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Volume Author/Editor: Jere H. Behrman

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Chapter Title: Other Components of the Balance of Payments

Chapter Author: Jere H. Behrman

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## **Other Components of the Balance of Payments**

The stress of the two previous chapters was on the effects of recent Chilean international economic regimes on her goods trade. In this chapter, the stress is shifted to the impact of the regimes on, first, services and transfers and then, capital and gold flows.

### **SUMMARY AND CONCLUSIONS**

i. The net balance from aggregate services was quite responsive to changes in the regimes. In reaction to the systematic changes in the PLD-EERs for nongoods transactions, noted earlier, this balance declined substantially during more liberal periods and rose in more restrictive ones.

ii. Variations in service imports accounted for most of these reactions. In part this was because that import category was relatively responsive to policy changes. The partial-equilibrium price and QR elasticities for service imports, for example, were higher than those for two-thirds of the imported goods categories. That service imports were subjected to relatively great variations in policies was another factor. As a result, the relative variations in service imports were high in comparison with those for goods imports and for service exports.

iii. The partial-equilibrium price responsiveness of service imports implies, *ceteris paribus*, that the demand for such imports increased 50 per cent in 1955-72 because of the secular fall of the PLD-EER. Thus, the exchange-rate policy added to balance-of-payments pressures.

iv. Within a general-equilibrium framework, on the other hand, the direct price responsiveness was almost swamped by the indirect effects. Quantitative restrictions were much more effective for constraining short-run balance-of-payments deficits than were price policies, given that exchange movements were not neutralized.

v. Patterns were less clear for service imports on a more disaggregate level. However, liberalization tended to increase deficits due to net outflows for freight, transportation, and income on direct investments. Increases were allowed in the last category even near the end of phases when other items were restricted because of foreign-exchange shortages. In a sense, then, policies favored foreign over domestic interests.

vi. Unilateral transfers increased during liberalization attempts, primarily because of enlarged inflows to the government. Such net inflows aided the liberalization efforts, but never averaged as much as a quarter of the deficit on the goods and services account.

vii. The totals of capital and gold inflows reveal that Chile was consistently a debtor nation. Fluctuations in these totals, however, were not closely phase-associated.

viii. The aggregate capital inflows to nonmonetary sectors, in contrast, reflected the degree of liberalization. They increased in more liberal phases and fell in more restrictive ones. The causes of this phase association included direct investment responses to specific policies and to the general economic climate and private short-term capital movements due to these same factors and to speculation. Net long-term private capital flows and net flows to the government, on the other hand, were not closely phase-related; they were dominated instead by the Alliance for Progress, political attitudes of the donor governments, and repayment requirements.

ix. Net direct-investment inflows increased relative to net outflows from income on such investments during the first two liberal phases and fell during more restrictive periods. For the quarter-century following the Second World War, however, the inflows averaged but 30 per cent of the outflows. Such figures caused many Chileans to question the appropriateness of the distribution of benefits from direct investment.

x. Compensatory capital movements of considerable magnitude were required to sustain the first two liberalization programs. The resulting exhaustion of reserves and of bank credit abroad led to their termination. The overvalued NER could not be maintained for very long.

In the third liberalization attempt, in contrast, these movements were in the opposite direction. The world copper market boom of the late 1960s was the primary cause of this difference. The accumulated reserves, however, were quickly exhausted under the Allende government because net capital outflows from traditional private and public sources were only partially offset by new sources.

