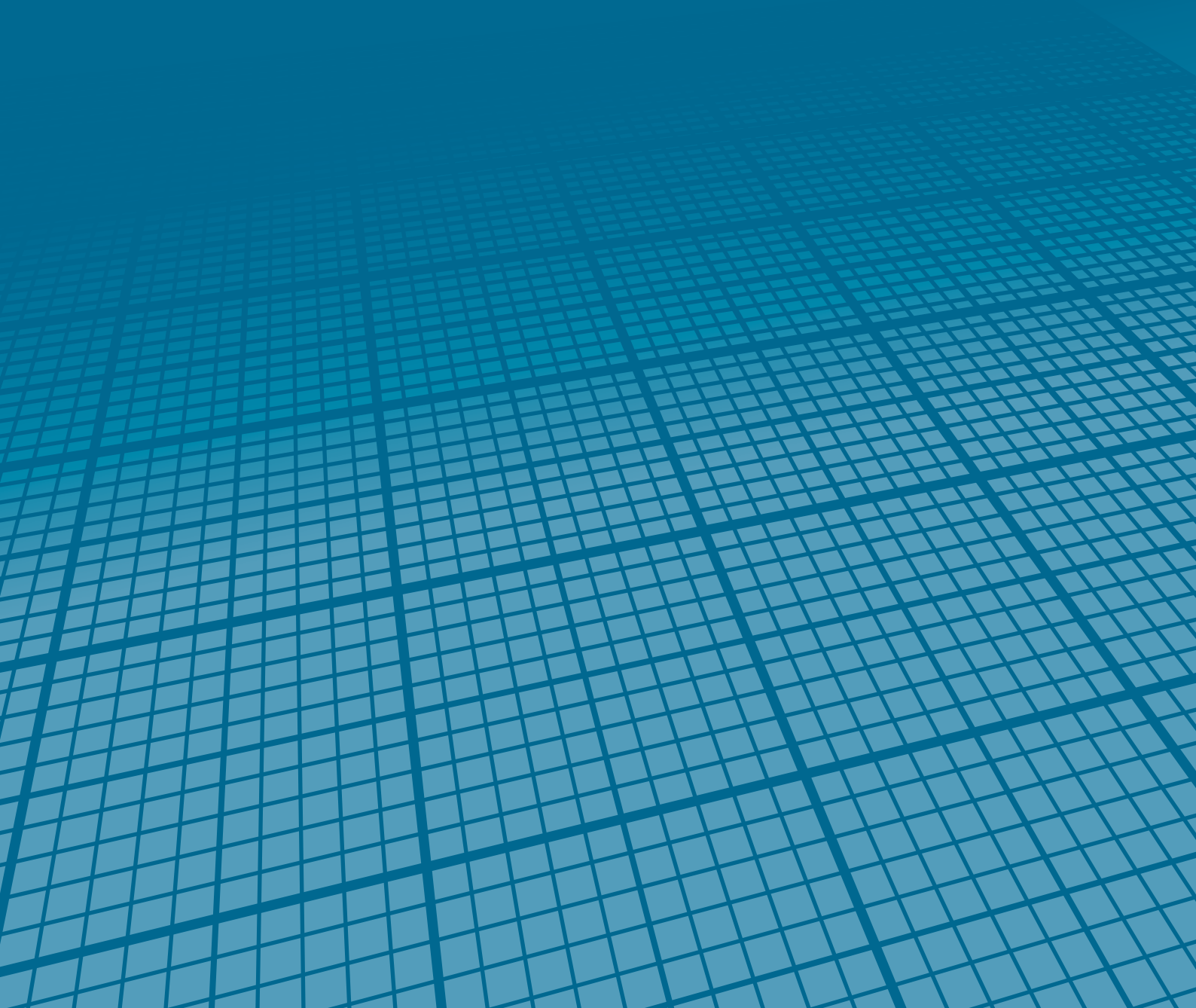


Chapter 3:

