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## informes y estudios especiales

# A standardized methodology for the measurement of defence spending \*

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NACIONES UNIDAS



**Office of the Executive Secretary**

**Santiago, Chile, January 2002**

This document has been prepared as part of the Project on a Common Standardized Methodology for the Measurement of Defence Spending, which is being executed by ECLAC in conjunction with the Governments of Argentina and Chile. The project, which is being funded by those two Governments, is being conducted under the guidance of the Executive Secretary, José Antonio Ocampo, and is being directed by Reynaldo Bajraj, Deputy Executive Secretary of ECLAC, in collaboration with Miriam Krawczyk, Director of the Programme Planning and Operations Division. Its technical coordination is being conducted by Héctor Assael in collaboration with the consultants Horacio Santamaría and Roberto Martirene and with Ernesto Pastén, who has performed the duties of research assistant. At different stages in its execution, the following persons have also worked on the project: Ernesto Ottone, who has helped to direct its implementation; the consultant Eugenio Lahera; and secretariat staff members Raúl Atria, Marcelo Ortúzar and Pedro Sáinz.

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## Presentation

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The technical study described in this report was undertaken by the Economic Commission for Latin America and the Caribbean (ECLAC), in response to a request by the Governments of Argentina and Chile for it to propose a common standardized methodology for the measurement of defence spending. The study, which was carried out between the fourth quarter of 1999 and August 2001 was funded by the two Governments concerned.

The first chapter of this report describes the background to the initiative and the processes carried out by the parties involved. It also briefly acknowledges the timeliness and importance of two publications to this project: the National Defence Manual of Chile (1997), and the National Defence White Paper (1999) published by the Ministry of Defence of Argentina.

The report then discusses the main international sources of public information on defence spending, analysing the methodological bases used in each case to measure such expenditure; and it comments on the potentials and difficulties involved in comparing defence expenditures between different countries.

The third chapter, which constitutes the core of this ECLAC secretariat study, presents a concrete proposal for a common standardized methodology for the measurement of defence spending, taking into account the particular characteristics of organizational structures in the Governments of Argentina and Chile, and especially their armed forces. This proposal envisages the measurement of defence spending in a sequence of ascending coverage levels, based on qualitative and quantitative information obtained from the two countries for the period 1996-1998.

As mentioned in the final chapter, preparing and testing this methodology has generated a valuable learning process which we hope to have transmitted in this report. Hopefully the project will be useful in future initiatives, not only by the two Governments that pioneered it, but also by other countries in the region that have shown serious interest in applying its methodology.

José Antonio Ocampo  
Executive Secretary of ECLAC

## **I. Background to this Argentine/ Chilean initiative**

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In various Latin American forums and meetings, and particularly at the Regional Conferences on Confidence- and Security-Building Measures, participating countries have reaffirmed the need to move forward, within a Latin American policy framework, with joint actions aimed at integrating and strengthening peace and security among member countries, whether at the regional or bilateral level.

Meetings such as those held in Santiago, Chile, in 1995 and in El Salvador in 1998, restated this commitment. In the Santiago meeting, participating countries noted that the adoption of confidence- and security-building measures represented a major contribution to transparency, security and mutual understanding, and to the achievement of economic and social development objectives. Moreover, in proposing concrete integration measures, the communiqué released at the El Salvador conference recommended undertaking studies aimed at establishing a common methodology to facilitate the comparison of military spending in the region, with technical support from the appropriate international economic agencies.

These recommendations were welcomed and supported by the Santiago Declaration approved during the second Summit of the Americas (Santiago, Chile, 1998), in which Heads of State from all the nations of the Americas resolved to implement a plan of action which, in its section in chapter II on fomenting confidence and security between States, undertakes to carry out the measures and recommendations emanating from the abovementioned regional conferences.

The Governments of Argentina and Chile have been stressing the importance of this topic, and at the fifth meeting of the Argentine/Chilean Standing Committee on Security (COMPERSEG),<sup>1</sup> held in Buenos Aires on 16-17 July 1998, the two countries agreed to submit a joint official request to the ECLAC secretariat. This was presented in a letter sent by the two countries' foreign affairs and defence ministers to the executive secretariat of the Economic Commission for Latin America and the Caribbean (ECLAC), on 30 July of that year. The letter referred to the high priority attaching to the analysis of public defence spending, for which reason they were requesting that a technical study be made, including a cost analysis, with a view to fulfilling the agreement between Argentina and Chile to develop a common standardized methodology for measuring defence expenditure in the two countries.

On 28 October 1998 the ECLAC executive secretariat replied, expressing satisfaction at the confidence placed in the institution by the two Governments, and enclosing a project proposal. The key objective of this proposal involved conducting a technical study to analyse and present a common standardized methodology for measuring defence spending in Argentina and Chile, in order, subsequently, to proceed to a regional initiative.

This proposal acknowledged the importance attached to this topic by the ECLAC executive secretariat; but it also pointed out the difficulties in tackling it, given the different government accounting criteria used in the two countries, and the scant amount of research carried out in the region into the characteristics of different categories of public expenditure, particularly defence. It therefore proposed setting up a binational technical group, consisting of authorities connected with the project, with the task of providing sustained research support, facilitating access to the necessary information and making technical comments on the work in progress. The project proposal also indicated the likely costs of the study for the two countries; and it briefly outlined the external data sources available internationally, noting the various definitions they use and the consequent methodological differences in their accounting procedures.

Subsequently, on 16 February 1999, in an event to commemorate the centenary of the "Magellan Straits Embrace" between Presidents Roca of Argentina and Errázuriz of Chile, a joint declaration was signed in Ushuaia, Argentina.<sup>2</sup> In it, the current presidents of the two countries expressed their satisfaction at the confidence- and security-building measures developed between Chile and Argentina, and drew attention to the excellent level of dialogue and co-operation currently existing between the two countries' armed forces. They particularly welcomed the progress achieved in the bilateral consultation meetings held between their ministries of foreign affairs and defence, and gave instructions for the respective authorities to implement the ECLAC proposal as soon as possible.

Lastly, pursuant to the Joint Presidential Declaration of Ushuaia, the ministers of foreign affairs and defence, meeting in Zapallar, Chile, on 18 May 1999, sent a further note to the Executive Secretary of ECLAC. In it, they expressed their satisfaction that the request by the two Governments for a technical study proposal aimed at the standardized measurement of Argentine and Chilean defence expenditures had been well received, and that the proposal and cost estimates had been accepted. They reported that an ad hoc advisory group with representatives from both countries had been set up to monitor execution of the project.

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1 This committee was created on 8 November 1995 via a memorandum of understanding aimed at strengthening cooperation on mutual security issues. It brings together officials from the two countries' foreign affairs and defence ministries twice a year.

2 See annex 1, "Joint presidential declaration on confidence- and security-building".

During the period considered, in 1997 the Chilean Ministry of National Defence published the “National Defence Manual of Chile”, and then in 1999, the Ministry of Defence of Argentina published its own “National Defence White Paper”. These were events of enormous significance, as further steps towards establishing a framework of confidence- and transparency-building measures between the two countries. The two publications have facilitated implementation of this project, since they are a valuable source of information in themselves, aside from indicating a willingness among the corresponding institutions to co-operate in implementing the project.

The “National Defence Manual of Chile”, is the first book of its kind ever published in that country. Its aims are, first and foremost, to develop citizen awareness of the value of defence; secondly, to show transparently to the international community some of the key concepts guiding the conduct of the Chilean State on questions of external security; and thirdly, to highlight a number of the country’s key defence policy issues. The complete manual consists of seven parts, divided into 22 chapters.

Publication of the “National Defence White Paper of Argentina”, was also the first time in Argentina that official global information on this subject has been published; the white paper seeks to provide information on issues of defence and military matters, while also presenting a guideline to national government thinking on the subject. It makes a thorough analysis of a variety of substantive and ongoing defence-related issues, describing key policies already implemented and discussing others currently being developed.

Both of these publications refer to defence spending in the international context. They argue that the standardization of criteria in defence expenditure accounting should be a short-term goal, in order to establish international comparison of such expenditures and so move forward in consolidating mutual confidence measures between the countries of the region, in general, and between Argentina and Chile in particular.

An exceedingly important role in this project’s start-up and progress has been played by the ad hoc advisory group, which has prepared guidelines for the implementation of the various project tasks. These guidelines were submitted as an informal “Non-Paper” to ECLAC headquarters on 22 December 1999.<sup>3</sup> This was reviewed by the parties at the advisory group meeting held in Argentina on 22 February 2000, which was attended by official representatives from Argentina and Chile, along with staff from the ECLAC secretariat.

During the ensuing months as the project progressed, technical groups were formed in each country to advise and provide support for ECLAC research tasks, both in preparing data and in commenting on the products obtained. In Argentina, the group was composed of representatives from the Ministry of Foreign Affairs, International Trade and Worship, the Ministry of Defence, and the National Budget Office (which is attached to the Department of the Treasury in the Ministry of Economic Affairs). The equivalent technical group in Chile comprised representatives from the Ministry of Foreign Affairs, the Ministry of National Defence, the Central Bank of Chile, the Comptroller General of the Republic, and the Budgetary Affairs Bureau of the Ministry of Finance. In the Chilean case, the Ministry of National Defence acted as group coordinator and official contact point with ECLAC technical staff, while in Argentina this function was carried out by the Ministry of Foreign Affairs, International Trade and Worship.

During this period, the ECLAC secretariat pressed ahead with data collection and analysis. In view of the points suggested in the “Non-Paper” and at the meeting of the ad hoc advisory group, in May 2000 the ECLAC secretariat presented a methodological proposal to its counterparts in the respective technical groups, which later submitted helpful comments.

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3 Reproduced in full in annex 2, “Standardized measurement of defence expenditure”.

Complementing these activities, the eighth meeting of the Argentine/Chilean Standing Committee on Security (COMPERSEG) was held in Buenos Aires on 3 and 4 July 2000, followed by a ninth meeting on 18 and 19 December 2000, held in Santiago. On both occasions, after reporting on the progress of the project to date, the ECLAC secretariat was given further guidelines on the work it was required to carry out.

Work by the ECLAC secretariat continued to move ahead taking all these inputs into account, and culminating in a preliminary report that was presented for detailed evaluation to the Governments of Argentina and Chile in late January 2001. Following a meeting of the ad hoc advisory group on 23 May in Buenos Aires, a variety of opinions and specific observations on the contents of this preliminary report were received from the two Governments. After taking due account of these, the ECLAC secretariat presented a preliminary revised version on 8 August 2001, which in turn was analyzed and corrected at a joint Argentina-Chile-ECLAC technical meeting in Buenos Aires on 9 and 10 August this year.

As a result of this process, on 23 August the ECLAC secretariat released an additional revised version of the project report for consideration by the two countries., and at the fourth consultation meeting in Buenos Aires on 27 and 28 August 2001, the ministers of foreign affairs and (national) defence of Argentina and Chile agreed as follows:

- To take cognizance of the final report of the technical study for a “common standardized methodology for the measurement of defence spending”, as requested from ECLAC by the two countries, to permit a rational comparison of their respective defence expenditures with a view to consolidating its role as a confidence- and transparency-building measure.
- To put on record their agreement with the ECLAC proposal and express their gratitude to the commission for its efforts in carrying out this task.

The Governments of Argentina and Chile are now being presented with a final corrected and edited version of the project report. On this occasion, it is appropriate to reiterate the importance of this project for the two Governments, draw attention to its repercussions throughout the Latin American region, and highlight the extraordinary experience it has represented for ECLAC. Project funding has come from the two countries involved, which is in itself a special feature of this activity.

## **II. Main international sources of information on defence spending**

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### **A. Worldwide**

As regards public information in the international domain, there are a number of institutions engaged in measuring, collecting and disseminating data on defence expenditure and arms transfers between countries, which make it possible to carry out comparative studies based on these sources. Several studies have reviewed the methodologies used by the main international bodies dealing with this topic.<sup>4</sup> This chapter provides a summary of conclusions reached, and, complementing them with other information, it analyses the characteristics of the different research efforts known to the ECLAC secretariat, emphasizing their relevance for measuring defence spending in Argentina and Chile.

In the first place, the International Monetary Fund (IMF) publishes the *Government Finance Statistics Yearbook* (GSFY) each year, containing standardized data on defence spending by consolidated central government for a large number of countries, including Argentina and Chile. This annual publication presents a variety of categories and breakdowns of government spending, including defence expenditure by consolidated central government classified on a functional basis, and it provides one of the main sources for comparison between countries using data series spanning several years.

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<sup>4</sup> See, for example, Lahera, 2000; Lahera and Ortúzar, 1998 and 2000.

In addition to IMF, there are four other bodies that measure defence spending: the United Nations, which publishes *Reduction of Military Budgets: Military Expenditure Reported by States in Standardized Form*; the London-based International Institute for Strategic Studies (IISS), which publishes a report entitled *The Military Balance*; the Stockholm International Peace Research Institute (SIPRI); and, until recently, the Arms Control and Disarmament Agency (ACDA) of the United States, which since April 1999 has been part of that country's Department of State. The two latter institutions also collect data on arms transfers. In addition, there are two institutions that publish information on arms transfers: the Congressional Research Service (CRS) of United States, and once again the United Nations, this time through the *United Nations Register of Arms Transfer*.

The bulk of the reports published by these bodies use common reference frameworks, based firstly on the United Nations *Classification of the Functions of Government* (COFOG), and secondly on a set of methodological definitions issued by the North Atlantic Treaty Organization (NATO). Thus, the different forms of measurement cannot be seen as entirely independent of each other, but countries also provide directly or release various bits of less standardized information.

Table A summarizes the information presented so far: the seven main international sources are listed; the variables included in their databases are specified (defence expenditures and/or arms transfers); and the primary reference sources used by each institution are named. The latter may be based on COFOG of the United Nations, on NATO guidelines or a variety of information provided by the countries concerned. Thus, for example, IMF uses COFOG in consultation with the countries themselves;<sup>5</sup> both IISS and the former ACDA use the framework established by NATO for its members, together with the budgets of non-member countries; SIPRI uses NATO as a guide; the two United Nations publications use information provided and classified directly by the countries themselves; and CRS confines itself to data contained in the records of "*U.S. Foreign Military Sales*".

As regards the coverage and measurement of defence spending, information provided by the countries has the disadvantage of not always being standardized so as to permit suitable international comparison. Again, the only solid frameworks in this context are COFOG and the NATO guidelines; yet these are not entirely equivalent, since they include different categories under the term "defence", and hence in the expenditures incurred by countries on defence-related activities.

For example, NATO includes pensions paid to military personnel as defence expenditures, whereas IMF includes these in GFSY under "*Social Security and Welfare*". The latter, unlike NATO, consolidates the internal transfers of the public accounts system in its data, including those relating to defence, thereby excluding operations carried out within central government.

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5 Although COFOG was designed by the United Nations (see United Nations, 2000), IMF uses it exclusively as a reference framework, for which reason it is often associated with the latter institution and with its definition of defence expenditures.