TABLE 8.1  
**Chilean Balance of International Payments, Annual Averages for Phases  
 and Subphases, 1947-71**  
 (millions of 1958 United States dollars)

	1947-51	1952-55	1956-58	1959-61	1962-64	1965-69	1970	1971
<b>A. Goods and services</b>	-50.1	-5.6	-81.7	-163.0	-179.9	-79.2	-66.2	-139.7
1. Merchandise <sup>a</sup>	20.7	56.3	-5.6	-71.0	-74.4	100.0	88.0	-56.0
1.1 Exports	392.2	475.2	429.8	442.8	485.1	757.7	836.0	738.0
1.2 Imports	-371.5	-418.9	-434.9	-513.8	-559.5	-657.7	-748.0	-794.0
2. Nonmonetary gold	5.4	5.3	2.7	1.8	1.8	0.3	—	—
3. Freight and other transportation	3.6	9.0	6.4	4.0	3.5	14.2	—	—
4. Travel	0.6	-0.8	-7.8	-21.5	-8.8	-1.3	—	—
5. Investment income	-77.1	-67.8	-71.4	-67.1	-89.0	-170.5	-95.2	-63.4
5.1 On direct investment	-66.3	-53.7	-57.2	-45.7	-52.5	-83.0	—	—
6. Govt., n.i.e.	0.9	-4.2	-9.1	-6.0	-2.9	-5.6	-11.4	—
7. Other services	-4.1	-3.3	2.6	-3.2	-10.1	-16.3	—	—
<b>B. Unrequited transfers</b>	1.1	-0.1	19.6	38.2	9.6	14.4	23.7	—
8. Private	0.9	-1.4	5.3	10.1	5.0	5.0	—	—
9. Central govt.	0.2	1.3	14.3	28.2	4.6	9.4	—	—
Net total (lines 1-9)	-49.0	-5.6	-62.1	-124.7	-170.3	-64.8	-32.5	—
<b>C. Capital and monetary gold</b>	46.0	10.9	70.1	129.1	168.9	79.0	42.7	139.2
Nonmonetary sectors	39.9	18.6	37.4	82.6	143.9	153.1	110.0 <sup>b</sup>	-78.8 <sup>b</sup>
10. Direct investment	22.0	16.8	42.8	43.7	-2.4	1.0	—	—
10.1 Large-scale mining	13.0	9.2	20.7	-2.9	-18.7	-2.6	—	—
11. Other private long term	-0.3	-0.3	8.8	23.5	48.5	51.3	—	—
12. Other private short term	1.1	-1.2	-8.6	16.0	6.6	18.6	—	—
13. Central government, n.i.e.	17.0	3.4	-5.4	-0.6	91.3	82.1	—	—

13.1 Loans received	29.1	6.8	-5.8	7.7	93.2	86.8	—
13.2 Chilean govt. securities	0.0	0.0	0.0	-2.8	-4.5	-4.7	—
13.3 U.S. govt. escudo holdings	0.0	1.3	3.4	1.1	4.8	5.5	—
13.4 Subscriptions to IDA and IDB	0.0	0.0	-0.1	-4.8	-3.7	-4.0	—
13.5 Other short term capital	-12.1	-4.8	-2.8	-1.8	1.6	-1.6	—
Monetary sectors	6.1	-5.6	32.7	46.4	24.9	-74.2	218.0 <sup>c</sup>
14. Commercial banks	2.6	-0.9	2.6	13.4	14.0	-14.4	—
15. Central institutions: liabilities	16.8	-1.1	22.1	53.2	15.6	-17.8	—
15.1 Use of IMF credit	13.5	1.0	9.9	27.0	11.5	-7.3	—
15.2 Loans received	1.9	-2.2	15.6	23.3	6.4	-12.2	—
15.3 Payments agreements	1.7	0.1	-0.4	4.4	-3.4	-0.5	—
15.4 IDA and IDB escudo holdings	0.0	0.0	0.0	1.4	1.8	2.2	—
16. Central institutions: assets	-13.2	-7.0	8.0	-20.2	-4.6	-42.0	—
16.1 Changes in IMF reserve position	0.0	0.0	0.0	-16.2	0.0	0.0	—
16.2 Payments agreements	-0.8	-2.2	-0.6	4.2	0.0	-0.5	—
16.3 Other claims	-5.6	-4.9	7.1	-5.7	-6.1	-40.8	—
16.4 Monetary gold	4.6	0.1	1.5	-2.5	1.5	-0.7	—
Net errors and omissions	3.0	-5.2	-8.0	-4.3	1.5	-14.6	-10.2