The Budgets



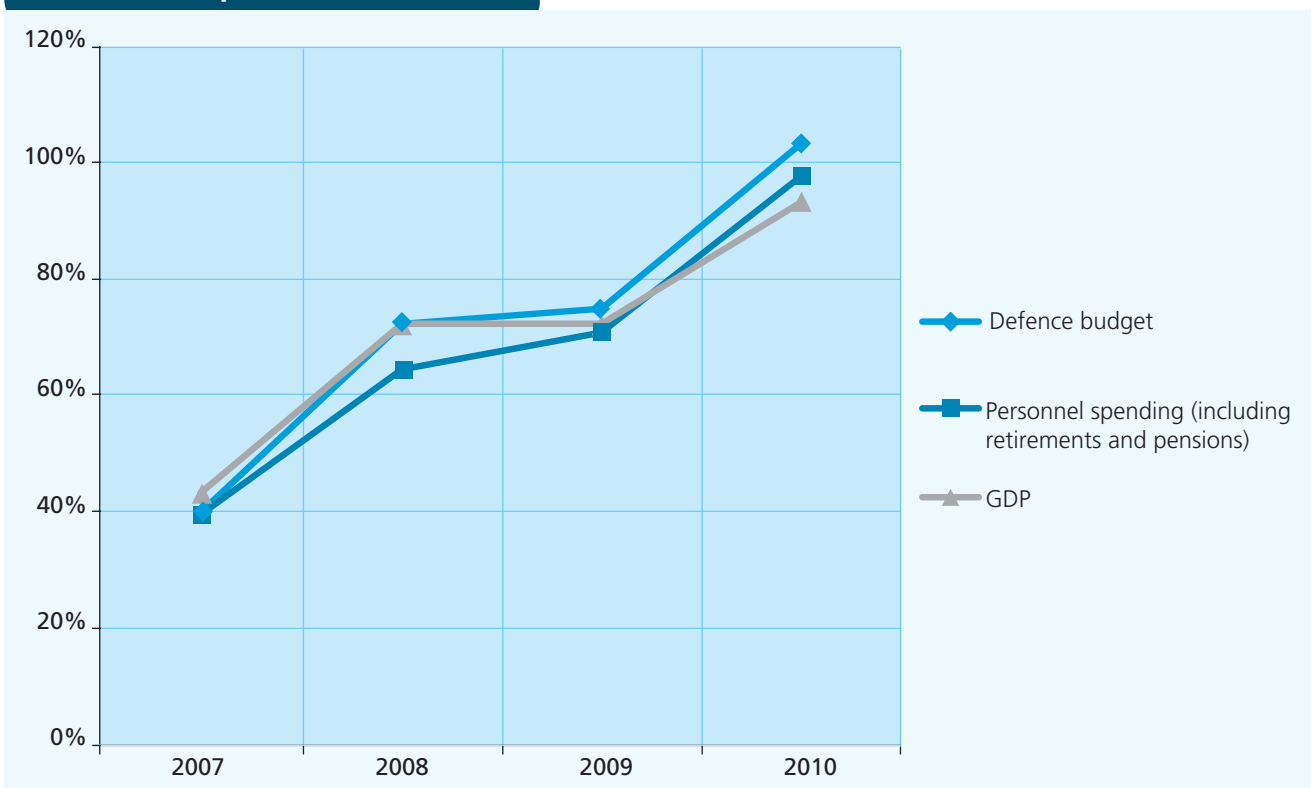


Defence Budget (in US\$)

Country	2006	2007	2008	2009	2010
Argentina	1,952,165,821	2,120,829,805	2,628,157,098	2,849,654,256	3,138,200,705
Bolivia	197,291,177	193,405,756	254,520,509	307,478,493	336,894,359
Brazil	13,692,057,669	20,973,055,774	26,202,709,813	25,911,333,511	33,055,029,481
Chile	3,177,404,842	4,276,790,277	4,459,645,809	4,353,450,717	4,778,329,754
Colombia	2,872,392,573	4,105,180,855	6,004,957,107	5,534,277,720	6,178,261,917
Cuba*	71,162,500	78,850,000	84,233,333	88,591,667	91,920,833
Dominican Republic	213,117,635	265,058,384	269,120,373	311,355,315	332,298,929
Ecuador	953,125,534	1,168,229,152	1,389,330,906	1,679,073,897	2,156,832,116
El Salvador	106,363,230	111,400,520	115,409,495	132,861,405	132,874,110
Guatemala	134,476,326	152,106,898	156,210,263	153,090,192	159,860,766
Honduras	63,175,260	86,837,651	121,183,088	127,963,147	172,194,128
Mexico	3,288,106,264	4,184,285,440	4,706,150,462	4,681,259,477	4,875,854,577
Nicaragua	36,293,492	39,336,274	42,191,833	37,293,776	39,644,293
Paraguay	95,572,924	126,711,873	149,580,691	176,769,687	227,582,002
Peru	1,086,270,304	1,252,580,042	1,515,727,130	1,600,023,237	2,067,397,486
Uruguay	215,709,213	290,335,815	316,844,107	322,261,459	375,059,540
Venezuela	1,867,024,633	2,612,441,958	3,351,756,259	4,185,502,812	2,501,244,477
TOTAL	30,021,709,396	42,037,436,475	51,767,728,276	52,452,240,769	60,619,479,474
Variation %	0.00%	40.02%	23.15%	1.32%	15.57%