Table A  
INTERNATIONAL SOURCES: COVERAGE AND REFERENCES

Coverage		Organization	References (worldwide, including Argentina and Chile)
ARMS TRANSFERS	DEFENCE EXPENDITURES	International Monetary Fund (IMF)	Questionnaire to countries based on COFOG
		United Nations ( <i>Reduction of Military Budgets...</i> )	Information and classification provided by member countries
		International Institute of Strategic Studies (IISS)	NATO, for member countries; and budget figures for non-NATO members Use of public information
		Stockholm International Peace Research Institute (SIPRI)	Guided by NATO
		United States <i>Arms Control and Disarmament Agency</i> (formerly ACDA)	NATO, for member countries; and budget figures for non-NATO members
		United States, <i>Congressional Research Service</i> (CRS)	From the records of "U.S. <i>Foreign Military Sales</i> "
		United Nations ( <i>Arms Transfer Register</i> )	Information and classification provided by member countries

Source: Prepared by the ECLAC secretariat, based on Lahera (2000).

On the other hand, expenditure on police forces, border control, and auxiliary or para-military personnel are included within defence spending by NATO, provided they have been equipped and trained for military operations. GFSY, meanwhile, includes these items under "Public Order and Safety". Civil defence is included in "defence" by GFSY, but not by NATO.

## B. Defence expenditures and the international institutions that report them

As mentioned above, there are four international institutions apart from IMF that measure countries' defence spending: the United Nations, IISS, SIPRI and the former ACDA.

The United Nations has been developing a unified system of military expenditure records since 1975,<sup>6</sup> for which it requests information from all member countries. These records are grouped together under three headings: operating costs; procurement and construction; and research and development. The first category includes all current expenditures, such as administration and maintenance; the second covers all capital goods, such as equipment and constructions, and the third category encompasses defence-related research expenses.

Although this system has been in place for a number of years, it has given poor results. Many countries have claimed not to have data available to fit the United Nations categories. Since 1992, the United Nations has been providing an additional source of information, through publication of a conventional weapons register, prepared from data on arms transactions provided by each member country.

The International Institute for Strategic Studies (IISS) uses the definitions suggested by NATO, but in the case of non-NATO member countries budgetary figures and other sources in the public domain have to be consulted directly. Available data are published annually in a report

<sup>6</sup> As mentioned above: *Reduction of Military Budgets: Military Expenditure Reported by States in Standardized Form*.

entitled “*The Military Balance*”, which gives various details relating to military, reservist and paramilitary contingents; and on the weaponry existing in each country.

The Stockholm International Peace Research Institute (SIPRI) also bases itself on the NATO definition of defence expenditure. Its treatment of military imports is complex, but generally speaking those financed with national funds are included within defence expenditure, while those financed externally, through grants for example, are excluded.

The Arms Control and Disarmament Agency (formerly ACDA) is a United States Government body that collects information on defence spending using the NATO definition for its member countries. There are three observations to be made here: firstly, it excludes Ministry of Defence civil expenditure, but includes military spending by other ministries; secondly, military aid is included in the expenditure of the respective donor countries; and thirdly, the procurement of military hardware on credit is recorded when the corresponding debt is contracted, rather than when payment is made. For non-NATO members, data released by the various defence ministries is used, but in this case the Agency does not indicate whether arms imports are included, which may affect the volume and annual variability of defence spending.

In the case of IMF, its publication *Government Finance Statistics Yearbook* (GFSY) is based on the United Nations *Classification of Expenditure According to Purpose* (COFOG). In its functional breakdown of consolidated central government expenditure,<sup>7</sup> the definition it uses in calculating defence spending includes the administration, supervision and operation of military land sea and airborne forces. It also covers special forces, together with engineering, transport, communications, intelligence, materials, personnel, other non-combat forces and commands, reservists and auxiliary defence forces. Lastly, it includes civil defence expenses, and grants or loans from abroad (in money or kind) and defence-related scientific research.

IMF does not include expenditures for non-military purposes, even if carried out by defence ministries. In theory, therefore, much of military expenditure on education, health, research and development should be excluded, along with interest paid on military debts. Payments or services provided to retired personnel or former combatants should also be excluded.

Similarly, and maintaining consistency with the functional classification of government spending, defence expenditures do not include military pensions (included under “*Social Security and Welfare*”), nor disbursements relating to the police, coastguard or border patrol activities (these are included under “*Public Order and Safety*”). Moreover, as the information relates to expenditure by consolidated central government, any transfers made within central government are also excluded.

Original data are submitted annually to IMF by public bodies responsible for preparing and controlling the government budget in each country, based on a questionnaire designed by IMF itself. The latter merely verifies the internal consistency of the figures supplied. The information provided is calculated in the respective local currency, at current prices, with expenditures measured on a cash accounting basis for each fiscal year.

Figures published by IMF in GFSY only cover consolidated central government expenditures, so they do not include the entire public sector; and the information is only of a global nature both for consolidated central government expenditure and for the different government functions, including defence. Nonetheless, IMF has made a major contribution to knowledge and the inter-national comparability of defence spending and of expenditure by consolidated central government as a whole, so this major methodological effort should be duly acknowledged (we return to this topic in the next chapter).

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7 This covers expenditure undertaken by the Office of the President of the Republic, National Congress, the judiciary, ministries, and their respective dependencies.

### **III. Methodological proposal and selected results**

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#### **A. Basic methodological elements**

When the project was launched, the Governments of Argentina and Chile approved a clearly worded definition and orientation for the work to be undertaken, stating that “Defence is understood to refer to all activities whose effect is to safeguard national sovereignty. Its aim is to attain a level of external security that will enable the country to achieve its national objectives.” Accordingly, “defence spending” was understood to refer to expenditures made by the country in pursuit of this objective.<sup>8</sup>

In view of these and other considerations discussed above, three methodological definitions can be formulated that are essential to this study. Firstly, with regard to the scope and coverage of the measurement of defence expenditures, it is clear that the fundamental agreement between Argentina and Chile refers to national defence, i.e. actions to safeguard each country’s borders against foreign threats. This concept of defence wholly excludes any and all expenses incurred in connection with internal security, which involves security-related activities inside these two countries.

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<sup>8</sup> See “Non-Paper”, op. cit., p. 1.

Secondly, the “measurement” of defence expenditure proposed under the project is based on annual monetary flows rather than on physical or financial assets accumulated over longer periods. Nonetheless, the two Governments have made it very clear that “the model should be viewed in conjunction with other transparency- and confidence-building measures, such as the reports on conventional weaponry sent to international agencies, or measures adopted in fulfilment of commitments assumed under international agreements.”<sup>9</sup>

Thirdly, the Governments of Argentina and Chile proposed that a “standardized methodology” or a “standardized measurement” should be used to quantify defence expenditures. In this connection, they noted that “the model should be designed to permit a rational comparison of expenditure in order to guarantee its usefulness as a confidence- and transparency-building measure.”<sup>10</sup> Accordingly, the work pursued under this project has been geared towards using common criteria and procedures that will facilitate comparable calculations of defence spending in Argentina and Chile, based on budgetary and accounting procedures currently in force in the two countries. Although the latter are not always entirely similar, the project has not attempted to alter them.

In addition to these three basic principles, the standardized measurement of the two countries’ defence expenditures has been based on certain analytical and specifically designed budgetary procedures for compiling the quantitative and qualitative data required for this report.

Firstly, it should be noted that the institutions which are generally responsible for functional defence expenditures are the Ministry of Defence in Argentina and the Ministry of National Defence in Chile. Thus, there is some convergence between the “functional” and “institutional” budgetary classifications of these expenditures. There appear to be two major exceptions to this rule: (a) in Chile, the Ministry of National Defence is responsible for the uniformed police force (*Carabineros de Chile*), the investigative police (*Policía de Investigaciones*) and the Directorate General of Sports and Recreation (DIGEDER), which are institutions engaged not in defence functions as such but internal security, or social activities in the case of DIGEDER; (b) in Argentina, on the other hand, certain military institutions are attached to the Ministry of Economic Affairs rather than the Defence Ministry.<sup>11</sup>

Secondly, although the key objective of the study is to measure defence “spending”, it seemed appropriate to complement the available information with quantitative and qualitative data on the “incomes” used to finance such expenditures, in order to support defence spending estimates as far as possible.

Thirdly, as a fuller understanding was gained of the budgetary and income/expenditure control systems used by the Governments of Argentina and Chile, with a view to the development of a common standardized methodology for the measurement of defence spending, it was decided that the basic operational data to be used should be compiled on a cash-flow basis (the relevant terms are “pagado” and “ingresado” in Argentina, and “efectivo” en Chile), rather than based on accruals (or budgetary allocations or commitments). In addition, 1996-1998 was chosen as the review period to be used for identifying and analysing the strengths and potential weaknesses of the standardized methodology. This represented a reasonable and relatively recent period of time, for which data is widely available and the criteria and methodologies used in the two countries are sufficiently stable.

Cash-flow accounting was preferred for the following reasons: (a) it seemed to reflect more faithfully the true economic and strategic impacts of defence activities; (b) it allowed an acceptable

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9 See “Non-Paper”, op. cit., p. 2.

10 See “Non-Paper”, op. cit., p. 1.

11 “Non-Paper”, op. cit., p. 2, points out the need to “identify defence-related activities and programs under the jurisdiction of other State agencies.” The ECLAC secretariat was unable to identify any other defence activities and programs conducted outside the institutional structure of the ministries of defence of Argentina and Chile, apart from those mentioned.

level of comparability between Argentine and Chilean data, although preparing the information was more complicated in the Argentine case, because of the characteristics of that country's budgetary system; (c) in general, this procedure facilitated verification of the quality and precision of the available data; and (d) last but not least, in terms of knowledge and international comparability of defence expenditures, IMF publishes information prepared from government statistics based on this type of accounting, and disseminates it widely throughout the world.

Lastly, for the actual design of the common standardized methodology, it was decided to use a sequence of ascending approximations, such that different levels of defence expenditure in the two countries could be defined based on the increasing coverage of the particular category concerned. Accordingly, the ECLAC secretariat proposes that defence expenditures be calculated for three different aggregates — $G_1$ ,  $G_2$  and  $G_3$ — representing successively broader classifications of expenditure. This approach makes it possible to tailor the proposed methodology to the desires and needs of the countries in question, and permits more relevant, valid international comparisons to be made.

The aim of the remainder of this chapter is to prepare and apply expenditure level  $G_1$  (Basic), and then calculate levels  $G_2$  (Expanded) and  $G_3$  (Total), describing the specific scope in each case. These expenditure levels are specified on the basis of a fundamental definition contained in the “Non-Paper”: “As a general criterion to be applied, the entire budget in the jurisdiction of the Ministry of Defence or the armed forces shall be considered defence expenditure, unless the country that excludes certain categories or programmes contained therein, shows that they have another function.”<sup>12</sup>

## **B. Categories and results of Level $G_1$ (Basic) (expenditure by defence ministries)**

In view of the difficulty of devising a simple yet suitable methodological definition for Level  $G_1$  (Basic), the different analytical steps involved in consistently structuring this level of expenditure—which essentially corresponds to an initial, closely delimited category of government defence spending—are described below. The defence activities designated as corresponding to Level  $G_1$  (Basic) include all government expenditures involving the administration and management of military defence functions, specifically the administration, supervision and management of military defence forces and affairs; land, sea, airborne and space defence forces; engineering, transport, communications, information, materials, personnel, and non-combatant command and other forces; reserve forces and auxiliary defence personnel; and military structures and equipment supplies. Level  $G_1$  (Basic) also includes civil defence matters; applied research and experimental defence-related activities; and administration, management and support for defence activities that cannot be allocated to any of the preceding categories.<sup>13</sup>

### **1. The starting point: information obtained from national treasury institutions and IMF, on consolidated defence expenditures by National Government (Argentina) and Central Government (Chile)**

The starting points in deciding on a final specification for Level  $G_1$  (Basic), are the definitions and estimates provided by the respective Governments. These are then adjusted and corrected in a balanced and consistent way for the two countries. The initial categories and values used in this project were equivalent to payments (“pagados” or “efectivos”) made by the ministries

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<sup>12</sup> *Ibid.*, p. 2.

<sup>13</sup> For further details, see IMF, *A Manual of Government Finance Statistics*, Washington, D.C., 1986, pp. 168 and 169.

of defence of Argentina and Chile, in expenditure categories classified as defence in the budgetary appropriation act for each fiscal year (the latter coincides with the calendar year in both countries).

Both countries, however, may pass laws that “complement” the main annual budget act, and these are also considered in the estimates. Expenditures generally correspond to disbursements arising from budgetary items for the current calendar year, although some exceptions are possible. This happens in the Argentine case, particularly, where payments appear in respect of expenditures accrued during the previous period; but these tend to be very largely offset by budgetary items included in the current year but paid in the next.

In this project, the expenditure categories in each case were prepared and defined from official sources: the National Budget Office (Department of the Treasury, Ministry of Economic Affairs) in Argentina, and the Budgetary Affairs Bureau (Ministry of Finance) in Chile. These expenditure categories are also reported to the Public Finance Division of IMF, which publishes them annually, usually without amendment, in its *Government Finance Statistics Yearbook*. They are also published in official documents of the Department of the Treasury in Argentina and the Ministry of Finance in Chile. The guidelines set out in *A Manual of Government Finance Statistics* are followed in preparing the corresponding estimates. To gain a better understanding of their respective scope in Argentina and Chile, it is also helpful to study two far-reaching regulatory documents published every year, dealing with the fundamental characteristics of budgetary accounting in the two countries.<sup>14</sup>

The initial data for Argentina and Chile for the period 1996-1998 are shown in table 1. In both countries, the figures represent paid or effective expenditures, and it is accepted that the scope of “National Government” in Argentina is reasonably comparable to that of “Central Government” in Chile, notwithstanding the differences that exist in terms of administrative and territorial organization between the two countries.

In both cases the figures shown in the table are global estimates of defence expenditures executed by each country’s defence ministry, according to a functional classification of government spending used by Treasury institutions. They include disbursements made in local currency, together with the local-currency equivalents of expenditures made directly in foreign currency. Official publications in Argentina and Chile, like those of IMF, only report total values without subdividing defence activities, expressed in local currency and at current prices each year.<sup>15</sup>

In the initial defence expenditures shown in table 1, total spending by the respective ministries of defence was mutually reconciled in two respects, first and foremost by eliminating expenditures on pension benefits from this level, for later inclusion in Level G<sub>2</sub> (Expanded). Expenditures classified under the heading “Personnel” in Argentina and Chile correspond to total expenditure in this category, in other words they include employer contributions and pension savings made by currently active military personnel. Additional information will be given on this below.

In addition, these initial defence expenditure categories excluded expenses relating to internal security—in Argentina, for the obvious reason that institutions engaged in this security function, such as the police (*Gendarmería* and *Policía Federal*) have always belonged to the Ministry of the Interior. In Chile, on the other hand, obtaining this basic value involves deducting all expenditures relating to the uniformed and investigative police (*Carabineros de Chile* and *Policía de Investigaciones*, respectively), since these are organizations are dedicated essentially to the

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14 For Argentina, see Secretaría de Hacienda, *Manual de Clasificaciones Presupuestarias para el Sector Público Nacional*; and for Chile, see Ministerio de Hacienda, *Instrucciones para la Ejecución de la Ley de Presupuestos del Sector Público*.