SOURCE: Annual data in current dollars are from International Monetary Fund [1950a-1969a] for 1947-69 and from Banco Central [1972b:263] and unpublished Central Bank data for 1970 and 1971. The United States GNP deflator was used to convert the data into constant dollars. The data for 1970 and 1971 are not strictly comparable to the data for earlier years; so 1970 is presented separately rather than in combination with the rest of the 1965-70 phase. Also because of problems of making the data for the earlier years compatible with those for later years, not all the subtotals for 1947-51 sum to the final totals shown.

a. Exports f.o.b., imports c.i.f.

b. Called "autonomous capital movements" in the source.

c. Called "compensatory capital movements" in the source.

## 8.1 SERVICES AND TRANSFERS

In this section an attempt is made to answer three questions about services and transfers after the Second World War. What were the patterns in constant-dollar mean values for phases? Were there any within-phase regularities? Within a structural model how responsive were services to various policies?

### 8.1.1 Mean Values for Phases.

Average constant-dollar values of all of the major components of the Chilean balance of payments for phases and subphases in 1947-71 are presented in Table 8.1. The data in this table, together with others elsewhere in the study, suggest, first, that in each of the three more liberal phases (i.e., 1956-58, 1959-61, 1965-70), the mean net constant-dollar balance from all services (Table 8.1, line A less line A1) declined from the level of the previous phase. In two of the three more restrictive phases or subphases, the opposite was true. The systematic reductions in discrimination against nongoods transactions that accompanied liberalization (and vice versa) noted above (column 3 in Table 5.1),<sup>1</sup> thus, generally caused increased movements in the net balance from services. More careful examination of the data underlying Table 8.1 indicates that most of this variation was in the imports of services.<sup>2</sup> Policy changes affected the value of such imports much more strongly than they did goods imports or goods or nongoods exports.<sup>3</sup>

The secular growth rate in 1947-65 for total services was the highest by far among export categories and second only to transportation-related capital goods among imports (column 1 in Table A.2). The value of these transactions increased relatively rapidly over time, therefore, despite the fluctuations due to phase changes. The only significant (at the 20 per cent level) phase-coincident deviation from the secular growth rate is a decline for the 1962-64 Phase II years.

On a more disaggregate level, the relations between phases and mean values are less consistent. In the 1956-58 liberalization, mean net flows fell for every category except other services. In 1959-61 they fell for all but investment income and government. For 1965-70 they fell for all but travel, freight, and other transportation.<sup>4</sup>

The pattern of outflows for investment income merits some comment. These returns were largely from large-scale copper mining. For the phase immediately after the *Nuevo Trato* of 1955, they increased somewhat. During the liberalization of 1959-61 they fell by 6 per cent. In the 1965-70 liberalization,

however, their absolute value increased tremendously. The copper boom of the late 1960s was a major factor in this bulge. The foreign owners reaped substantial returns from this boom despite the increase in Chilean participation (see subsection 7.1.2.3).

For net flows from unrequited transfers, a phase-related pattern also prevailed. On the average these inflows rose substantially in each of the three more liberal periods. These increases originated primarily in enlarged transfers to the central government. Changes in transfers to the private sector also were important in 1956-58 and 1959-61. Such inflows helped facilitate the liberalization efforts, although in none of these three attempts did they cover as much as a quarter of the mean deficit on the goods and services account.

### 8.1.2 Within-Phase Patterns.

Careful examination of the annual data underlying Table 8.1 reveals some systematic patterns within phases. The aggregate deficit from net services rose at the start of each of the liberalization episodes. These increases originated predominately in higher freight and transportation payments resulting from increased exports and in larger investment income outflows. Credits from travel usually grew enough, on the other hand, to offset increased deficits in this category.