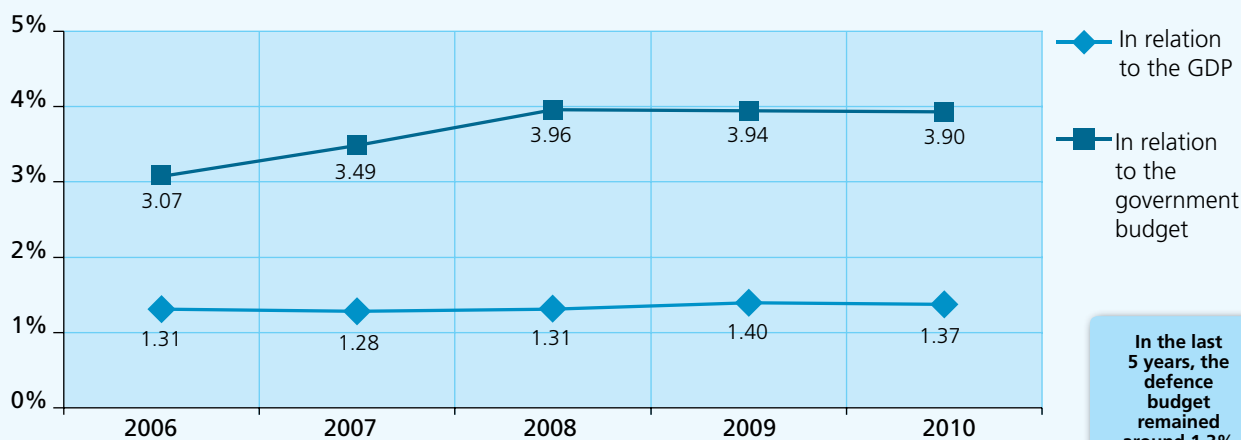
* Cuba: "Defence and Internal Order" budget.

Growth Comparison (2006-2010)



Note: Cuba is not included. 2006 represents the 0 level of variations.

Defence Budget in Latin America (in %)



In the last 5 years, the defence budget share in Latin American government budgets averaged 3.7%.

In the last 5 years, the defence budget remained around 1.3% of Latin American GDP

	2006	2007	2008	2009	2010
Argentina	1.04 / 6.19	0.85 / 5.44	0.81 / 5.18	0.95 / 4.66	0.91 / 4.70
Bolivia	1.93 / 3.17	1.52 / 2.61	1.52 / 2.27	1.75 / 2.08	1.77 / 2.22
Brazil	1.75 / 2.95	1.62 / 2.64	1.62 / 3.15	1.75 / 3.18	1.73 / 3.23
Chile	2.95 / 12.24	2.66 / 11.15	2.62 / 12.05	2.90 / 9.44	2.43 / 9.38
Colombia	2.65 / 7.46	2.39 / 7.32	2.97 / 9.30	2.42 / 8.54	2.30 / 8.16
Cuba *	3.24 / 5.12	3.23 / 4.73	3.32 / 4.26	3.41 / 4.56	3.47 / 4.87
Dominican Republic	0.87 / 4.497	0.75 / 3.47	0.71 / 3.20	0.70 / 3.49	0.66 / 3.25
Ecuador	2.81 / 8.10	2.62 / 7.84	2.80 / 8.78	3.02 / 8.76	3.48 / 10.13
El Salvador	0.61 / 2.51	0.55 / 2.61	0.53 / 2.53	0.60 / 2.64	0.61 / 2.59
Guatemala	0.48 / 3.14	0.46 / 3.14	0.44 / 2.97	0.42 / 2.62	0.40 / 2.62
Honduras	0.75 / 2.92	0.86 / 3.47	0.88 / 3.83	0.88 / 3.79	1.13 / 4.78
Mexico	0.44 / 2.41	0.47 / 2.78	0.50 / 2.71	0.54 / 2.74	0.49 / 2.65
Nicaragua	0.72 / 2.87	0.69 / 2.91	0.65 / 2.83	0.59 / 2.33	0.63 / 2.72
Paraguay	1.25 / 2.84	1.22 / 2.91	1.24 / 2.93	1.30 / 2.70	1.31 / 2.99
Peru	1.40 / 7.33	1.23 / 6.59	1.20 / 6.23	1.26 / 6.77	1.41 / 7.17
Uruguay	1.52 / 7.61	1.37 / 7.58	1.19 / 7.31	1.02 / 7.25	0.92 / 7.25
Venezuela	1.39 / 5.16	1.15 / 4.88	1.00 / 5.24	1.18 / 5.37	0.83 / 5.41