15 Although in Argentina the ECLAC secretariat had access to complementary information on the functional classifications of defence expenditures, it was impossible to compare this with appropriate figures for Chile.

country's internal security despite being institutionally attached to the Ministry of National Defence.<sup>16</sup>

It is also worth comparing the relative magnitudes of defence and security spending in Argentina and Chile, as reported to IMF. In Argentina, annual average expenditure on internal security for the 1996-1998 triennium amounted to 70% of disbursements made on national defence; in Chile, the equivalent figure was 67%.<sup>17</sup> These proportions are very similar, despite the specific characteristics in each case.

During execution of the project, it was noted that initial defence expenditures in Argentina and Chile were not equivalent, owing to a number of important scope and quantification differences between the two countries. We address this issue in the following sections of this chapter, dealing with the two national cases separately. This procedure allows a more thorough examination of the most important characteristics of the various categories of defence expenditure in Argentina and Chile, respectively.

**Table 1**  
**ARGENTINA AND CHILE: INITIAL DEFENCE EXPENDITURE,  
NATIONAL TREASURY INSTITUTIONS - IMF, 1996-1998**

*(Totals; cash values expressed in local currency at current prices;  
including foreign-currency expenditures) a/*

	1996	1997	1998
<b>ARGENTINA</b>	(Millions of Argentine pesos)		
National Budget Office b/	1 986.2	2 007.0	1 922.9
<b>CHILE</b>	(Millions of Chilean pesos)		
Budgetary Affairs Bureau c/	489 048	564 636	633 496

**Source:** National Budget Office, Department of the Treasury, Ministry of Economic Affairs of Argentina; Budgetary Affairs Bureau, Ministry of Finance of Chile; International Monetary Fund (IMF), *Government Finance Statistics Yearbook*, Washington, D.C., 2000.

a/ Nominal exchange rate in Argentina: US\$1 = Arg\$1; nominal exchange rate in Chile (annual averages): US\$1 = Ch\$412.27 (1996), Ch\$419.31 (1997), and Ch\$460.29 (1998). Used to convert foreign-currency expenditures into local currency. b/ Values calculated in 2000 by this Office, comparable and similar to those previously provided to and published by IMF in its 2000 Yearbook. c/ Bureau estimates, as supplied to IMF.

## 2. Corrections to initial defence expenditures: Argentina

In the first place, it is worth recalling that in December 1999 the Governments of Argentina and Chile had agreed the following:

“SOCIAL SERVICE ACTIVITIES: Defence ministry or military budgets assigned to health, security, education, culture, science and technology activities, should be considered as an integral part of the defence project, although certain specific categories can be deducted that provide services to the community at large, or if they are personally financed by the users.”<sup>18</sup> In Argentina, however, all defence ministry expenditure on “Education and training” and “Sanitary assistance” programmes were originally included under “Education” and “Health”, respectively, unlike the procedure followed in Chile.<sup>19</sup>

16 Total expenditures by DIGEDER (destined for social functions) are also deducted.

17 See International Monetary Fund, *Government Finance Statistics Yearbook*, 2000, Washington, D.C., pp. 25 and 96.

18 See “Non-Paper”, op. cit., p. 3.

19 On this point, it is interesting to note that the Argentine accounting system classifies expenditures entirely according to “programmes”, which makes it possible to prepare a functional subdivision of the country's defence expenditures. In Chile, the government accounting system leads to a somewhat different budgetary sub-classification, with some items that are essentially institutional and not really based on “programmes”.

Accordingly, table 2 adds in the amounts calculated for “Education and training” and “Health” for military personnel, to the original values for Argentina shown in table 1. These include activities of instruction or training and medical care (including the family group) necessary to ensure adequate performance from military forces. Consequently, education and health actions destined for people outside the military system are not included.

Secondly, in defence expenditures corresponding to its air force, the initial value includes all expenditures by the Military Aeronautical Police, an institution whose basic function is to guarantee safety at airports throughout the country. Table 2 therefore deducts from the original figures an estimate of expenditures relating to that institution’s internal security functions, including a component for the procurement of inputs and hiring of services.

Thirdly, pension fund contributions made by the State as employer, together with payroll deductions from military personnel —both of which are paid into military social service institutes— are generally included in personnel expenditures at the initial G<sub>1</sub> Level. Moreover, institutions financed in this way are not included as items in the national budget, so no duplication problems would arise here in the different definitions of defence spending, since expenditures corresponding to these institutes are not included.

Nonetheless, in the case of the army general staff, there is income arising from the Army Social Work Institute (IOSE), in respect of reimbursements for healthcare treatment received by army personnel in the institution’s hospital network. As hospital expenditures are included in the initial Level G<sub>1</sub> figures, the portion covered by IOSE appears in the budget as health expenditures financed with earmarked funds (source 13). Accordingly, a duplication occurs when total expenditures are consolidated; according to information provided by the army, estimated annual reimbursements amount to 5.4 million pesos, which should be deducted in table 2. The navy and air force use a different procedure to the army, so budgetary duplications should not arise.

**Table 2**

**ARGENTINA: DEFENCE EXPENDITURE AT G<sub>1</sub> (BASIC) LEVEL, 1996-1998**  
(Totals; cash values expressed in local currency at current prices;  
including foreign-currency expenditures)

	1996	1997	1998
	(Millions of Argentine pesos)		
<b>National Budget Office</b> (Initial defence expenditure)	<b>1 986.2</b>	<b>2 007.0</b>	<b>1 922.9</b>
<i>Plus:</i>			
Education and training a/	233.2	174.2	197.5
Health a/	124.1	118.3	144.5
<i>Less:</i>			
Military aeronautical police b/	26.4	26.8	27.2
Payments to Army Social Work Institute a/	5.4	5.4	5.4
<b>Defence expenditure, Level G<sub>1</sub> (Basic) c/</b>	<b>2 311.7</b>	<b>2 267.3</b>	<b>2 232.3</b>

**Source:** National Budget Office, Department of the Treasury of Argentina; ECLAC estimates based on the Integrated Financial Information System (SIDIF), of the Department of the Treasury, 1996, 1997 and 1998; and Department of the Treasury, *Manual de Clasificaciones Presupuestarias para el Sector Público Nacional*, Buenos Aires, 1999.

a/ ECLAC estimates. b/ ECLAC estimate: expenditure by Air Force on airport security. c/ Includes “bienes de uso” (fixed assets).

Lastly, it is essential to note that in Argentina defence spending by the defence ministry include all expenditures on military hardware (e.g. warships, submarines, fighter and bomber aircraft, tanks, missiles, rockets, patrol vehicles and weaponry), which under internationally accepted budgetary standards are considered as “current expenditure”. Additional categories are

also included under “capital expenditure”, destined especially for the construction or procurement of equipment and other physical assets for use in the production of other goods or services, which are not exhausted after initial use, have a useful life of more than one year and are subject to depreciation; intangible assets are also included. The sum total of these three types of current and capital expenditure is what Argentine budgetary practice refers to as “bienes de uso”, or fixed assets.

Total expenditures in this “fixed assets” category, expressed in millions of Argentine pesos at current prices each year, and including amounts disbursed in both foreign and local currency, are as follows:

Year	Totals	Current expenditure	Capital expenditure
1996	38.7	22.6	16.1
1997	65.3	48.0	17.4
1998	88.1	80.5	7.7

Source: National Budget Office of Argentina (differences due to rounding).

Under Argentine budgetary procedures, these amounts (38.7 million pesos in 1996; 65.3 million in 1997 and 88.1 million pesos in 1998) represent total defence spending on military equipment, gross fixed capital formation and intangible assets undertaken by the country’s armed forces during that period —despite their different financing periods, but according to the date on which they are entered as fixed assets in budgetary accounts. It is worth reiterating that these amounts are incorporated in full in Level G<sub>1</sub> (Basic) for each of the annual periods studied (see table 2). In short, Argentina’s total defence expenditure at Level G<sub>1</sub> (Basic), at current prices, was 2,311.7 million pesos in 1996; 2,267.3 million in 1997 and 2,232.3 million pesos in 1998.

### 3. Adjustments to initial defence expenditures: Chile

In the Chilean case, defence expenditures identified in the original approximation, analysed above, require a number of adjustments to reconcile them with the Level G<sub>1</sub> (Basic) figures valid for Argentina. Table 3 makes use of complementary information provided by the Comptroller General of the Republic of Chile.<sup>20</sup>

Firstly, total expenditures by the Civil Aviation Board and the Territorial Waters Board both need to be deducted. These two institutions essentially perform non-defence functions related to ensuring safety in air and ocean transport, which is mainly a civil activity.

After that, it is necessary to eliminate all expenditures incurred by specialized bodies attached to the Chilean armed forces (the Military Geographical Institute, the Naval Hydrographics and Oceanographics Service and the Aerophotogrammetrics Service of the Chilean Air Force – FACH; and army support organizations). These institutions basically carry out non-military activities in support of the country’s civil and economic development; their equivalents are generally not included when calculating this category in the Argentine case —except for the Naval Hydrographics Service of Argentina, which is included in that country’s Level G<sub>1</sub> (Basic), because it was not feasible to identify it separately.

In addition, expenditures incurred by defence industry organizations are also deducted, to be reconsidered later when estimating Chile’s defence expenditure at Level G<sub>3</sub> (Total), where they are included.

<sup>20</sup> The use of figures provided by the Comptroller General’s Office, which are also calculated on a cash basis, produces a number of small differences in total expenditure compared to the data obtained from the Budgetary Affairs Bureau (see the “Source adjustment” line in table 3).

**Table 3**  
**CHILE: DEFENCE EXPENDITURE AT G<sub>1</sub> (BASIC) LEVEL, 1996-1998**

*(Totals: cash values expressed in local currency at current prices; including foreign-currency expenditures)*

	1996	1997	1998
	(Millions of Chilean pesos)		
<b>Budgetary Affairs Bureau</b> (Initial defence expenditure)	<b>489 048</b>	<b>564 636</b>	<b>633 496</b>
<i>LESS</i>			
1) Source adjustment a/	-4 654	-98	60
2) Civil Aeronautics Board	37 834	45 005	52 610
3) Territorial Waters Board	16 084	15 179	19 726
4) Specialized agencies of the Armed Forces b/	3 806	4 595	5 063
5) Army support organizations c/	1 279	1 177	687
6) Defence industry organizations d/	2 073	2 259	2 549
7) Funding of Armed Forces health programmes e/	31 630	39 560	45 580
8) Funding of Armed Forces welfare programmes f/	5 704	5 991	5 519
<i>PLUS</i>			
Reserved Copper Laws g/	109 847	115 081	98 744
<b>Defence expenditure at Level G<sub>1</sub> (Basic) h/</b>	<b>505 140</b>	<b>566 047</b>	<b>600 447</b>

**Source:** National Budget Office, Ministry of Finance of Chile; ECLAC estimates based on the Comptroller General of the Republic of Chile, *Estados de la situación presupuestaria del sector público: enero-diciembre 1998*, Santiago, Chile, 1999; *Estados de la situación presupuestaria del sector público: enero-diciembre 1997*, Santiago, Chile, 1998; *Estados de la situación presupuestaria del sector público: enero-diciembre 1996*, Santiago, Chile, 1997; Budgetary Affairs Bureau of Chile, *Instrucciones para la ejecución de la Ley de Presupuestos del Sector Público Año 1998*, Santiago, Chile, Ministry of Finance, 1998; *Instrucciones para la ejecución de la Ley de Presupuestos del Sector Público Año 1997*, Santiago, Chile, Ministry of Finance, 1997; Budgetary Affairs Bureau of Chile, *Instrucciones para la ejecución de la Ley de Presupuestos del Sector Público Año 1996*, Santiago, Chile, Ministry of Finance, 1996.

a/ When the calculation methodology used by the Budgetary Affairs Bureau is applied to data from the Comptroller General of the Republic, a slight difference results. b/ Includes the Military Geographical Institute, the Naval Hydrographics and Oceanographics Service, and the Aerophotogrammetrics Service of the Chilean Air Force. These institutions perform essentially non-military activities. c/ Mainly the Military Works Corps, an organization responsible for building roads in difficult and isolated areas (it built much of the southern portion of the Pan-American Highway, for example). d/ Included as defence expenditure at the G<sub>3</sub> level; corresponds to the Talagante Chemical Complex (explosives) and the Quality Research and Control Institute (IDIC). e/ See table 4 and the description contained in the report on user-funded activities. It is assumed that the same occurred in 1996 and 1997 as in 1998. f/ The ECLAC secretariat also agreed that welfare programmes could be classified as "user-funded activities" based on a line of reasoning similar to that applied in the case of health programmes. g/ 10% of revenues from sales by the National Copper Corporation (CODELCO) of copper and its by-products, with a floor of US\$ 180 million as adjusted, since 1987, by the United States wholesale price index for the preceding year. These funds are apportioned equally among the three branches of the Armed Forces and are to be used "to procure and maintain materials and elements comprising the fighting potential of the country's Armed Forces". For 1996, 1997 and 1998, the corresponding amounts were US\$ 266.4 million, US\$ 274.5 million and US\$ 214.5 million respectively (rounded figures). h/ Includes compulsory military service expenditures.

Secondly, defence expenditure on military health and welfare services gives rise to a special situation that had already been foreseen by the two Governments, which had approved the following procedure:

"USER-FUNDED ACTIVITIES: Eliminate management activities relating to user-funded services in the defence sector such as health and welfare services, in order to avoid double counting. Each country can exclude from this category amounts financed out of direct user contributions, apart from those deducted through the payroll."<sup>21</sup>

On this point, in a note dated 25 June 2001 addressed to the Executive Secretary of ECLAC, the Chilean Minister for National Defence officially requested that a study prepared by the

<sup>21</sup> See "Non-Paper", op. cit., p. 3.

Government of Chile on the funding of that country's armed forces health programme be included in the ECLAC report. The study referred to, a copy of which was enclosed with the note, states the following:

“FUNDING OF ARMED FORCES HEALTH PROGRAMMES”

“These programmes provide health services to military personnel, their family members, retirees, persons receiving pensions from the National Defence Pension Fund (CAPREDENA) and their family members, and private individuals generally.”

“The corresponding services are provided at health centres, such as hospitals and diagnostic centres and primary health-care clinics; which possess all necessary elements for diagnosis, treatment and support to provide this service. With very few exceptions, the entire service is provided at such centres, which are fully equipped to provide a complete service.”

“These health centres finance their expenditure by charging for the services they provide, according to a scale of fees established by ministerial decree on the advice of the respective commander in chief. Amounts charged appear in sub-category 01, “Operating Revenues”, in the respective health programme budget. These services enjoy implicit subsidies because a large proportion of their staff are paid by the respective branch of the armed forces, their infrastructure is financed through institutional budgets, and the institutions concerned pay for basic inputs or consumables. All such payments are made directly by the respective branch of the armed forces, using funds drawn from and recorded in their institutional budgets. As a result, they are counted as part of army, navy or air force expenditure. Depending on the status of the individual receiving treatment, the charge will be made against the respective health funds, or, in the case of a private individual, the person or health institution providing insurance cover (ISAPRE, FONASA, etc.)”