In the last year of the first two more liberal phases, the deficit from aggregate net services continued to grow. The primary contributing factor was the rising outflow for income on investment. The incentives for such outflows were strong because of impending foreign-exchange crises. Despite the growing foreign-exchange scarcities, however, the government did not effectively restrict these returns to foreigners. Instead it limited other items such as expenditures on travel. In fact greater stringency—together with reduced goods exports—generally caused increases in net credits in the other categories. The expanded outflow of investment income to foreigners, thus, was probably offset by net reductions in other categories. In a sense, therefore, foreign interests were favored over domestic ones.

Comparable data are not available for the last year of the third liberalization attempt. The lack of an immediate foreign-exchange shortage, however, probably resulted in different patterns. Expenditures on travel, for example, apparently rose throughout most of 1970. Less because of policy stringency than because of the ending of the worldwide boom in the copper market, outflows of investment income also fell.

At both the beginning and end of the more restrictive 1962-64 phase net debits for aggregate services declined. This again emphasizes the relative impact of greater restrictiveness on the service categories. Despite the over-all

greater stringency, however, once again foreign investors were favored by allowing larger outflows.

Enlarged net credits from unilateral transfers (especially to the central government) helped facilitate liberalization at the start of the first two attempts. In the first case they continued to grow throughout the phase, but in the last year of the second effort they fell off. In 1965, in contrast, such transfers dropped. Subsequently they grew somewhat and then leveled off in 1968. Under the Frei government, however, these inflows were definitely smaller than during the two previous liberalization attempts, reflecting a worldwide shift in the form of aid flows from grants to loans.

### 8.1.3 Partial-Equilibrium Responses of Services.

#### SERVICE IMPORTS.

Relation 8.1 is for service imports ( $M_s$ ). The underlying model is the same as is used for other imports in subsection 6.2.1:

$$\begin{aligned}
 M_s = & -43.7 \text{ PLD-NER} + 48.0 (\text{PLD-NER}^{BM} / \text{PLD-NER}_{-1}^{BM}) \quad (8.1) \\
 & (2.5) \qquad (1.2) \\
 & [-0.8] \qquad [0.3] \\
 & + 0.105(X + M) - 1,503 \text{ QR} + 1,366 \\
 & (11.7) \qquad (3.4) \qquad (3.1) \\
 & [1.9] \qquad [-7.6]
 \end{aligned}$$

$$\bar{R}^2 = 0.92; SE = 30.4; DW = 2.5; \text{ years covered, 1947-65}$$

Each of the same four sets of determinants is considered in turn.

The response to relative prices is fairly large. The elasticity with respect to the PLD-NER is  $-0.8$ , which is greater than four of the six imported-goods categories included in Table 6.3.<sup>5</sup> *Ceteris paribus*, this value implies that the 62 per cent fall in the brokers' PLD-NER between 1955 and 1972 induced an expansion of almost 50 per cent in desired service imports. The attempt to maintain increasingly overvalued exchange rates thus generated strong inducements for imports in this category. On the other hand, such price responsiveness also suggests that price-related tools rather than QRs could have been used to limit these imports.

The second term in relation 8.1 is the ratio of the current to the lagged PLD-NER for the black market. It represents speculative pressures. The estimate provides some evidence of a response in service imports to such pressures, but the relevant coefficient is significantly nonzero only at the 15 per cent level. The existence of a reaction to risk (as measured by the standard deviation of relative prices), in contrast, is not supported even at the 25 per cent level of significance.



The only important nonprice demand factor is the activity index for total trade ( $X + M$ ), which is included because imports of certain services (e.g., freight and insurance) depend upon it. The elasticity estimate of 1.9 implies that such services are quite sensitive to the level of total trade. In contrast to some of the consumer and intermediate goods categories, however, banking system credit does not seem to have affected service imports directly.

On the other hand, the reaction to quantitative restrictions ( $QR$ , the French-Davis index) is significant and large. The elasticity of  $-7.6$  implies a greater response than for all but investment goods among the import categories in Table 6.3. This supports the hypothesis made several times above (e.g., section 5.1, subsection 8.1.1) that changes in the stringency of quantitative policies affected services relatively strongly. Great use of QRs to curb service imports was required to offset the previously mentioned price response to the overvalued NER.