■ In relation to de GDP ■ In relation to the government budget

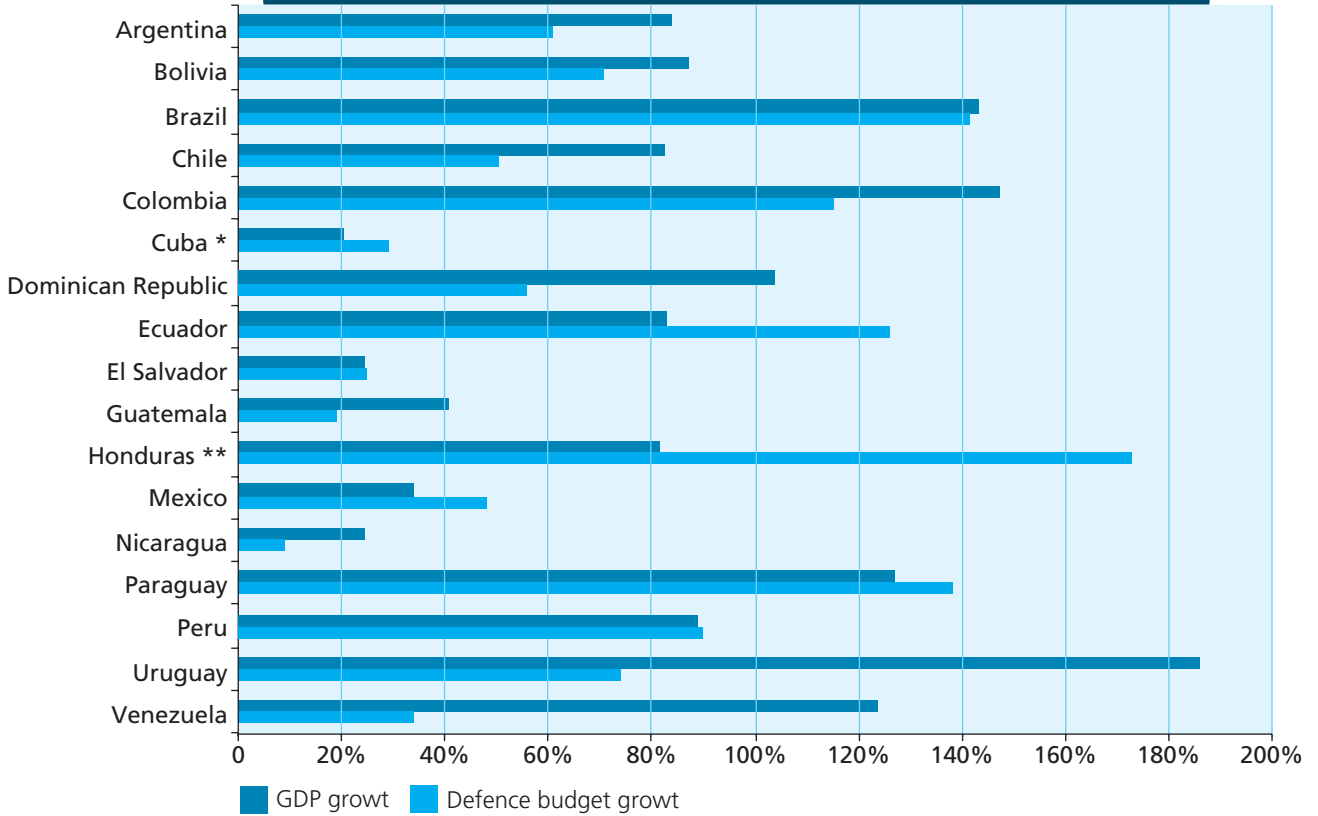
* Cuba: "Defence and Internal Order" budget.

Source: Compilation based on the budget laws of each country. In the case of Cuba, 2006, 2007, 2008 and 2009 figures correspond to government budget execution (*Anuario Estadístico de Cuba 2009*). The dollar exchange rate considered is that provided by the World Economic Outlook Database, IMF, for each year under review. This source has been taken for comparative purposes. Cuba: *Anuario Estadístico de Cuba 2009* and 2010 estimates of the Ministry of Economy and Planning.

The defence budget is made up of all funds allocated to meet the needs of the defence system, regardless of the specific institutional classification expressed in the respective budgets. Only in the case of Cuba, the "Defence and Internal Order" activity is considered, as expressed in the Cuban budget. Headquarter Administration, Decentralized organizations and Social Security items are included. For further details, see Section "The Countries" from this publication. In the case of Chile and Peru, out-of-budget spending forecasts provided for by law have been included.