“For personnel in active service and their family members, each institution operates a main health fund, supported by a number of complementary funds; costs not covered the respective fund(s) are deducted from the salary of the person concerned through the payroll.”

“In the case of personnel in active service these health funds are financed by a deduction of 5.5% from salary, supported by a 1.5% employer contribution. Additional funds include a family assistance fund, which covers part of what the main health fund does not cover, and a complementary fund covering all or most of what is not covered by the other funds (for further details see the Armed Forces Health Act of August 1996). Any outstanding balance is covered by additional personnel payroll deductions, which can be made by installments.”

“All legal contributions, such as ‘voluntary’ payments to the main and complementary funds are deducted from direct staff remuneration. Institutional budgets record gross pay; so contributions made to health funds are included as an expense under sub-category 21, ‘Personnel’, of the respective institution.”

“Institutional budget sub-category 21, Personnel, transfer to health funds.”

“Health programme sub-category 1, Operating Revenues.”

“Employer contributions (1.5% of gross pay) are transferred to the (main) health fund under the same procedure, drawn against sub-category 21, ‘Personnel’, of the respective institutional budget.”

“As the State has to assume responsibility for the health of persons called upon to do military service, a fiscal transfer is made to the (main) health fund. This appears in the institution's budget as item 31.002 in sub-category 25, ‘Transfers to public-sector bodies’. It is recorded as a transfer in the health programme budget, sub-category 06, item 62 in Revenues.”

“Pensioners and their family dependents who receive treatment in health institutions are divided into two categories: those affiliated to the institutional health service and those who are members of the CAPREDENA health system.”

“In the first case, the system is the same as for personnel in active service, with legal and voluntary healthcare deductions transferred to the respective health funds. Affiliates of CAPREDENA pay for the services they receive through the CAPREDENA health fund, which operates in a similar way to institutional health funds.”

“These are financed by health insurance premiums deducted from pensions paid. The main fund is budgeted under Item 15, chapter 13, programme 02, and a subordinate programme to that of CAPREDENA which records payments for health benefits and the transfer of 17.5% of healthcare deductions to the armed forces health funds.”

On 3 August 2001, the budgetary adviser to the Minister of National Defence of Chile, explained this in a detailed memorandum sent to the ECLAC secretariat on that date; the memorandum provided complementary information on this topic.

For the reasons given, the ECLAC secretariat finally decided to accept the argument of the Government of Chile proposing the deduction of health expenses according to calculations for 1998, because their funding came primarily from health institutions’ operating revenues and transfers from categories previously counted in initial defence expenditure (see table 4).

**Table 4**

**SUMMARY OF INCOME RECEIVED BY CHILEAN ARMED FORCES HEALTH PROGRAMMES a/**  
(1998: in millions of pesos at current prices)

	<b>Executed</b>
A. TRANSFERS (from the Army, Navy and Air Force)	1 590
B. OPERATING REVENUES (includes operations relating to earlier years) (corresponds to payments in respect of military health services by CAPREDENA 8,311 million pesos; the Armed Forces 27,801 million pesos; and private individuals 6,078 million pesos)	42 190
C. OTHER INCOME	1 800
<b>Total</b>	<b>45 580</b>

**Source:** Ministry of National Defence of Chile, memorandum dated 3 August 2001.

a/ The corresponding detailed table is contained in the 3 August 2001 memorandum.

Accordingly, in 1998, a total of 45,580 million pesos (rounded figures expressed in current prices) was deducted from table 3 in respect of health programmes. For 1996 and 1997, the corresponding deductions were 31,630 million pesos and 39,560 million pesos respectively, assuming the existence of similar situations and according to approximate estimates made by the secretariat.

The ECLAC secretariat did not have detailed information available on the funding of welfare services, so it used a similar criterion as for health expenditures, assuming that welfare activities are also financed out of internally generated operating revenues and through transfers from items already included in initial defence expenditures. The resulting estimated reductions for welfare services are as shown in table 3 (line 8).

Thirdly, current Chilean law includes the Reserved Copper Acts (No. 13196 of 1958, the final text of which was established by Decree Law No. 1530 of 1976, subsequently amended by Laws 18445 of 1985 and 19628 of 1987). The first two articles of Law No. 18445 provide as follows:

### Article 1

“Ten percent of foreign-currency earnings from external sales of copper production, including sub-products, by the National Copper Corporation of Chile, plus 10% of the value of contributions in copper made abroad by that corporation, shall be deposited in the General Treasury of the Republic, in United States dollars, by the Central Bank of Chile, to enable the Supreme National Defence Council to fulfil the objectives of Law No. 7.144.”

“A final liquidation of the yield of this law shall be made each year, and should the total proceeds from 10% of sales be less than US\$ 180 million, having been adjusted annually since 1 January 1987 in line with variations in the wholesale price index of the United States of America for the preceding year, any difference shall be made up by the Treasury. A contingency provision shall be included in the national budget appropriation act each year for this purpose.”

### Article 2

“The transfer of funds to be made in fulfilment of this Decree Law, shall be conducted in reserve; the corresponding funds shall be held in secret accounts, their accounting shall be confidential; and investment of proceeds, whether by cash purchase, credit operations, instalment payments or loan service, shall be authorized through Reserved Supreme Decrees exempt from the taking of cognizance and certification.”

Given the very special characteristics of these Reserved Laws in Chile, it is not feasible to calculate or estimate annual expenditure on the purchase and maintenance of materials and elements forming the war potential of the armed forces, financed by the annual proceeds of these laws. Nonetheless, the funds generated thereby are officially known, namely US\$ 266.4 million in 1996; US\$ 274.5 million in 1997 and US\$ 214.5 million in 1998 (figures in current dollars), shared equally between the three branches of the armed forces. These figures are published in the annual accounts of the National Copper Corporation (CODELCO-CHILE).

Accordingly, this report accepts that the full equivalent in local currency of the yield in current dollars from the Reserved Copper Laws, be added to initial defence expenditures (Ministry of Finance - IMF) proposed for Chile in order to determine Level G<sub>1</sub> (Basic).<sup>22</sup>

In other words, this methodological option is chosen because it is viable given the information available. It would be worth improving on this in future, however, particularly in terms of greater detail on the different expenditures carried out and how they are recorded in government accounts.

Lastly, and to summarize, as a result of all the rectifications proposed in the three previous sections (deductions and additions), Chile's defence expenditures at Level G<sub>1</sub> (Basic) amounted to 505,140 million pesos in 1996, 566,047 million in 1997 and 600,447 million pesos in 1998 at current prices (see table 3).

Interestingly, the National Defence Manual of Chile (1997) uses a different methodology to calculate the country's defence expenditures, and constructs the corresponding figures from different analytical foundations than those suggested in this report. In the manual, the initial reference point and the source of original calculations is the fiscal transfer to the country's armed forces, accrued and published through information contained in a describing the public-sector budget situation *Estado de la Situación Presupuestaria del Sector Público*, published by the Comptroller General of the Republic. This methodology was not used in this project because the figures are calculated on an accruals basis rather than in cash-flow terms, and the values calculated are not comparable with their Argentine counterparts.

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<sup>22</sup> This seems to be a sustainable working hypothesis, especially considering the possible limits for the corresponding defence expenditures as an average over several years. A similar approach is followed by IMF, for its own estimates. See, for example, International Monetary Fund, *Chile-Selected Issues*, Staff Country Report No. 00/104, Washington, D.C., August 2000, tables 15 and 17.

#### 4. Argentina and Chile: initial comparison of defence expenditures at G<sub>1</sub> (Basic) level

On the basis of the Level G<sub>1</sub> (Basic) defence expenditure categories in Argentina and Chile, and their respective values expressed in each country's local currency at current prices, an initial comparison can be made by expressing Level G<sub>1</sub> expenditures as a percentage of gross domestic product (GDP), the latter also being calculated in nominal terms. The corresponding figures are shown in table 5.

The G<sub>1</sub> (Basic) coefficient in Argentina amounted to 0.85% in 1996, but then fell to 0.77% in 1997 and 0.75% in 1998, to average **0.79%** for the 1996-1998 triennium as a whole. In Chile, on the other hand, the equivalent proportions stayed constant at **1.79%** in each of the three years studied, so naturally this was also the annual average for the triennium. In other words, the G<sub>1</sub> (Basic) coefficient for Chile is somewhat more than twice the corresponding figure for Argentina, measured as an average for 1996-1998 in relation to GDP.

Table 5  
**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT G<sub>1</sub> (BASIC) LEVEL,  
1996-1998**

*(Totals expressed in local currency at current prices; including foreign-currency expenditures) a/*

	1996	1997	1998	Annual average, 1996-1998
<b>ARGENTINA</b> (Millions of Argentine pesos)				
Defence expenditure, Level G <sub>1</sub> (Basic)	2 311.7	2 267.3	2 232.3	--
Level G <sub>1</sub> (Basic) as a percentage of GDP	0.85	0.77	0.75	<b>0.79</b>
Gross domestic product (GDP) b/	272 150	292 859	298 948	--
<b>CHILE</b> (Millions of Chilean pesos)				
Defence expenditure, Level G <sub>1</sub> (Basic)	505 140	566 047	600 447	--
Level G <sub>1</sub> (Basic) as a percentage of GDP	1.79	1.79	1.79	<b>1.79</b>
Gross domestic product (GDP) b/	28 268 364	31 567 287	33 630 367	--

**Source:** Tables 1 to 4 *supra*; ECLAC estimates based on SIDIF (1996, 1997, and 1998); Department of the Treasury, Ministry of Economic Affairs of Argentina (1999); Comptroller General of the Republic of Chile (1997, 1998 and 1999); Budgetary Affairs Bureau of Chile (1996, 1997 and 1998); ECLAC (2000) and Central Bank of Chile (2000).

a/ Nominal exchange rate in Argentina: US\$ 1=Arg\$ 1. Nominal exchange rate in Chile (annual averages): US\$ 1=Ch\$ 412.27 (1996), Ch\$ 419.31 (1997), and Ch\$ 460.29 (1998). b/ Calculated directly at current prices, on the basis of official figures provided by the National Accounts Office (Argentina), and Central Bank of Chile.

The levels and behaviour of defence expenditure at G<sub>1</sub> (Basic) level in Argentina and Chile naturally depend on the comparative magnitudes of total central government expenditure in the two countries, and are also related to the functional structure of such expenditure. Table 6 provides figures on this.

In Argentina, total consolidated expenditure by National Government in relation to GDP was quite stable at just over 15% during the 1996-1998 period. Level G<sub>1</sub> defence expenditures as a proportion of total government spending fell from 5.5% in 1996 to under 5% in 1998. This provides a quantitative explanation for the levels and downward trend of Level G<sub>1</sub> defence expenditures in Argentina in relation to GDP.

**Table 6**  
**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT G<sub>1</sub> (BASIC) LEVEL, AND CONSOLIDATED CENTRAL GOVERNMENT EXPENDITURE, 1996-1998**  
*(Totals expressed in local currency at current prices; including foreign-currency expenditures)*

	1996	1997	1998	Annual average, 1996-1998
<b>ARGENTINA</b> (Millions of Argentine pesos)				
1. Total consolidated expenditure by national government	41 866.9	44 697.0	45 930.4	--
2. Defence expenditure, Level G <sub>1</sub> (Basic)	2 311.7	2 267.3	2 232.3	--
3. Level G <sub>1</sub> (Basic) as a percentage of total expenditure	5.52	5.07	4.86	5.15
4. Total national government expenditure as a percentage of GDP	15.38	15.26	15.41	15.35
5. Defence expenditure, Level G <sub>1</sub> (Basic), as a percentage of GDP	0.85	0.77	0.75	0.79
6. GDP	272 150	292 859	298 131	--
<b>CHILE</b> (Millions of Chilean pesos)				
1. Total consolidated expenditure by central government (excluding Reserved Copper Laws)	5 982 770	6 695 350	7 576 310	--
2. Total consolidated expenditure by central government (including Reserved Copper Laws)	6 092 617	6 810 431	7 675 054	--
3. Defence expenditure, Level G <sub>1</sub> (Basic) (including Reserved Copper Laws)	505 140	566 047	600 447	--
4. Defence expenditure, Level G <sub>1</sub> (Basic), as a percentage of total expenditure (line 3 / line 2)	8.29	8.31	7.82	8.14
5. Total central government expenditure as a percentage of GDP	21.55	21.57	22.90	22.01
6. Defence expenditure, Level G <sub>1</sub> (Basic) as a percentage of GDP	1.79	1.79	1.79	1.79
7. GDP	28 268 364	31 567 287	33 630 367	--

**Source:** ECLAC estimates, on the basis of official statistics; tables 1 to 5 *supra*; and IMF, *Government Finance Statistics Yearbook*, 2000, pp. 24 and 96.

The situation in Chile is different. Total consolidated central government expenditure (including the yield from the Reserved Copper Laws) as a proportion of GDP, moved up from already quite high levels of around 21.6% in 1996 and 1997, to 22.9% in 1998. Defence expenditure at G<sub>1</sub> (Basic) level, as a proportion of total government spending, fell from 8.3% in 1996-1997 to 7.8% in 1998, thereby failing to accompany the growth in total government expenditure. As a result of these different behaviour patterns, Level G<sub>1</sub> (Basic) defence expenditure in Chile remained stable throughout the 1996-1998 triennium as a proportion of GDP.

In brief, the figures recorded in Argentina and Chile differ because of a combination of two factors. Both central government expenditure as a proportion of GDP and Level G<sub>1</sub> defence expenditure as a percentage of total government spending were significantly lower in Argentina than in Chile (see table 6).

As a partial and eminently provisional explanation of the larger comparative magnitude of Level G<sub>1</sub> (Basic) defence expenditures in Chile compared to Argentina, it is worth considering the average number of personnel in the two countries' armed forces in 1996-1998. In Argentina, there were 77,920 personnel in active service, while the corresponding figure in Chile was 62,200.<sup>23</sup> These indicators provide an initial physical explanation for the relative size of Level G<sub>1</sub> defence expenditures in the two countries.

## 5. Trend of selected relevant economic variables

Having provided information on Level G<sub>1</sub> (Basic) defence expenditures, the logical thing would have been to proceed with the study by providing constant-price figures, calculated in terms of nominal local currencies in Argentina and Chile, and in current United States dollars. This methodological option was not taken, however, for three reasons.

Firstly, the period of analysis, which only covers three years (1996-1998), poses the difficult and controversial problem of choosing suitable price deflators for the Argentine and Chilean figures, and also when using certain basic data for the United States. Table 7 shows that the two key price indices (consumer and wholesale prices) behaved very differently in those three countries, both in consecutive years and in terms of cumulative trends expressed in index form (1995=100). In view of these wide disparities, it was considered inadvisable to use price indices that were averaged in any way, or implicit deflators from national accounts calculations.

Secondly, the foreign-exchange policies applied by Argentina and Chile during this three-year period were fundamentally different, since one of these countries had a fixed exchange rate while the other was using a flexible system. It therefore did not seem wise to try to arrive at approximate estimates of the real value of the dollar in the two countries, which would have been required in order to estimate and compare figures for defence expenditures expressed in constant dollars.

