the better?

We need a number of institutions. We need an institution that publicizes the cost of military expenditures and arms imports and their economic toll, and lobbies against military grants and arms exhibitions around the world. We need an institution that brings parties to a dispute to the negotiating table before the outbreak of hostilities; and for parties that refuse to negotiate, the institution must develop a system of enforceable penalties, including naming the party that refuses to negotiate as the aggressor in any subsequent conflict. We need an institution that assesses reparations for conflicts based on an agreed-upon methodology; and we need an agreement to enforce such assessments automatically. We need all these to be done by an entity, or entities, that is immune to political interest and manipulation as far as possible. While the world waits for leaders, and especially those from the countries that are superpowers, to set up this institution (or institutions) that has the power to deter conflicts and wars, we propose that NGOs set up institutions that would do the same work, and publicize their results and assessments to shame countries into reduced military expenditures and armed conflict. The more people, NGOs, and governments that adopt these suggestions to deter military expenditures, aggression, conflicts, and wars, the likelier we are to succeed on a global level. We require a global movement to save humanity from itself.

We, in the context of this institutional structure, must try to encourage formal mediation efforts before disputes lead to armed conflict. We must publicize the heavy toll of military expenditures and wars. Similarly we should publicize and document the aggressors to a conflict, and those who will not negotiate. We should recommend reparations to be paid and sanctions to be placed on aggressors. In these endeavors, our efforts will be reinforced by publicizing these facts. Aggressors and those who support them must be shamed. We hope that public pressure will in time motivate the weaker countries to embrace this approach. We hope that they will do this by giving their official endorsement. If a sufficient number of countries do so, then we can imagine that the powerful will one day listen to reason too. In time, the union of informed citizens around the globe, concerned NGOs, and weaker countries could force the powerful to see the benefits of peace in a holistic framework: that is, when they consider all the ramifications of their actions on their own long-term economic conditions, global poverty, human misery, environmental degradation, and more. The world may be slowly uniting to tackle global warming, but attention to arresting global conflicts and wars is no less urgent.

Can such a proposal succeed? We can only try and hope. The costs of military expenditures, conflicts, and wars are killing more of mankind

than ever before; the poor need medical care; the disadvantaged need education; the poor need food and shelter; and our environment is slowly, but surely, being destroyed by a multitude of human abuses, including conflicts, wars and the ensuing destruction and degradation. We hope that the success of NGOs and citizens in such an endeavor around the world will be a positive force for change.

The West must not support and condone rulers who use oil and gas revenues to enrich themselves, their families, and a chosen few. If the West continues to support rulers who are robbing their own citizenry, we can look forward to a continuous cycle of violence and instability in the region.

Time is running out for the governments in power in the region, and for the Western powers if they want to see a prosperous and peaceful Persian Gulf and better relations with the Muslim world. Higher oil prices may provide a short-term respite to the major oil exporters of the region, but oil alone cannot solve their deep-rooted economic, social and political problems. Oil and oil revenues, which theoretically should have supported economic prosperity, have in practice and in part fueled regional conflicts and enabled policies that have been, and continue to be, detrimental to economic, social, and political progress. In the case of the Persian Gulf, the region that is critical for global energy supplies and for the global economy, success cannot be measured by improvements in the sparsely populated countries of Kuwait, Qatar, and the UAE. The key is what happens in the larger Persian Gulf countries: Iran, Iraq, and Saudi Arabia. If the world does not come to terms with the global importance of Middle Eastern peace and prosperity, the world economy will suffer as increased energy supplies are not brought on line and conflicts over restricted energy supplies develop between the major powers.

If military expenditures are dramatically reduced or eliminated, then border security will be guaranteed and regional stability will be enhanced. Most future oil and gas exports will have to emanate from the Persian Gulf. The region could expand its oil and gas production by the equivalent of about 15–20 million barrels per day over 2020–2025 if peace and stability are restored, foreign investment is encouraged (requiring an investment of US\$400 billion to US\$500 billion), and outside meddling is eliminated. If this is done, the world could enjoy stable energy supplies at reasonable prices while alternative energy sources are developed. There is no Iraq solution. There is only a Persian Gulf solution and with a Persian Gulf solution, comes the benefit of less conflict and a medium-term global energy solution.

The United States will play the key role in affecting the region's military expenditures and level of conflict. Mikhail Gorbachev aptly summarized the decision the US faces in an opinion piece in July of 2008:

the next president, will have to decide and state clearly whether America wants to be an empire or a democracy, whether it seeks global dominance or international cooperation. They will have to choose, because this is an either-or proposition: The two things don't mix, like oil and water.²

NOTES

1. Parts of this chapter are adapted from Askari, Hossein, *The Middle East Oil Exporters: What Happened to Economic Development?*
2. Gorbachev, Mikhail, "From Russia With Alarm: Questions for the Candidates," *International Herald Tribune* (Source: <http://www.iht.com/articles/2008/07/04/opinion/edgorbachev.php?page=2>).

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