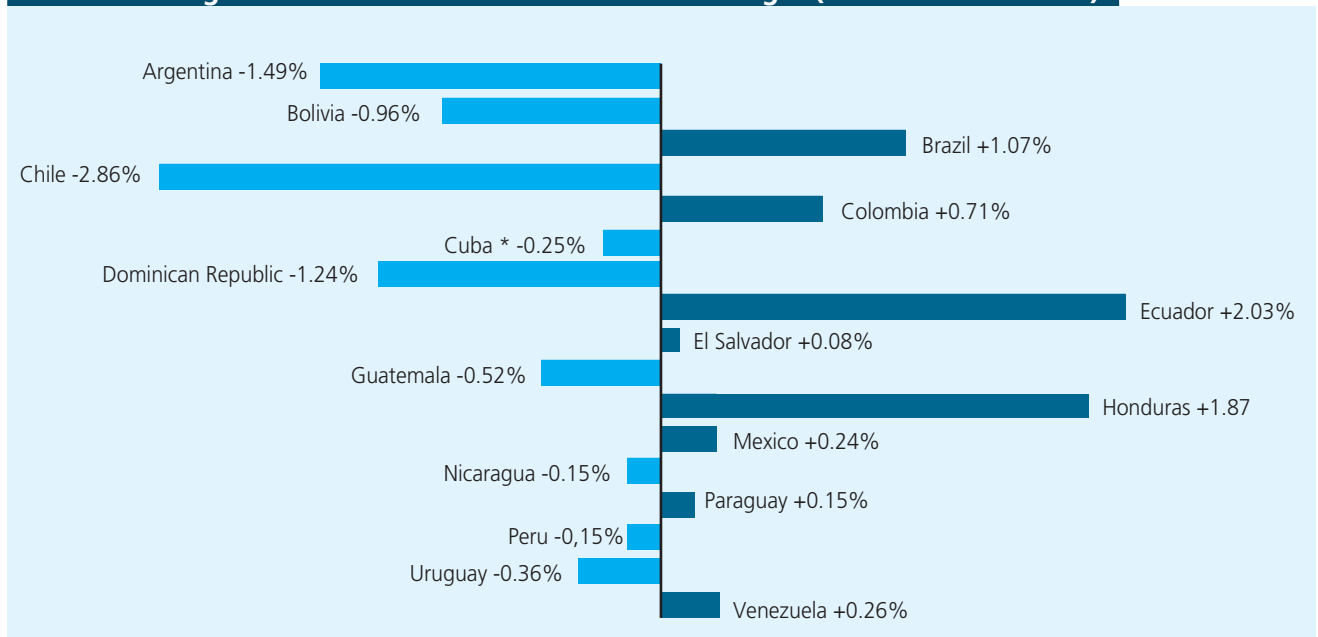
GDP – Defence Budget- GDP Growth Comparison (2006-2010)



* Cuba: "Defence and Internal Order" activity budget.

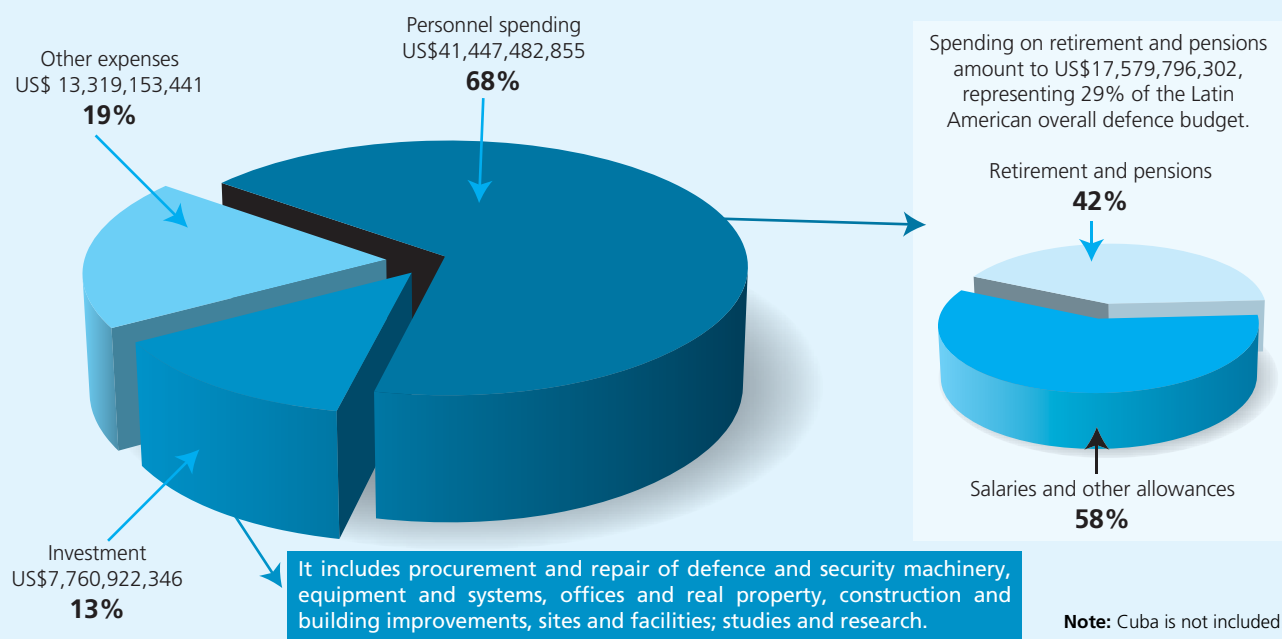
** Honduras: Retirement and pensions of police officers and firefighters incorporated as members of the Institute of Military Social Security are included as from 2007. No breakdown has been made to the budget items.