Thirdly, to avoid unpredictable distortions in the standardized bases of quantitative data for Argentina and Chile, the safest approach was to use series for national accounts aggregates expressed in current dollars. The corresponding indicators are presented in table 8.

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<sup>23</sup> Approximate figures on military personnel in active service in Chile come from International Institute of Strategic Studies, *The Military Balance 1998/1999*, London, 2000, pp. 210 & ff. Information for Argentina is based on official sources, and includes 20,550 volunteer soldiers. The figures for Chile exclude 32,300 conscripts.

Table 7  
**ARGENTINA, CHILE AND UNITED STATES: VARIATIONS IN DOMESTIC PRICES, 1996-1998**  
 (Yearly average-average variations)

	1996		1997		1998	
	Percentage variations (1995=100)		Percentage variations (1995=100)		Percentage variations (1995=100)	
	Annual variation	Index	Annual variation	Index	Annual variation	Index
<b>ARGENTINA</b>						
1. Consumer price index	0.2	100.2	0.5	100.7	0.9	101.6
2. Wholesale price index	3.7	103.7	-1.1	102.6	-3.3	99.2
<b>CHILE</b>						
1. Consumer price index	7.4	107.4	6.1	113.9	5.1	119.8
2. Wholesale price index	5.8	105.8	1.7	107.6	1.9	109.6
<b>UNITED STATES</b>						
1. Consumer price index (Consumer Prices)	2.9	102.9	2.3	105.3	1.6	107.0
2. Wholesale price index (Producer Prices)	2.3	102.3	0.0	102.3	-2.5	99.7

Source: International Monetary Fund, *International Financial Statistics*, various editions.

Table 8  
**ARGENTINA AND CHILE: GROSS DOMESTIC PRODUCT, 1996-1998**  
*(Total and per capita values)*

	1996	1997	1998	Annual average, 1996-1998
<b>ARGENTINA</b>				
1. Gross domestic product (millions of Argentine pesos at current prices; millions of current dollars)	272 150	292 859	298 948	287 986
2. Population (thousand inhabitants at the middle of each year)	35 220	35 672	36 125	35 672
3. GDP per capita (current Argentine pesos; current dollars)	7 727	8 210	8 275	8 072
<b>CHILE</b>				
1. Gross domestic product (millions of current dollars)	68 568	75 286	73 063	72 306
2. Population (thousand inhabitants at the middle of each year)	14 419	14 622	14 822	14 621
3. GDP per capita (current dollars)	4 755	5 149	4 929	4 945

**Source:** GDP in current dollars: ECLAC, on the basis of official statistics; Population: ECLAC, *Statistical Yearbook for Latin America and the Caribbean, 1999*.

The annual averages obtained for the period were as follows: per capita GDP in Argentina, at current prices was US\$ 8,072, corresponding to total GDP of US\$ 287,986 million, and a population of 35.7 million. Per capita GDP in Chile, at current prices, was US\$ 4,945, corresponding to total GDP of US\$ 72,306 million and a population of 14.6 million.

## **6. Level G<sub>1</sub> (Basic) defence expenditures, in current dollars**

### **a) Global figures (see table 9)**

In Argentina, Level G<sub>1</sub> (Basic) defence expenditures declined steadily throughout the period, from US\$ 2,312 million in 1996 to US\$ 2,232 million in 1998 (figures expressed in current dollars). This trend, combined with population data, gives Level G<sub>1</sub> figures that fall from US\$ 65.6 per capita in 1996 to US\$ 63.6 in 1997 and US\$ 61.8 in 1998.

In Chile on the other hand, Level G<sub>1</sub> (Basic) defence expenditure rose from US\$ 1,225 million in 1996 to US\$ 1,350 million in 1997, before dropping to US\$ 1,305 million in 1998 in the wake of a sharp rise in the Chilean peso exchange rate that year. Combining these figures with data on total population, Chile's per capita Level G<sub>1</sub> (Basic) defence expenditure increased from US\$ 85.0 in 1996 to US\$ 92.3 in 1997, before slipping back to US\$ 88.0 in 1998 (figures in current dollars).

Thus, bearing in mind all the limitations inherent in current dollar estimates, it can be stated that as an average for the triennium, per capita defence expenditure at the G<sub>1</sub> (Basic) level in Chile was 39% higher than the comparable figure for Argentina (annual averages of US\$ 88.4 and US\$ 3.7 respectively).

### **b) Economic and institutional classifications of Level G<sub>1</sub> (Basic) defence expenditures**

In order to provide complementary information on Level G<sub>1</sub> (Basic) defence expenditures in the two countries, but without pretending to achieve full standardization, tables 10 and 11 have been calculated using figures in current dollars. The first of these tables gives an "economic" classification of defence expenditures, and the corresponding incomes. The second table provides an "institutional" classification, though in this case for expenditures alone.

The economic classification of income and expenditure for 1996-1998, shown in table 10, suggests a number of significant qualitative differences between the two countries' figures. For example, on the expenditure side, in Argentina, the personnel (remunerations) category accounts on average for 80% of total Level G<sub>1</sub> expenditure; the equivalent proportion for Chile was considerably lower —close to 55%. In other words, Level G<sub>1</sub> expenditure in Argentina seems to be heavily weighted towards remunerations paid to active military personnel.

On the income side, the fiscal transfer to current incomes accounted for a preponderant share of total defence-sector income in Argentina. In Chile, broadly speaking, the direct fiscal transfer accounts for a smaller share of the total, but this is explained by the special situation caused by the Reserved Copper Laws.

On the income side, it should be noted that the "Tax and tariff regime",<sup>24</sup> which affects defence-related expenditures, was not studied by the ECLAC secretariat for a number of reasons. Nonetheless, it is assumed that the systems existing in the two countries are reasonably similar and do not produce major biases when comparing each other's defence spending.

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24 See "Non-Paper", op. cit, p. 3.

Table 9  
**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT G<sub>1</sub> (BASIC) LEVEL, IN CURRENT DOLLARS, 1996-1998**

*(Total and per capita values)*

	1996	1997	1998	Annual average, 1996-1998
<b>ARGENTINA</b>				
1. Defence expenditure, Level G <sub>1</sub> (Basic) (millions of Argentine pesos at current prices; millions of current dollars)	2 311.7	2 267.3	2 232.3	2 270.4
2. Population (thousand inhabitants at the middle of each year)	35 220	35 672	36 125	35 672
3. Level G <sub>1</sub> (Basic) per capita (current dollars)	65.6	63.6	61.8	<b>63.7</b>
<b>CHILE</b>				
1. Defence expenditure, Level G <sub>1</sub> (Basic) (millions of Chilean pesos at current prices)	505 140	566 047	600 447	--
2. Defence expenditure, Level G <sub>1</sub> (Basic) (millions of current dollars)	1 225.3	1 349.9	1 304.5	1 293.2
3. Population (thousand inhabitants at the middle of each year)	14 419	14 622	14 822	14 621
4. Level G <sub>1</sub> (Basic) per capita (current dollars)	85.0	92.3	88.0	<b>88.4</b>

Source: Previous tables; and ECLAC, *Statistical Yearbook for Latin America and the Caribbean*, 1999.

**Table 10**  
**ARGENTINA AND CHILE: ECONOMIC CLASSIFICATION OF DEFENCE INCOME AND EXPENDITURE**  
**AT LEVEL G<sub>1</sub> (BASIC), 1996-1998**  
*(Local and foreign-currency expenditures, expressed in millions of dollars at current prices)*

	1996		1997		1998	
	Argentina	Chile	Argentina	Chile	Argentina	Chile
<b>INCOME, Level G<sub>1</sub> (Basic)</b>						
<b>Current income</b>	2 311.7	1 225.3	2 267.3	1 349.9	2 232.3	1 304.5
National Treasury/Fiscal Transfer a/	2 309.5	1 218.7	2 215.2	1 343.3	2 161.6	1 281.0
Earmarked funds b/	2 283.3	954.2	2 178.4	1 085.6	2 121.0	1 044.3
Reserved Copper Laws	26.2	--	36.8	--	40.6	--
Other current revenues c/	--	266.4	--	274.5	--	214.5
<b>Capital income (including use of credits)</b>	2.2	-1.9	52.1	-16.8	--	22.2
		6.6		6.6	70.7	23.5
<b>EXPENDITURE, Level G<sub>1</sub> (Basic)</b>						
<b>Current expenditure</b>	2 311.7	1 225.3	2 267.3	1 349.9	2 232.3	1 304.5
Payroll	2 273.0	918.2	2 201.9	1 024.5	2 144.1	1 046.5
Goods and services	1 862.3	657.3	1 826.6	745.3	1 776.0	736.9
Other current expenditure d/	403.4	238.8	370.9	257.6	365.9	257.1
<b>Capital expenditure e/</b>	7.3	22.1	4.4	21.7	2.2	52.5
	--	40.6	0.1	51.0	0.1	43.4
<b>Argentina: Fixed assets ("bienes de uso") f/</b>	38.7	--	65.3	--	88.1	--
<b>Chile: Reserved Copper Laws g/</b>	--	266.4	--	274.5	--	214.5

Source: Argentina: National Budget Office; Chile: Comptroller General of the Republic and ECLAC secretariat.

a/ The terms "National Treasury" and "Fiscal Transfer" are used in Argentina and Chile respectively. In both cases, as a methodological simplification, this entire category is assumed to correspond to "current income" in this table. b/ "Earmarked funds" is a term used in Argentina for internally generated incomes that generally have a specific destination. c/ Only relevant to Chile. Encompasses net consolidation transfers; variation in the final cash balance (to adjust income and expenditure); incomes not otherwise specifically covered, such as gains or losses on foreign-exchange operations; and internally generated institutional incomes in certain cases. d/ In Argentina, corresponds to current transfers; in Chile, this item encompasses current transfers, together with outstanding operations and commitments carried over from previous years. e/ Corresponds to use of resources arising from variations in assets. In the Argentine case, this item only involves financial investment, since funds used for real investment are classified as fixed assets ("bienes de uso"). In Chile, this item is larger because it includes real investment—mainly constructions and buildings, together with repairs and investment in machinery and equipment not having a direct military use. f/ In Argentina, "bienes de uso" mainly corresponds to current expenditure, but to some extent also to capital expenditure. g/ The Reserved Copper Laws are only relevant to Chile; the corresponding funds have to be used in the procurement and maintenance of elements comprising the country's war potential (Note from secretariat: apparently this involves both current and capital expenditure).

Albeit with a number of methodology and comparability limitations between two countries, table 11 presents an institutional breakdown of expenditures at G<sub>1</sub> (Basic) level. Average expenditure by each of the three branches of the armed forces accounted for relatively similar shares at this level in both countries. Nonetheless, in Argentina the air force increased its share while overall G<sub>1</sub> (Basic) expenditure was declining. In Chile, the three branches of the armed forces were all able to increase their outlays as overall G<sub>1</sub> (Basic) expenditure expanded.

## **C. Defence expenditure at G<sub>2</sub> (Expanded) level, including pension expenditures in the two countries**

As discussed above, the G<sub>1</sub> (Basic) level in Argentina and Chile does not include military pension expenditures. These are now included in this section. The new G<sub>2</sub> (Expanded) level is derived directly from Level G<sub>1</sub> (Basic) plus pension benefit expenditures, referred to in the “Non-Paper” as “Expenditure on military personnel and retirement (Argentina), or Social Security (Chile).”<sup>25</sup>

These expenditures in Argentina are made by the Financial Aid Institute for Military Retirement Pensions and Benefits, or IAF (Instituto de Ayuda Financiera para el Pago de Retiros y Pensiones Militares), which is attached to the Ministry of Defence; and in Chile by the National Defence Pension Fund, or CAPREDENA (Caja de Previsión de la Defensa Nacional), attached to the Ministry of Labour. Net pension benefit expenditures to be added to Level G<sub>1</sub> (Basic) were estimated from data provided by these institutions.

Clearly, defence expenditures at G<sub>2</sub> (Expanded) level need to be reported and evaluated with particular care, because in the remainder of this document the G<sub>2</sub> (Expanded) level will always include net military pension expenditures, in keeping with the procedure followed by several international institutions. In other approaches, however, military pension expenditures are included within the social services category of total government spending. This report presents both calculations separately, in other words, defence expenditures excluding pension benefits (Level G<sub>1</sub>), and including them (Level G<sub>2</sub>). This enables relevant international comparisons between different countries to be made in a transparent and clearly intelligible manner.

### **1. Net pension expenditures (*Pasividades Netas*) in Argentina**

The total expenditure of IAF in Argentina, as shown in table 12, trends upwards from 1,051.4 million pesos at current prices in 1996 to 1,107.9 million in 1997, and 1,249 million pesos in 1998. The increase is partly explained by “natural growth” in the number of retired military personnel, but mostly it is the result of legal rulings upholding claims for emoluments and benefits owed to retirees. Some major claims and/or liquidations pertaining to retired military personnel are still pending in the courts, because their retirement pensions are considered significantly below the comparable remunerations paid to military personnel in active service.

The same table shows that the number of inactive military personnel rose moderately during the period from 84,014 to 84,386, as a result of military retirees shrinking in number from 53,851 in 1996 to 53,040 in 1998, and the number of recipients of survivor benefits growing from 30,163 to 31,346 during the same period.

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<sup>25</sup> *Ibid.*, p. 3.

Table 11  
**ARGENTINA AND CHILE: INSTITUTIONAL CLASSIFICATION OF DEFENCE EXPENDITURE AT G<sub>1</sub> (BASIC) LEVEL, 1996-1998**  
*(Expenditure in local and foreign currency, expressed in millions of dollars at current prices)*

	1996		1997		1998	
	Argentina	Chile	Argentina	Chile	Argentina	Chile
<b>1. Ministry of (National) Defence and joint distributions a/</b>	<b>123.9</b>	<b>6.2</b>	<b>95.9</b>	<b>7.0</b>	<b>86.2</b>	<b>7.5</b>
<b>2. Army (War) b/</b>	<b>1 001.8</b>	<b>515.9</b>	<b>980.5</b>	<b>558.7</b>	<b>974.2</b>	<b>540.5</b>
Army General staff (Argentina)	1 001.8	--	980.5	--	974.2	--
Under-secretariat for War (Chile)	--	427.1	--	467.2	--	469.0
Reserved Copper Laws	--	88.8	--	91.5	--	71.5
(War-Chile)						
<b>3. Navy (Navy)</b>	<b>637.0</b>	<b>409.6</b>	<b>609.9</b>	<b>448.4</b>	<b>589.1</b>	<b>437.9</b>
Navy General Staff (Argentina)	637.0	--	609.9	--	589.1	--
Under-secretariat for the Navy (Chile)	--	320.8	--	356.9	--	366.4
Reserved Copper Laws	--	88.8	--	91.5	--	71.5
(Navy-Chile)						
<b>4. Air Force (Aviation)</b>	<b>549.0</b>	<b>293.5</b>	<b>581.0</b>	<b>335.8</b>	<b>582.8</b>	<b>318.6</b>
Air Force General Staff (Argentina)	549.0	--	581.0	--	582.8	--
Under-secretariat for Aviation (Chile)	--	204.7	--	242.5	--	247.1
Reserved Copper Laws	--	88.8	--	91.5	--	71.5
(Aviation-Chile)						
<b>DEFENCE EXPENDITURE, Level G<sub>1</sub></b>	<b>2 311.7</b>	<b>1 225.3</b>	<b>2 267.3</b>	<b>1 349.9</b>	<b>2 232.3</b>	<b>1 304.5</b>

**Source:** Argentina: National Budget Office; Chile: Comptroller General of the Republic and ECLAC secretariat.

a/ In Argentina, these expenses correspond to central activities, the training of professional soldiers (only in 1996), and various transfers from the Ministry of Defence; to joint military planning of the Joint Armed Forces General Staff; and defence-related technology development carried out by the Armed Forces Scientific and Technical Research Institute. In all these institutions, expenditures under this heading are included in the "Defence Service" programme. In Chile, the category only corresponds to expenses, consolidated for transfers, incurred by Ministry of Defence Administration and the National Mobilization Institute. b/ In Chile this item includes the National Defence General Staff, of the joint Armed Forces.