Finally, dominance of neither the habit-adjustment nor inventory effects, as represented by lagged dependent variables, is supported by the results.

#### SERVICE EXPORTS.

Relation 8.2 is for service exports ( $X_s$ ):

$$\begin{aligned}
 X_s = & 23.3 \text{ PLD-NER}_{-1} + 11.5 \Delta \text{PLD-NER} + 0.0261 (X + M) \quad (8.2) \\
 & (5.1) \qquad \qquad (4.9) \qquad \qquad (2.7) \\
 & [0.2] \qquad \qquad [0.0] \qquad \qquad [0.3] \\
 & + 0.0567 (X + M)_{-1} + 0.233 \text{ GDP}^{\text{AR}} \\
 & (4.1) \qquad \qquad (4.1) \\
 & [0.6] \qquad \qquad [0.7] \\
 & + 65.2 \text{ LAFTA} - 0.600 X_{s,-1} - 266 \\
 & (3.9) \qquad (5.2) \qquad (7.6) \\
 & [0.1]
 \end{aligned}$$

$$\bar{R}^2 = 0.99; SE = 9.1; DW = 1.4; \text{ years covered, 1947-65}$$

The basic underlying model is the same as that used in subsection 7.2.1 for other exports.

i. Although the response of exports of services to price policies is statistically significant, the price elasticity is substantially smaller than that for imports of services, and it is also smaller than the price elasticities for other exports (Table 6.2). The relatively limited reaction of service exports to price policies is illustrated by the fact that this estimate implies only a 12 per cent reduction in response to the 62 per cent decline in the relevant PLD-NER for the 1956-72 period—in contrast to the almost 50 per cent increase in

desired service imports noted above. The combination of these two elasticities, of course, still implies a considerable net response in services. If service exports and imports were in balance initially, for example, such a drop in the PLD-NER would cause a deficit of over 60 per cent of the original level of imports, *ceteris paribus*.

For both service exports and imports, no evidence exists of a significant response to risks concerning future relative price movements. However, the reaction to a Harberger [1963] accelerator term—the first difference of the PLD-NER—is significant and large. This term represents (naive) anticipations regarding future changes in the PLD-NER.

ii. In contrast to all the other export categories included in Table 7.2, quantitative supply factors have not directly limited service exports. This result reflects the vagueness in capacity definitions for the service sector in general, even though some components (e.g., tourist hotels) may have specific capacity constraints.

iii. Three significant quantitative demand factors are incorporated in the regression. One is over-all trade ( $X + M$ ), which represents the demand for the Chilean provision of certain services analogously to the situation for the import of services. A second is Argentinian product ( $GDP^{AR}$ ), pertinent because more tourists visiting Chile have come from neighboring Argentina than anywhere else and that tourism is income sensitive. A third is the LAFTA dummy variable, which suggests that the formation of that organization resulted in increased regional tourism in the early 1960s.

iv. The significant coefficient of the lagged dependent variable implies the dominance of an inventory effect for services. Although the existence of an inventory effect for service exports such as for tourists from neighboring countries does not seem unreasonable, the absolute magnitude of this coefficient is surprisingly large. The explanation probably is that the series for the dependent variable better reflects the payment for services (for which an inventory effect makes more sense) than the provision of services. Lags in payments also underlie the significance of the lagged trade term  $(X + M)_{-1}$  in addition to the current one.