Defence Budget Share in the Overall Government Budget (2006-2010 variation)



* Cuba: "Defence and Internal Order" activity budget.

Latin American 2010 Defence Budget Breakdown



Personnel and Investment (in %)

Country	2008		2010	
	Personnel	Investment	Personnel	Investment
Argentina	78.7	3.1	75.4	3.1
Bolivia	62.1	5.2	62.2	5.8
Brazil	70.3	10.9	71.6	14.0
Chile*	50.5	31.6	58.4	24.0*
Colombia	43.9	25.5	48.8	14.0
Dominican Republic	73.7	8.7	80.7	4.6
Ecuador	78.5	1.8	73.2	15.3
El Salvador	72.6	7.4	72.6	3.0
Guatemala	66.1	2.3	61.6	1.4
Honduras	71.5	4.9	77.0	0.6
Mexico	78.7	3.0	75.2	5.3
Nicaragua	57.7	2.6	62.6	2.4
Paraguay	84.0	5.7	81.8	7.1
Peru	47.6	7.9	48.4	15.1
Uruguay	73.8	5.4	73.7	5.4
Venezuela	76.7	2.3	82.5	1.6

* Chile: As a contribution for the country's reconstruction process, in 2010 and 2011 a total of 600 million dollars shall be transferred by the Reserved Copper Law's Fund, in addition to 520 million dollars to fund the repair of military facilities damaged by the past earthquake.

Source: Compilation based on the budget laws of each country. Chile: contribution from the reconstruction fund: House of Representatives of Chile. The dollar exchange rate considered is that provided by the World Economic Outlook Database, IMF, for each year under review. This source has been taken for comparative purposes.

The defence budget is made up of all funds allocated to meet the needs of the defence system, regardless of the specific institutional classification expressed in the respective budgets. Headquarter Administration, Decentralized organizations and Social Security items are included.

The following items are considered as "investment": Real direct investment (Argentina); Real assets (Bolivia); Fiscal and social security budget investments and investment budget (Brazil); Acquisition of non-financial assets and investment initiatives, and revenues for the copper fund (Chile); Investment (Colombia); Non-financial assets (Dominican Republic); Annual investment plan (Ecuador); Institutional investment (El Salvador); Properties, plants, equipment and intangible assets (Guatemala); Capital assets acquisition (Honduras); Investment (Mexico); Capital expenses/Machinery and equipment (Nicaragua); Physical investment (Paraguay); Acquisition of non-financial assets and revenues for the Fund for the Armed Forces (Peru); Investment (Uruguay); Real assets (Venezuela). The budget laws of each country present different degrees of details on investments.

For further details, see Section "The Countries" from this publication. In the case of Chile and Peru, out-of-budget spending forecasts provided for by law have been included.



Analysis:

Running the Arms Race?

A Contribution to Debate from a Measured Approach

Gustavo Sibilla

Member of RESDAL

In mid-2010, the year starting the series of Bicentennial celebrations of independence in several Latin American countries, when one googles the terms “arms race + Latin America”, the search in Spanish leads to 150,000 hits. In English, this figure spikes to 7 million. Although still a long way from more popular subjects, this issue is clearly starting to show up in at least some academic analyses, opinion pieces and activist manifestos. The arguments in this mass of information exhibit a variable degree of scientific rigor and academic sincerity. One can find from well-meaning pieces which are careless about their sources, to those that reflect the bias of pre-existing interest.

Given the extent of the debate, the discussions range from acknowledging the phenomenon (is there an arms race or not?) to issuing specific recommendations to different countries on how to address it; some options advise not to lag behind and start shopping immediately, while others stake everything on the consolidation of regional integration, delaying much-needed technological modernizations to avoid causing suspicious reactions from the others.

This paper discusses an issue that cannot be avoided in any scientific analysis of the arms race phenomenon and its applicability to the regional context. This issue is related to the validity of the patterns generally adopted for measuring and comparison purposes by those who have discussed the matter. Finally, an alternative indicator will be proposed for national effort comparisons.

What is an Arms Race?

According to a classical school of thought, the configuration of an arms race requires the concurrence of the following conditions:

- Two or more parties perceive each other as adversaries.
- Such parties are building up their arsenals at a fast pace.
- Each such party must structure its respective military stance on the basis of its counterpart's past, present and potential behaviour.¹

An arsenal increase implies the acquisition of new weapons or the upgrade of existing ones. These operations should be reflected in the countries' defence expenditures.