Total IAF expenditure overstates defence expenditure on net pension benefits in Argentina, however. This is because the “Personnel” category in expenditures at G<sub>1</sub> (Basic) level included gross remuneration paid to active military personnel, including employer contributions (from National Government) and social security contributions paid into IAF by active personnel. Accordingly, table 12 deducts employer contributions and an estimate of the premiums paid by active staff, in order to calculate net pension benefit expenditures (*Pasividades Netas*). The corresponding values are as follows:

Year	Millions of Argentine pesos at current prices	Percentage of GDP (Argentina)
1996	809.2	0.30
1997	850.1	0.29
1998	987.5	0.33

Source: Table 12 *supra*, and ECLAC estimates based on official figures.

This indicator increased significantly between 1996-1997 and 1998 as a proportion of Argentina’s GDP, thereby confirming the trend in total IAF expenditure mentioned above.

To examine the financing of calculated net pension expenditures, information is available on the transfer received from the National Social Security Administration, and there are also estimates of contributions made by retired military personnel,<sup>26</sup> as follows:

Category	1996	1997	1998
	(Millions of Argentine pesos at current prices)		
Contributions paid by retired military personnel	58.6	58.9	48.1
Transfers to finance IAF deficit a/	750.6	791.2	939.4
Net pension benefit expenditures	809.2	850.1	987.5

Source: Table 12 *supra*, and ECLAC estimates based on official figures.

a/ Under **current** fiscal arrangements in Argentina, these contributions come from the National Social Security Administration, which in turn receives financial assistance from the National Treasury.

## 2. Net pension payments (*prestaciones previsionales*) in Chile

In Chile, estimates of defence expenditures relating to military pension payments are approximations based on a number of simplifying assumptions. Firstly, it is assumed that the activities of the National Defence Pension Fund (CAPREDENA) properly relate to active and retired military personnel previously included in the different calculations of defence expenditures at G<sub>1</sub> (Basic) level. Generally speaking this is the case, because pension payments made by institutions not considered in this report (such as the uniformed and investigative police forces, DIGEDER, the Territorial Waters Board, and so forth) are not catered for by CAPREDENA but by other institutions.<sup>27</sup>

<sup>26</sup> In other words, the net pension expenditures calculated above are without deducting contributions made by retired military personnel. This is an important methodological point to take into account for comparability between Argentina and Chile.

<sup>27</sup> Apparently, the only major case that does not obey this rule is the Civil Aviation Board, but the relevant pension payments could not be identified within CAPREDENA to be eliminated from the estimates.

**Table 12**  
**ARGENTINA: DEFENCE EXPENDITURE ON NET PENSION BENEFITS a/ AND NUMBER OF INACTIVE MILITARY PERSONNEL, 1996-1998**

*(Totals in local currency at current prices)*

	1996	1997	1998
	<i>(Millions of Argentine pesos)</i>		
Total IAF expenditure b/	1 051.4	1 107.9	1 249.0
<i>Less:</i>			
Employer contributions			
Contributions paid by currently serving personnel c/	146.5	161.9	182.9
	95.7	95.9	78.6
<b>1. Defence expenditure on (net) pension benefits</b>	<b>809.2</b>	<b>850.1</b>	<b>987.5</b>
<b>2. Defence expenditure on (net) pension benefits as a percentage of GDP</b>	<b>0.30</b>	<b>0.29</b>	<b>0.33</b>
3. GDP (millions of pesos)	272 150	292 859	298 131
4. Number of persons receiving Armed Forces pensions	84 014	84 091	84 386
- Retirees d/	53 851	53 415	53 040
- Other beneficiaries e/	30 163	30 676	31 346

**Source:** ECLAC estimates, on the basis of official figures.

a/ Payment of retirement pensions and other benefits. b/ IAF is the Financial Aid Institute for Military Retirement Pensions and Benefits in Argentina; figures include IAF management expenses (Arg\$ 5.9 million in 1996; Arg\$ 6.5 million in 1997 and Arg\$ 6.7 million in 1998). c/ Estimates, corresponding to 62% of total contributions paid by current and retired military personnel. d/ Corresponds to retired military personnel. e/ Persons receiving other pensions, such as widows and other successors of deceased retirees.

Secondly, although CAPREDENA performs a number of functions, this report only considers expenditures corresponding to pension payments as such; in particular, it ignores expenditures relating to the CAPREDENA Curative Medicine Fund, since this operates as a health insurance institution (ISAPRE) within the Chilean system. Nonetheless, total (operating) management expenses of CAPREDENA have been added to its pension payment outgoings.

Thirdly, it was not feasible to obtain quality information on the employer contributions paid by Central Government (the Treasury) to CAPREDENA. The figures given below are not thought to overstate total pension payments, however, as employer contributions are understood to be duly consolidated in the official CAPREDENA data made available to the ECLAC secretariat.<sup>28</sup>

Table 13 provides estimates of defence expenditures on net pension payments by the Chilean armed forces, based on various pieces of official information provided by CAPREDENA, in a relatively similar form to those shown for the Argentine case.<sup>29</sup> Thus, using figures in local currency at current prices, net pension payments reached 0.90% of GDP in 1996, before dropping to 0.84% in 1997, and then rising slightly to 0.85% in 1998.

These proportions are clearly relatively high, since they give a triennium average nearly three times the equivalent Argentine figure (0.86% compared to 0.31% of GDP).<sup>30</sup> A number of factors contribute to this situation, but we prefer not to analyse them in detail here, since doing so would go beyond the essentially methodological purpose of this study. Nonetheless, table 13 also shows the number of contributing inactive military personnel in Chile, which grew by a substantial 6.3%

28 A provisional estimate of employer contributions around 1997 amounted to approximately US\$ 47 million (around 20,000 million Chilean pesos at current prices).

29 In this specific case, there was relatively less information available for Chile. Nonetheless, "Deductions from pensioners" identified in the official CAPREDENA data, were not deducted, in order to achieve a better comparison with the Argentine estimates discussed above.

30 See table 12.

between 1996 and 1998, from 79,189 to 84,214 people. The latter figure is almost the same as the annual average in Argentina for the triennium.

**Table 13**

**CHILE: DEFENCE EXPENDITURE ON NET PENSION PAYMENTS a/ AND CONTRIBUTING RETIRED MILITARY PERSONNEL, 1996-1998**  
(Totals in local currency at current prices)

	1996	1997	1998
	(Millions of Chilean pesos)		
Pension payments made by CAPREDENA b/	262 000 c/	271 838	294 276
Plus:			
CAPREDENA management expenses b/	2 700 c/	3 045	3 401
Less:			
Contributions paid by active military personnel d/	10 090	10 785	11 701
1. Net military pension payments e/	<b>254 610</b>	<b>264 098</b>	<b>285 976</b>
2. Net military pension payments (as a percentage of GDP)	<b>0.90</b>	<b>0.84</b>	<b>0.85</b>
3. GDP (millions of Chilean pesos)	28 268 364	31 567 287	33 630 367
4. Number of contributing retired military personnel f/	79 189	82 133	84 214

**Source:** Calculations by the ECLAC secretariat on the basis of official information furnished by the National Defence Pension Fund (CAPREDENA).

a/ Retirement and widow's pensions. b/ 1997 and 1998; figures taken directly from official CAPREDENA financial statements. In general, information on fiscal transfers to CAPREDENA, which gives slightly lower figures, was not used. c/ Approximate estimates. d/ Accrued values, as reported by CAPREDENA. e/ Figures for employers' contributions as such are unavailable. f/ Figures at December of each year, more detailed figures are unavailable.

### 3. Comparable defence expenditures in Argentina and Chile at G<sub>2</sub> (Expanded) level, including pension expenditures

For the purposes of this report and to obtain a standardized methodology for the measurement of defence spending, table 14 calculates Level G<sub>2</sub> (Expanded) for the two countries during the period 1996-1998. After adding net pension expenditures to Level G<sub>1</sub> (Basic) in each case, the respective coefficients are as follows:

Years	Argentina	Chile
	(Level G <sub>2</sub> (Expanded) as a percentage of GDP)	
1996	1.15	2.69
1997	1.06	2.63
1998	1.08	2.64
<b>Annual average, 1996-1998</b>	<b>1.10</b>	<b>2.65</b>

**Source:** Table 14 *infra*.

**Table 14**

**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT G<sub>2</sub> (EXPANDED) LEVEL, INCLUDING NET PENSION EXPENDITURES, 1996-1998**

*(Totals expressed in local currency at current prices, including foreign-currency expenditures)*

	1996	1997	1998
<b>ARGENTINA</b> (Millions of Argentine pesos)			
1. Level G <sub>1</sub> (Basic)	2 311.7	2 267.3	2 232.3
2. Net pension expenditures	809.2	850.1	987.5
3. Level G <sub>2</sub> (Expanded) (G <sub>1</sub> plus net pension expenditures)	3 120.9	3 117.4	3 219.8
4. Level G <sub>2</sub> (Expanded) as a percentage of GDP	1.15	1.06	1.08
5. GDP	272 150	292 859	298 131
<b>CHILE</b> (Millions of Chilean pesos)			
1. Level G <sub>1</sub> (Basic)	505 140	566 047	600 447
2. Net pension payments	254 610	264 098	285 976
3. Level G <sub>2</sub> (Expanded) (G <sub>1</sub> plus net pension payments)	759 750	830 145	886 423
4. Level G <sub>2</sub> (Expanded) as a percentage of GDP	2.69	2.63	2.64
5. GDP	28 268 364	31 567 287	33 630 367

**Source:** Tables 1–13 *supra*.

As expected, the Level G<sub>2</sub> figures are consistent with the trends seen in the defence expenditure components analysed above. In addition, Level G<sub>2</sub> (Expanded) maintains the differences seen at G<sub>1</sub> (Basic) level, namely lower figures for Argentina and higher ones for Chile.

Table 15 provides an alternative view of Level G<sub>2</sub> (Expanded) defence expenditures for the two countries expressed in current dollars. In per capita terms, average Level G<sub>2</sub> expenditure per year for the triennium 1996-1998, amounted to **US\$ 88.3** in Argentina and **US\$ 131.0** in Chile.

**Table 15**

**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT G<sub>2</sub> (EXPANDED) LEVEL, INCLUDING NET PENSION EXPENDITURES, IN CURRENT DOLLARS, 1996-1998**

*(Total and per capita values) a/*

	1996	1997	1998	Annual average, 1996-1998
<b>ARGENTINA</b>				
1. Defence expenditure, Level G <sub>2</sub> (Expanded), (millions of Argentine pesos at current prices; millions of current dollars)	3 120.9	3 117.4	3 219.8	3 152.7
2. Net pension expenditures (millions of current dollars)	809.2	850.1	987.5	882.3
3. Population (thousand inhabitants at middle of each year)	35 220	35.672	36 125	35 672
4. Number of persons receiving military pensions	84 014	84.091	84 386	84 164
5. Level G <sub>2</sub> (Expanded), per capita (current dollars)	88.6	87.3	89.1	<b>88.3</b>
6. Net pension expenditures, per capita (current dollars)	23.0	23.8	27.3	<b>24.7</b>
<b>CHILE</b>				
1. Defence expenditure, Level G <sub>2</sub> (Expanded) (millions of Chilean pesos at current prices)	759 750	830 145	886 423	--
2. Defence expenditure, Level G <sub>2</sub> (Expanded) (millions of current dollars)	1 842.8	1 979.8	1 925.8	1 916.1
3. Net pension payments (millions of current dollars)	617.6	629.8	621.3	622.9
4. Population (thousand inhabitants at middle of each year)	14 419	14 622	14 822	14 621
5. Number of contributing retired military personnel	79 189	82 133	84 214	81 845
6. Level G <sub>2</sub> (Expanded), per capita (current dollars)	127.8	135.4	129.9	<b>131.0</b>
7. Net pension payments, per capita (current dollars)	42.8	43.1	41.9	<b>42.6</b>

**Source:** ECLAC, *Statistical Yearbook for Latin America and the Caribbean, 1999* (LC/G.2066-P), Santiago, Chile, 2000. United Nations publication, Sales No. E.00.II.G.1.

a/ Nominal exchange rate in Argentina: US\$1 = Arg1. Nominal exchange rate in Chile (annual averages): US\$1 = Ch\$412.27 (1996), Ch\$419.31 (1997) and Ch\$460.29 (1998).

## D. Defence expenditure at G<sub>3</sub> (Total) level in Argentina and Chile

### 1. Conceptual aspects

Defence expenditure at G<sub>3</sub> (Total) level is proposed as a final standardized measurement of defence spending in the two countries, and is calculated by adding certain specific expenditure categories to Level G<sub>2</sub> (Expanded), i.e. including net military pension expenditures.

In principle, what needs to be added to Level G<sub>2</sub> (Expanded) is what the Governments of Argentina and Chile on different occasions have referred to as “Defence industry and research and development”; “Other productive activities”; “Defence activities undertaken by other public bodies”; and “Military aid”.<sup>31</sup> The ECLAC secretariat was unable to construct a dataset that was sufficiently extensive and comparable between the two countries, to fully estimate all defence expenditures to be added to Level G<sub>2</sub>, in order to calculate the new G<sub>3</sub> (Total) level adequately. Accordingly, this new level was estimated by adding certain available partial data to the Level G<sub>2</sub> (Expanded) figures.

<sup>31</sup> See “Non-Paper”, op. cit., pp. 2 and 4.

The new analytical category,  $G_3$ , is important to this report and the methodology proposed, partly because it seems conceptually correct and potentially attractive at the present time. But it will be even more important for the near future, in view of future initiatives for measuring defence spending elsewhere in the Latin American region.

## 2. Defence expenditures at $G_3$ (Total) level

Defence expenditures at  $G_3$  (Total) level calculated for the two countries are presented in table 16, slightly modifying the Levels  $G_2$  for the triennium. The figures in relation to GDP are as follows:

Years	Argentina	Chile
	(Level $G_3$ (Total) as a percentage of GDP)	
1996	1.16	2.69
1997	1.08	2.64
1998	1.09	2.64
Annual average 1996-1998	<b>1.11</b>	<b>2.66</b>

Source: Table 16 *infra*.

Table 16

**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT  $G_3$  (TOTAL) LEVEL, 1996-1998**  
(Totals expressed in local currency at current prices, including foreign-currency expenditures) a/

	1996	1997	1998
<b>ARGENTINA</b> (Millions of Argentine pesos)			
1. Level $G_2$ (Expanded), including pension expenditures	3 120.9	3 117.4	3 219.8
2. Military manufactures b/ (Ministry of Economic Affairs)	43.7	37.9	34.6
3. Level $G_3$ (Total) ( $G_2$ plus military manufactures) c/	3 164.6	3 155.3	3 254.4
<b>4. Level <math>G_3</math> (Total), as a percentage of GDP</b>	<b>1.16</b>	<b>1.08</b>	<b>1.09</b>
5. GDP	272 150	292 859	298 948
<b>CHILE</b> (Millions of Chilean pesos)			
1. Level $G_2$ (Expanded), including pension expenditures	759 750	830 145	886 423
2. Defence industry organizations d/ (Ministry of National Defence)	2 073	2 259	2 549
3. Level $G_3$ (Total) ( $G_2$ plus defence industry organizations) e/	761 823	823 404	888 972
<b>4. Level <math>G_3</math> (Total), as a percentage of GDP</b>	<b>2.69</b>	<b>2.64</b>	<b>2.64</b>
5. GDP	28 268 364	31 567 287	33 630 367

**Source:** ECLAC estimates, based on the Integrated Financial Information System of the Ministry of Finance (SIDIF) in Argentina, 1996, 1997 and 1998; and Comptroller General of the Republic of Chile, *Estados de la situación presupuestaria del sector público: enero-diciembre 1998*, Santiago, Chile, 1999; *Estados de la situación presupuestaria del sector público: enero-diciembre 1997*, Santiago, Chile, 1998; *Estados de la situación presupuestaria del sector público: enero-diciembre 1996*, Santiago, Chile, 1997.

a/ Nominal exchange rate in Argentina: US\$ 1 = Arg\$ 1. Nominal exchange rate in Chile (annual averages): US\$ 1 = Ch\$ 412.27 (1996), Ch\$ 419.31 (1997) and Ch\$ 460.29 (1998). b/ Corresponds to Military Manufactures Board. c/ Excludes the following contributions made by the Ministry of Foreign Affairs, International Trade and Worship to United Nations Peacekeeping Forces: Arg\$ 15.3 million in 1996; Arg\$ 7.7 million in 1997; and Arg\$ 5.0 million in 1998. d/ Includes the Talagante Chemical Complex and the Quality Research and Control Institute (IDIC). e/ Excludes the following contributions made by the Ministry of Foreign Affairs to United Nations Peacekeeping Forces: US\$ 514,000 in 1996, US\$ 509,000 in 1997 and US\$ 449,000 in 1998 (expressed in current prices each year).

To arrive at these estimates in the Argentine case, expenditures by the Military Manufactures Board, which is currently attached to the Ministry of Economic Affairs, were added to the Level G<sub>2</sub> figures (43.7 million Argentine pesos in 1996, 37.9 million in 1997 and 34.6 million pesos in 1998).<sup>32</sup> The Military Manufactures Board was transferred to the Ministry of Economic Affairs to streamline privatization and liquidation processes in its various factories. On the other hand, contributions made by the Ministry of Foreign Affairs, International Trade and Worship to United Nations peacekeeping forces (amounting to 15.3 million pesos in 1996, 7.7 million in 1997 and 5.0 million pesos in 1998) were not added in, because they do not correspond very well to the objective of “national defence”, as defined at the beginning of this chapter.

In the case of Chile, expenditures incurred by defence industry organizations attached to the Ministry of National Defence were added to Level G<sub>2</sub>, having previously been excluded from the G<sub>1</sub> (Basic) level calculations. These expenditures relate to the Talagante Chemical Complex (which makes explosives), and the Quality Research and Control Institute (IDIC), amounting to 2,073 million Chilean pesos in 1996, 2,259 million in 1997 and 2,549 million pesos in 1998 (figures in current prices).<sup>33</sup> Here again, contributions made by the Ministry of Foreign Affairs to United Nations peacekeeping forces, amounting to some US\$ 500,000 on average per year during the period, were not included for the reasons mentioned above in the Argentine case.

In Chile, there are three “defence industries” that operate as relatively autonomous productive entities, despite being institutionally attached to the Ministry of National Defence. These are “Fábricas y Maestranzas del Ejército” (FAMAE), attached to the Undersecretariat for War; “Astilleros y Maestranzas de la Armada” (ASMAR), connected to the Undersecretariat for the Navy; and “Empresa Nacional de Aeronáutica” (ENAER), which forms part of the Undersecretariat for Aviation. No attempt is made here to estimate additional defence expenditures resulting from these entities’ operations with the Chilean armed forces, for two main reasons.

Firstly, the ECLAC secretariat did not consider it appropriate to do so with the information it had available; secondly, and in particular, because a large proportion of sales made by these three companies to Chile’s armed forces are financed by the army, navy and air force themselves, in expenditures already accounted for within the Ministry of National Defence. Alternatively, funding may come from fiscal transfers, internally generated revenues, the Reserved Copper Laws, or a combination of these sources, so excluding them averts the possibility of major duplications in calculating Chile’s defence expenditures.

Lastly, table 17 shows defence expenditures at G<sub>3</sub> (Total) level for the two countries expressed in current dollars. As an annual average for the triennium, G<sub>3</sub> expenditures per capita amounted to US\$ 89.4 in Argentina and US\$ 131.4 in Chile —47% higher, a difference similar to that recorded at the G<sub>2</sub> (Expanded) level.

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32 These figures represent total expenses incurred by that organization, without considering possible deductions in respect of internally generated incomes and non-consolidated transfers.

33 These figures correspond to the total expenditures of the organizations mentioned, although there may also be internally generated incomes and unconsolidated transfers that were not deducted.

**Table 17**  
**ARGENTINA AND CHILE: DEFENCE EXPENDITURE AT G<sub>3</sub> (TOTAL) LEVEL, 1996-1998**  
**(INCLUDING NET PENSION EXPENDITURES)**  
*(Total and per capita values in current dollars)*

	1996	1997	1998	Annual average 1996-1998
<b>ARGENTINA</b>				
1. Defence expenditure, Level G <sub>3</sub> (Total), (millions of Argentine pesos at current prices; millions of current dollars)	3 164.6	3 155.3	3 254.4	3 191.4
2. Population (thousand inhabitants)	35 220	35 672	36 125	35 672
<b>4. Level G<sub>3</sub> (Total), per capita</b>	<b>89.8</b>	<b>88.4</b>	<b>90.0</b>	<b>89.4</b>
<b>CHILE</b>				
1. Defence expenditure, Level G <sub>3</sub> (Total) (millions of Chilean pesos at current prices)	761 823	832 404	888 972	--
2. Defence expenditure, Level G <sub>3</sub> (Total), (millions of current dollars)	1 847.9	1 985.2	1 931.3	1 921.5
3. Population (thousand inhabitants)	14 419	14 622	14 822	14 621
<b>4. Level G<sub>3</sub> (Total), per capita</b>	<b>128.2</b>	<b>135.8</b>	<b>130.3</b>	<b>131.4</b>

**Source:** Previous tables.

## E. Summary of quantitative results

In accordance with the different analytical categories of this report, table 18 presents a set of indicators relating to defence expenditures in Argentina and Chile, resulting from the estimates included in the study for the period 1996-1998. These indicators, expressed as annual averages, are grouped together in four blocks: General (socioeconomic); Level G<sub>1</sub>, (Basic), Level G<sub>2</sub>, (Expanded) and Level G<sub>3</sub>, (Total).

The figures contained in table 18 need to be evaluated and used with certain minimum precautions, and within the standardized methodological context in which they were constructed. Clearly, the values calculated are consistent with specific conceptual definitions, so it should be feasible to prepare other indicators that are equally relevant and valid, but based on different approaches. An important task that remains for the near future is to formulate and calculate a robust set of complementary indicators applicable to other Latin American countries.

**Table 18**  
**DEFENCE EXPENDITURE IN ARGENTINA AND CHILE: SELECTED KEY INDICATORS,**  
**1996-1998**  
*(Annual averages for the triennium)*

INDICATORS	ARGENTINA	CHILE
<b>A. General</b>		
1. Total population (thousand inhabitants)	35 672	14 621
2. Gross domestic product (millions of current dollars)	287 986	72 306
3. GDP per capita (current dollars)	8 072	4 945
<b>B. Level G<sub>1</sub> (Basic), and complementary indicators</b>		
<b>4. Defence expenditure, Level G<sub>1</sub> (Basic)</b> (as a percentage of GDP)	<b>0.79</b>	<b>1.79</b>
<b>5. Defence expenditure, Level G<sub>1</sub> (Basic)</b> (millions of current dollars)	<b>2 270.4</b>	<b>1 293.2</b>
<b>6. Defence expenditure, Level G<sub>1</sub> (Basic), per capita</b> (current dollars)	<b>63.7</b>	<b>88.4</b>
7. Total expenditure of National Government (Argentina) and Central Government (Chile) as a percentage of GDP	15.35	22.01
8. Defence expenditure, Level G <sub>1</sub> (Basic), as a percentage of total government expenditure	5.15	8.14
9. Payroll expenses (Personnel) in Level G <sub>1</sub> (Basic) (millions of current dollars)	1 821.6	713.2
10. Payroll expenses as a percentage of Level G <sub>1</sub> (Basic)	80.23	55.15
11. Number of military personnel in active service	77 920 a/	62 200 b/
<b>C. Level G<sub>2</sub> (Expanded), including pension expenditures</b>		
12. Net pension expenditures or net pension payments (millions of current dollars)	882.3	622.9
13. Net pension expenditures or net pension payments (as a percentage of GDP)	0.31	0.86
14. Number of retired or contributing retired military personnel	84 164	81 845
<b>15. Defence expenditure, Level G<sub>2</sub> (Expanded)</b> (millions of current dollars)	<b>3 152.7</b>	<b>1 916.1</b>
<b>16. Defence expenditure, Level G<sub>2</sub> (Expanded)</b> (as a percentage of GDP)	<b>1.10</b>	<b>2.65</b>
<b>17. Defence expenditure, Level G<sub>2</sub> (Expanded), per capita</b> (current dollars)	<b>88.3</b>	<b>131.0</b>
<b>D. Level G<sub>3</sub> (Total); National defence expenditure (including net pension expenditures)</b>		
<b>18. Defence expenditure, Level G<sub>3</sub> (Total)</b> (millions of current dollars)	<b>3 191.4</b>	<b>1 921.5</b>
<b>19. Defence expenditure, Level G<sub>3</sub> (Total)</b> (as a percentage of GDP)	<b>1.11</b>	<b>2.66</b>
<b>20. Defence expenditure, Level G<sub>3</sub> (Total), per capita</b> (current dollars)	<b>89.4</b>	<b>131.4</b>

**Source:** ECLAC secretariat, on the basis of official statistics.

**Note:** Differences due to rounding.

a/ Includes 20,550 volunteer soldiers. **Source:** ECLAC secretariat, on the basis of official statistics.

b/ Excludes 32,300 conscripts. **Source:** IISS, *The Military Balance 1998/1999*. Approximate estimate.

## IV. Final thoughts

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This final chapter summarizes the results achieved in this common endeavour originating in the initiative of the Argentine and Chilean Governments and undertaken by the ECLAC secretariat. It also aims to highlight the achievements of the exercise and set guidelines for the future. This project clearly represents a pioneering initiative in the region, promoted by two neighbouring countries as part of a set of transparency- and mutual confidence-building measures.

As originally requested of the ECLAC secretariat by the Governments of Argentina and Chile, this report and the various complementary tasks undertaken during the project, have been aimed at progressively and precisely defining the bases for a common standardized methodology for the measurement of defence spending. Naturally, construction of the proposed methodology drew on several approaches already in existence in the international domain, and also had to adapt to the availability of qualitative information and figures in Argentina and Chile, which at least had to be reasonably comparable.

The process of carrying out the various tasks and their completion have made it possible to design this standardized calculation methodology, which takes into account the specific characteristics of ground-level information in both countries. The methodology was verified experimentally for three consecutive years (1996, 1997 and 1998), giving comparable and reliable results.<sup>34</sup> This affords it validity for application to other years—either earlier or later—and also to broaden the scope of the exercise, should the Governments of the two countries consider it necessary.

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<sup>34</sup> See table 18, at the end of the previous chapter.

The common standardized methodology proposed in this project for the measurement of defence spending, envisages different levels of expenditure coverage, each well-defined and supported by specific and detailed calculations, and extended as far as possible to the corresponding defence-sector incomes. Three expenditure levels have been used ( $G_1$ ,  $G_2$  and  $G_3$ ), which, according to their relative magnitudes, encompass basic defence expenditure ( $G_1$ ); expanded ( $G_2$ ), which includes military pension benefits; and total expenditure ( $G_3$ ), including, additionally, certain expenses incurred by other defence industries and activities.

First and foremost it needs to be reiterated that defence spending at  $G_1$  (Basic) level includes all government expenditures involving the administration and management of military defence functions, specifically the administration, supervision and management of military defence forces and affairs; land, sea, airborne and space defence forces; engineering, transport, communications, information, materials, personnel, and non-combatant command and other forces; reserve forces and auxiliary defence personnel; and military structures and equipment supplies. Level  $G_1$  (Basic) also includes civil defence matters; applied research and experimental defence-related activities; and administration, management and support for defence activities that cannot be allocated to any of the preceding categories.

Secondly, the methodology developed by the ECLAC Secretariat proposes that defence expenditure be calculated in complementary fashion for a  $G_2$  (Expanded) level, as also suggested by several international institutions. This expanded level, as its name suggests, is indicative and is calculated directly from Level  $G_1$  (Basic), by adding in net military pension benefits, which were identified explicitly as “expenditure on military personnel and retirement, or social security” by the Governments of Argentina and Chile, respectively.

Thirdly, Level  $G_3$  (Total) is proposed as a final standardized measurement of defence spending, calculated by adding certain specific categories to level  $G_2$  (Expanded). As far as possible these correspond to what the two Governments have referred to as “Defence industry and research and development”; “Other productive activities”; “Defence activities undertaken by other public bodies”; and “Military aid”.

The process of preparing and testing this methodology has afforded the two countries and the ECLAC Secretariat itself a host of valuable experiences. The lessons learned, which we hope to transmit through this report and elsewhere, will be highly beneficial for the promoters of this work and other countries of the region that have shown interest in its results.

In short, the main strengths of this proposed common standardized methodology stem from the collaborative endeavour, carried out in successive stages, between the Governments of Argentina and Chile and the ECLAC secretariat. In addition, there was clear agreement in defining and using the different levels of defence expenditure suggested; and the estimates presented were consistent with those levels and transparently calculated.

Lastly, it needs to be acknowledged that this ECLAC secretariat project, and the tasks involved in it, including preparation of this report, have only been possible thanks to the generous and unconditional support provided by the Governments of Argentina and Chile, their sustained commitment to the tasks undertaken, and the numerous efforts made by the civil servants in both countries who participated in the project. The ECLAC secretariat wishes to highlight this fruitful collaboration with the two Governments, as pointing the way towards future initiatives of this type.