How much does Latin America spend on Defence?

Despite an overwhelming number of references, it is impossible to answer this question with any accuracy. Latin America still lacks an exhaustive official source measuring defence expenditures. Therefore, it is not possible to determine, in comparative terms and through a budget analysis, how much money each country invests in arms.²

There is an incomplete international register (UN Disarmament Department), there are series offering functional classifications of defence expenditures (IMF) and there are also databases developed by think tanks using definitions and methodological criteria of their own (SIPRI, IISS). Of course, each country also

¹ Colin S. Gray, “The Arms Race Phenomenon”. *World Politics*, Vol. 24, n°1 (1971).

² The OAS has, however, created an official source of information on arms transfers through the Inter-American Convention on Transparency in Conventional Weapon Acquisition, which was adopted in 1998 and entered into force in 2002. This Convention adopts, for the Hemisphere, the United Nations Register of Conventional Arms (1992) model, which is based on 7 categories: battle tanks, armored combat vehicles, large-caliber artillery systems, combat aircraft, attack helicopters, warships, missiles and missile launchers.

has national budget laws which disaggregate defence expenses by sector; this information is compiled by RESDAL in the present volume. In the case of these data, a bilateral measuring methodology has been proposed for the Chile-Argentina twosome (CEPAL). But, despite this wide variety of sources, the creation of an official regional register is still outstanding on the part of the OAS at inter-American level, and even more on the part of the UNASUR at South American level.

In the framework of the register kept by the United Nations, presentations are voluntary, in local currency, with no verification or aggregation required. The IMF's database (GFS) disaggregates the defence function, excludes training and medical assistance expenses, among other items, and can only be accessed by subscription. The same can be said of the IISS' annual report *Military Balance*. SIPRI offers open access but does not disaggregate expenditure components.

Notwithstanding the complexity in origin brought about by the choice of the source (which implies having available multiple data for the same year and country), a pyrotechnic use of the figures is frequently observed in the material available. The main variables being handled are the total expenses in international currency (at most, mention is made of their variations against the previous year), and their relative shares in the GDP.

In addition to these static divergences it should be considered that the processes for the procurement of a weapons system usually take from 3 to 5 years, from the administrative determination of the requirement up to its effective employment in operations. This situation requires more sophisticated analyses of expense time series, contemplating the dynamics of their processes and using both transversal and longitudinal data, in order to verify in practical terms some pompous weapon acquisition announcements.

In brief, with the present scattered and heterogeneous data and the type of statistical analysis applied, which is mostly transversal, it is impossible to state whether an arms race exists in Latin America or not. A data panel or time series analysis will have to be performed, which implies surveying various data on equipment investments from several countries over several years and empirically testing the action-reaction hypotheses. It should be borne in mind that a country may have internal motivations driving it to modernize its arsenal: global geopolitical aspirations, the availability of specific funds, the decision to employ the armed forces in non-military tasks, technological obsolescence and industrial leverage.

Spend a lot, spend little

It has often been held that country *A* spends a lot on defence because the percentage of its GDP earmarked for this purpose doubles the amount assigned, also in relative terms, by its neighbour *B*. Leaving aside the fact that base asymmetries (different sizes) imply that *A* and *B* may reach military parity by assigning different amounts of their GDPs, it remains legitimate to start by questioning the relevance of the GDP as the denominator in the ratio. After all, the GDP only expresses the wealth generated by a country in a calendar year. It is the sum of the added value of all productive sectors (including the government) in a 12-month period and is a flow variable representing the national income strictly within that period. It obviously conditions the amount of the annual national budget and therefore the defence budget, but its usefulness does not go much further. Therefore, any conclusions drawn from this line of argument line should be considered as relative.

State Security perceived as Insurance

It is clear that the overwhelming majority of Latin American constitutions have assigned to their defence systems the primary mission of protecting territorial integrity, and preserving resources (both natural and produced), which represent a stock variable of the country's wealth. It is necessary to think of studies allowing a correlation between defence expenditures and national wealth, which is ultimately the wealth that needs to be preserved.

Sharing with Thomas Scheetz the symbolic analogy of national defence as a sort of insurance for the State, we may think of the annual defence expenditure as the cost of an insurance policy, which in actuarial calculations is called "premium". Every premium is directly related to the insured capital. This means that, given a certain risk level, the higher the capital insured, the higher the premium.³ The translation of this micro logic to the macro national dimension opens a road which remains largely unexplored in the defence expenditure debate, thereby introducing a different facet of the State Security concept.

In 2006, the World Bank published *Where is the Wealth of Nations?*, one of the most recent surveys on the estimation of global wealth and its components, where it assessed world wealth as at 2000. According to the

³ The difference is that, while in the case of private assets, a more expensive insurance does not reduce the exposure to loss risks (at most, it increases the probability of full recovery), in the case of national wealth, a military instrument with higher capacities (and more expensive) would reduce the probability of "loss" occurrence by deploying a higher deterrent effect towards potential aggressors.



Table I. State Insurance Premium in Latin America

Country	National Tangible Wealth	Defence Expenditure	State Insurance Premium
	2000 US\$ billions	2008 –SIPRI-US\$ billions	
Argentina	1,054.8	2.8	0.26%
Bolivia	58.1	0.3	0.43%
Brazil	2,788.8	23.3	0.84%
Chile	329.0	6.0	1.82%
Colombia	483.0	9.1	1.88%
Costa Rica	64.3	0.0	0.00%
Dominican Rep.	74.3	0.3	0.38%
Ecuador	198.2	1.5	0.78%
El Salvador	31.2	0.1	0.38%
Guatemala	69.1	0.2	0.24%
Guyana	10.3	0.0	0.00%
Honduras	39.2	0.1	0.30%
Mexico	2,689.4	4.9	0.18%
Nicaragua	19.3	0.0	0.22%
Panama	45.9	0.0	0.00%
Paraguay	51.9	0.1	0.25%
Peru	237.0	1.4	0.58%
Suriname	9.2	0.0	0.00%
Uruguay	66.7	0.4	0.60%
Venezuela	987.4	4.3	0.44%
TOTAL	9,307.1	54.9	0.59%

Sources: World Bank, *Where is the Wealth of Nations? Measuring Capital for the 21st Century*, (Washington D.C.: The International Bank for Reconstruction and Development, 2006) and Stockholm International Peace Research Institute, "SIPRI Military Expenditure Database", SIPRI, <http://www.sipri.org/databases/milex>.

Table II. State Insurance Premium in G-8, China and India

Country	National Tangible Wealth	Defence Expenditure	State Insurance Premium
	2000 US\$ billions	2008 –SIPRI-US\$ billions	
United States	26,699.2	616.1	2.31%
Japan	19,255.2	46.3	0.24%
Germany	6,011.4	46.8	0.78%
Russia	4,775.7	58.3	1.22%
France	3,777.9	66.0	1.75%
United Kingdom	3,674.5	65.6	1.79%
Italy	3,266.5	38.9	1.19%
Canada	2,738.4	19.3	0.70%
G-8 Total	70,198.8	957.3	1.36%
China	6,539.2	86.2	1.32%
India	3,131.1	32.3	1.03%
TOTAL	79,869.1	1,075.8	1.35%

Sources: World Bank, *Where is the Wealth of Nations? Measuring Capital for the 21st Century*, (Washington D.C.: The International Bank for Reconstruction and Development, 2006) and Stockholm International Peace Research Institute, "SIPRI Military Expenditure Database", SIPRI, <http://www.sipri.org/databases/milex>.

proposed methodology, wealth is based on a tangible component and an intangible component. Tangible wealth in turn comprises Natural Capital (energy resources, mineral assets, timber resources, pastureland, cropland and protected areas) and Produced Capital (urban land, machinery and structures). Intangible wealth includes manpower, human capital, social capital and other factors such as institutional quality.

Table I shows the tangible wealth of the 20 countries comprised in the sample and their defence expenditures (SIPRI, 2008), and introduces the State Insurance Premium as a quotient.⁴ Table II shows the same variables for G-8 plus China and India, for comparison purposes.

The State insurance premium may be interpreted as reflecting the risk level that each country perceives in its context (defensive posture) or the power project it wishes to deploy (expansive posture).

Some preliminary conclusions that may be drawn from both tables are the following:

1. Latin American pays a regional premium lower than the premium paid by half the G-8 plus China and India.

2. Latin American countries whose premiums exceed the regional average have weighty endogenous factors influencing their defence expenditures (global geopolitical aspirations, equipment funds tied to commodities, internal armed conflicts, etc.). Mexico appears as a significant "free rider" of the US.

3. The US defence expenditure exceeds the aggregate military expenditures of the other G-8 countries plus China, India and Latin America, and its relative premium is 4 times that of Latin America.

4. G-8 countries plus China and India whose premiums are above the group average are permanent members of the United Nations Security Council (Russia and China are very close to it).

Returning to the question raised in the title of this paper, the existence of an arms race in Latin America has not been scientifically proven. Analyses are conditioned by the dispersed and heterogeneous characteristics of the sources. For this reason, it is advisable to urge the OAS and UNASUR to implement an institutional regional source allowing the performance of unequivocal evaluations which will contribute to transparency and trust-building in the region.

⁴ It is of course admitted that the variables are being compared at different times, and that national tangible wealth magnitudes per country must have changed significantly as a result of the post-2000 commodity boom and the growth of China and India, among other factors.