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## **Annexes**

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## Annex 1

### Joint presidential declaration on confidence- and security-building (16 February 1999)

1. In a solemn atmosphere redolent of historical reconstruction, the President of Chile, Eduardo Frei Ruiz-Tagle and the President of Argentina, Carlos Saúl Menem, met in Punta Arenas and Ushuaia on 15 and 16 February 1999, to commemorate the transcendental meeting between their predecessors, Presidents Federico Errázuriz Echaurren and Julio A. Roca, one hundred years earlier. The visionary spirit that motivated the two presidents at that meeting in 1899 heralded a stage of renewed friendship between Chile and Argentina, which, among other things, paved the way for signing the May 1902 accords to restrict weapons procurement.
2. Against this backdrop, the two Heads of State reasserted their commitment to preserve, strengthen and develop relations of inalterable peace and eternal friendship between Chile and Argentina, as enshrined in the 1984 Peace and Friendship Treaty, which strongly permeates every dimension of the bilateral relationship between the two countries on the threshold of the twenty-first century. In testimony to this, Presidents Frei and Menem paid homage to a key figure in achieving these objectives, Cardinal Antonio Samoré, by inaugurating a monument in his memory.
3. The Presidents also reaffirmed the commitment of the two countries to defend their common interests in Antarctica, to pursue a shared future vision and to strengthen bilateral cooperation in the Antarctic System.
4. The two Heads of State said the aims expressed in the Joint Presidential Declaration of 1991, in terms of consolidating a peaceful border between the two countries in fulfilment of the democratic mandate of their peoples, heralded an auspicious start to the twenty-first century. In this regard, they highlighted the importance of the joint statement issued in Buenos Aires on 15 December 1998, and the communiqué adopted on the occasion of the signing of the agreement to establish the frontier line from Mount Fitz Roy to Cerro Daudet, on 16 December 1998. In reference to this, they reiterated their satisfaction at the results achieved in the application of confidence- and security-building measures between the two countries, and drew attention to the excellent level of cooperation and dialogue existing between the Chilean and Argentine armed forces. In particular, they expressed pleasure at the progress achieved in the bilateral consultation meetings between the two countries' ministers of foreign affairs and defence held at Zapallar in July 1997 and at Campo de Mayo in June 1998, highlighting their contribution to strengthening bilateral cooperation and the coordination of positions on security and defence issues. This they saw as giving direction and momentum to consultation and coordination carried out within the Standing Committee on Security, and in the interinstitutional consultation mechanism between the two armed forces general staffs.
5. The presidents reaffirmed their Governments' willingness to monitor the agreements adopted in the hemispheric summit meetings held in Miami and Santiago, on confidence- and security-building measures, and with respect to progress made in the Meetings of the Ministers Defence of the Americas, and at the Regional Conferences on Confidence- and Security-Building Measures held to date. In addition, they drew attention to the importance of the political declaration of July 1998 establishing

- Mercosur, Bolivia and Chile as a zone of peace, for its contribution to integration and enhanced regional dialogue.
6. The two leaders agreed to continue promoting confidence- and security-building initiatives at the bilateral and regional levels, praising the spirit that inspires them and the contribution they make to international peace and security. They stressed the importance of continuing to furnish information to the United Nations registry of conventional weapons and military expenditures.
  7. The presidents stressed the value of making their countries' defence policies explicit through publications such as the National Defence Manual of Chile, together with legislation and presidential statements on this issue in Argentina. In this context, they drew attention to the importance of the joint step taken by their Governments in requesting the Economic Commission for Latin America and the Caribbean (ECLAC) to draw up a proposal for a common standardized methodology for the measurement of defence spending in the two countries, and instructed the competent authorities in their respective countries to take all necessary steps to implement the ECLAC proposal without delay, in order to encourage this joint decision to be extended regionwide.
  8. In signing this declaration to commemorate the "Magellan Straits Embrace", Presidents Frei and Menem called for the spirit of transparency and deep friendship it implied to grow and nurture ever closer relations between the Argentine and Chilean peoples.
  9. Signed in Ushuaia, Republic of Argentina on 16 February 1999.

Eduardo Frei Ruiz-Tagle  
President of the Republic of  
Chile

Carlos Saúl Menem  
President of the Republic of  
Argentina

## Annex 2

### Standardized measurement of defence spending

*“Non-Paper” Argentina-Chile  
(22 December 1999)*

#### I. Definition and objectives

The term “defence” is understood to refer to all activities whose effect is to safeguard national sovereignty. Its aim is to attain a level of external security that will enable the country to achieve its national objectives.

Accordingly, “military expenditure” refers to expenditures incurred by the country to attain the objective set out in the preceding paragraph.

The model should be designed to permit a rational comparison of expenditure in order to guarantee its usefulness as a confidence- and transparency-building measure.

The ECLAC study should ensure that public information in both countries constitutes the “minimum information” to be used in the comparative model in order to promote transparency. For that purpose the budgets of the two countries will be analysed to establish guidelines for reconciling the categories used in each country with the detail necessary for adequate standardization. This should take account of the differences in budgetary formulation and execution systems in the two countries.

The methodology to be established should indicate the categories to be considered when measuring defence expenditure in the two countries, and provide criteria for including expenditures that could be considered defence-related, despite not appearing in defence ministry or armed forces budgets; or, conversely, for subtracting expenditures that do appear in such budgets but do not really correspond to defence.

**Budgetary status:** In the measurement, the key criterion should be to count expenditures executed at the end of each fiscal year. It should also include all sources of funding (National Treasury, special laws, autonomous local government, and so forth) that finance defence-related expenditures.

The study should indicate the expenditure categories to be included, but not necessarily identify individual costs in each one.

The development of this methodology, which is intended to make such expenditures more transparent, does not mean investing ECLAC with defence-expenditure comptroller or audit attributions.

The study should provide a glossary indicating the equivalence of terms used in each country, and proposing a common vocabulary.

The methodology developed, being common, standardized and consistent with national accounts methodologies, could be extended to the other countries of the region.

Both countries undertake to provide the information required by ECLAC to carry out this study, on the understanding that it will not be necessary to provide details involving strategic matters that are not relevant for calculating expenditures. It will sufficient to state programme amounts and give a general indication of their nature.

Defence expenditures may also include amounts that are subsumed in the accounts of other ministries, or which simply have not been included in government accounting.

One of the key objectives of the study is to indicate budgetary magnitudes and trends over time and, through expenditure classification, to reveal variations in each country's defence capacities. Accordingly, the model should be viewed in conjunction with other transparency- and confidence-building measures, such as the reports on conventional weaponry sent to international agencies, and measures adopted in fulfilment of commitments assumed under international agreements.

## II. Considerations for the study

**Definitions:** Define the scope of defence expenditure. As a general criterion to be applied, the entire budget in the jurisdiction of the Ministry of Defence for the Armed Forces shall be considered defence expenditure, unless the country that excludes certain categories or programmes contained therein, shows that they have another function.

Definition of "armed forces": Distinguish between internal security functions and defence.

In principle, the three branches of the armed forces (navy, army and air force) should be included in this category, but police forces, such as "Gendarmería", "Carabineros" and "Prefectura Argentina", should be excluded as they perform internal-security functions.

**Non-military activities:** Eliminate expenditures relating to non-military activities undertaken by the armed forces.

In principle, although there could be exceptions, these would be items that the country concerned justifies as relating specifically to non-defence activities (e.g., assistance in situations of natural disaster or fire, and other non-defence services provided to the community).

**Defence industry and research and development:** Identify activities and programmes undertaken by defence industries, research and development and other decentralized bodies under Ministry of Defence jurisdiction, but which are not defence-related.

**Other productive activities:** Eliminate productive activities that are not defence-related. In the case of activities undertaken by organizations attached to the ministries of defence or armed forces, the inclusion criterion would be applied in principle.

**Defence activities undertaken by other public bodies:** Identify defence-related activities and programmes under the jurisdiction of other State agencies.

**User-funded activities:** Eliminate management expenditures relating to user-funded services in the defence sector, such as health and welfare services, in order to avoid double counting. Each country can exclude from this category amounts financed out of direct user contributions, apart from those deducted through the payroll.

**Breakdown of information:** Distinguish expenditure by level of jurisdiction and sub-jurisdiction. Information should discriminate in each case between the armed forces (army, navy and air force) and the political structure (Ministry of Defence, joint general staff), or at the level of Ministries and Undersecretariats for War, Navy and Aviation.

**Maritime activities:** Analysis of patrol activities in territorial waters. This is included as defence expenditure unless the country concerned justifies otherwise. On the other hand, activities relating to the protection of human life at sea and navigation safety should not, in principle, be counted as defence expenditures.

**Air traffic control:** Expenditures in respect of air traffic control to guarantee aircraft navigation safety, together with airport management and other activities carried out by the armed forces in connection with commercial aviation, are excluded from defence expenditure.

**Operations relating to border control and peace:** As activities in this category may or may not be defence-related, their nature should be specified in the expenditure analysis in order to decide which category to include them in.

**Social service activities:** Defence ministry or military budgets assigned to health, security, education, culture, science and technology activities should be considered as an integral part of the defence project, although certain specific categories can be deducted that provide services to the community at large, or if they are personally financed by the users.

**Expenditures on military personnel and retirement (Argentina), or social security (Chile):** This category should cover military, civil and temporary defence personnel. Military pension benefits should be analysed, to determine whether they should be considered as social expenditure properly pertaining to a Ministry other than Defence.

**Tax and tariff regime:** Analysis of the tax and tariff treatment of defence-related activities, to prevent bias arising from the higher expenditure resulting therefrom.

### III. Methodological issues

**Level of aggregation:** To keep the model simple to apply to a variety of situations and countries, the degree of detail shown in the expenditure breakdown should allow for adequate standardization. Moreover, details should be given as to which expenditures are or are not included in the accounting process.

**Accounting treatment of procurement:** It is important to clarify the accounting treatment of long-term military procurements, problems relating to their inclusion in national accounts, and their consideration as external debt and fiscal expenditure. Given that defence expenditure partly reflects the country's weapons potential, it is important to distinguish direct expenditure on weaponry from the financing expenses that facilitate such procurement.

**Military aid:** Military aid received from third parties is counted as a defence expenditure in the recipient country only to the extent of any amounts paid.

**Financing of defence expenditure:** Expenditure figures should include amounts transferred from the Treasury, plus funding from other sectors; describing, in particular, contributions and transfers to public and private firms, whether or not decentralized, in the defence industry, research and development fields.

## Appendix A

### Glossary

This appendix is intended to make the report easier to read, by setting out the various terms used in Argentina and Chile. They have been grouped together for ease of presentation; some terms have been put on the same line to highlight the differences that exist between the two countries; in other cases to indicate that they have been interpreted as comparable even though there are significant differences between them; and, lastly, in other categories the aim is to show the nomenclatures used with similar meanings.

The information has been arranged in three columns, one each for Argentina and Chile, and the third for making comments or observations on the scope and characteristics of the various terms considered.

#### A. General terms

Argentina	Chile	Remarks
Federal Republic	Unitary Republic	<i>Different administrative organization in the two countries.</i>
Terrestrial, river, island, maritime, air and Antarctic zones	Continental, island, maritime, air and Antarctic zones	<i>Significant spaces for defence, according to corresponding defence manual.</i>
Voluntary military service	Compulsory military service	<i>Argentina: since 1995.</i>
National Defence White Paper	National Defence Manual of Chile	<i>Argentina: published in 1999. Chile: published in 1997.</i>

#### B. Institutional terms

Argentina	Chile	Remarks
National government	Central government	<i>Comparable in the report, despite the fact that Argentina is a federal republic and Chile is a unitary republic.</i>
Department of the Treasury, Ministry of Economic Affairs	Ministry of Finance	<i>Institutional differences in the two countries.</i>
National Budget Office	Budgetary Affairs Bureau	<i>Each attached to the corresponding finance ministry.</i>
----	Comptroller General of the Republic	<i>A supervisory body does not exist at this level in Argentina. In Chile it is an additional source of economic information.</i>
Joint General Staff	National Defence General Staff (advisory and only at ministerial level)	<i>Advises the President of the Republic and coordinates the Armed Forces.</i>
Army, Navy and Air Force	Army, Navy and Air Force	<i>Branches of the Armed Forces.</i>
Army General Staff	Undersecretariat for War (government body only)	<i>Administrative organization of the Army and the institutions attached to it.</i>
Navy General Staff	Undersecretariat for the Navy (government body only)	<i>Administrative organization of the Navy and the institutions attached to it.</i>
Air Force General Staff	Undersecretariat for Aviation (government body only)	<i>Administrative organization of the Air Force and the institutions attached to it.</i>
“Gendarmería Argentina” and Argentine Federal Police	“Carabineros de Chile” and “Policía de Investigaciones de Chile”	<i>Institutions responsible for domestic security and public order. In Argentina these come under the Interior Ministry.</i>
Military Aeronautical Police	----	<i>Responsibility for security at airports.</i>

Argentina	Chile	Remarks
National aviation activity support program	Civil Aeronautics Board	<i>Provides support and protection for aviation. In Chile it is a decentralized body, but in Argentina it is attached to the Air Force General Staff.</i>
Argentine Coast Guard	Territorial Waters Board	<i>Provides support and protection for maritime, and inland waterway navigation. In Argentina, attached to the Ministry of the Interior.</i>
----	Army support organizations	<i>Attached to the Undersecretariat for War; principally the Military Works Corps.</i>
----	Military Works Corps	<i>Undertakes civil works of national interest; built much of the Austral highway, for example.</i>
Financial Aid Institute for Military Retirement Pensions and Benefits (IAF)	National Defence Pension Fund (CAPREDENA)	<i>Organizations that administer pension expenditures relating to inactive military personnel. Argentina: attached to the Ministry of Defence. Chile: attached to the Undersecretariat for Social Security, Ministry of Labour.</i>

### C. Economic terms

Argentina	Chile	Remarks
"Manual de Clasificación Presupuestaria del Sector Público"	"Instrucciones para la Ejecución de la Ley de Presupuestos del Sector Público"	<i>Guidelines for recording budgetary execution.</i>
Basis of accounting: accrual	Basis of accounting: cash flow	<i>Different criteria used mainly in budgetary execution.</i>
Earmarked funds	Internally generated revenues	<i>It is acceptable for each country to have specific and particular origins in the different cases, although their nature is not completely equivalent.</i>
Capital income	Capital income	<i>Argentina: external and domestic credit.</i>
Personnel	Payroll	<i>Chile: asset sales and borrowing.</i>
Goods and services	Goods and services	<i>Total wages and salaries.</i>
Capital expenditure	Capital expenditure	<i>Consumer goods and services, non-personnel.</i>
Gross fixed capital formation	Real investment	<i>Argentina: mainly financial investment; real investment is counted under fixed assets ("bienes de uso"); see report.</i>
Net pension expenditures	Net pension payments	<i>Chile: real investment plus financial investment (excludes Reserved Copper Laws; see report).</i>
		<i>Similar concepts.</i>
		<i>Expenses incurred annually in the payment of retirement and other pensions, and other related items.</i>



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