#### CHILEAN NET FACTOR INCOME FROM ABROAD.

Relation 8.3 is for Chilean net factor income from abroad in constant terms ( $NFIAB/PGDP$ ), where  $PGDP$  denotes the GDP deflator:

$$\frac{NFIAB}{PGDP} = 26.5V_1 - 0.840V_2 - 0.116V_3 + 0.377V_4 - 376 \quad (8.3)$$

(2.1)	(2.2)	(3.0)	(1.8)	(5.6)
[-0.8]	[0.4]	[0.4]	[-0.7]	

$\bar{R}^2 = 0.81; SE = 31.4; DW = 1.7; \text{years covered, } 1947-65$

where

- $V_1$  = real wage rate in mining including employers' social security tax contributions;
- $V_2$  = dollar value of mining exports after adjustment for direct tax on large-scale mining relative to dollar cost of intermediate mining inputs at special NER for large-scale mining;
- $V_3$  = export value after adjustment for direct tax on large-scale mining relative to intermediate input index for mining with adjustment for ratio of national accounts to large-scale mining NERs (with all components lagged one year);
- $V_4$  = real value of legal cost of production for large-scale mining at large-scale mining NER (with all components lagged one year).

Chilean net factor income from abroad (*NFIAB*) is composed primarily of outflows from mining. The primary determinants of this flow are variables related to that sector: the prices of mining inputs (labor and intermediate), the real level of total or of mining exports, the price of mining products (or of copper in particular), the legal cost of production in large-scale mining, the employers' social security tax rate and the direct tax rate on large-scale mining, the NER for large-scale mining, and possibly quantitative restrictions. This relationship is a somewhat ad hoc attempt to estimate the determinants of real factor income from abroad in response to composite variables constructed on the basis of such considerations.

These factors are consistent with a considerable portion of the variance in the dependent variable. The coefficients are of the anticipated signs. Judging from the *t* statistics and the elasticities, government policies regarding the NER, the legal cost of production, and the tax rates for large-scale mining played particularly important direct roles in determining variations in net factor payments from abroad.

Quantitative restrictions,<sup>6</sup> on the other hand, were not important because the Chilean government never limited the freedom of the large-scale mining companies to repatriate after-tax earnings as they saw fit. In fact, the companies were not required either to return such earnings to Chile or to convert them into escudos.

Finally, relation 8.3 supports the observation that the Chilean governments wished to limit factor payments abroad and were reluctant, therefore, to increase the PLD-NER for large-scale mining. The export estimate for large-scale mining in Table 7.2, however, implies that the limiting of foreign factor payments from this subsector was purchased at the price of reduced national control over foreign exchange from exports. It is not clear that the government was always aware of this trade-off.

### 8.1.4 General-Equilibrium Responses of Services.

The model introduced in Chapter 2 and the simulations summarized in Table A.11 once again provide the basis for commentary on the responses of services within a general-equilibrium framework.

The general-equilibrium responses of service imports and exports to exchange-rate variations show the same basic characteristic as do most other exports and imports (subsections 6.2.2 and 7.2.2). Most of the large partial-equilibrium reactions are swamped by indirect effects resulting especially from domestic price responses to changes in international reserves. As a result, the relevant first-year elasticities are about 0.1 in absolute value (simulation 2.1.1). Note that the elasticity for service exports is about the same in absolute magnitude as for service imports despite the partial-equilibrium differences observed in the previous subsection.<sup>7</sup> Pessimism about the effectiveness of exchange-rate policy thus seems appropriate for the service categories as well as for the goods categories.

The response of net factor income from abroad to changes in the over-all exchange rate is inverse and elastic in the first year, with a fairly substantial reaction occurring during the next several years (simulations 2.1.1 and 2.1.3).<sup>8</sup> The first-year elasticity for a change in the NER for large-scale mining alone is  $-0.9$  (simulation 2.7.1). The general-equilibrium results thus reinforce the partial-equilibrium conclusion that the low NER for domestic purchases of large-scale mining significantly reduced foreign-factor earnings.

The general-equilibrium responses of services to changes in quantitative restrictions are quite large (simulation 2.3.1). The first-year elasticity of  $-0.9$  for service exports is greater in absolute value than those for all but one other export category. The first-year elasticity of  $-4.6$  for service imports is the largest in absolute value among all import categories.<sup>9</sup> The first-year elasticity for net factor income from abroad is  $-4.0$ , and the third-year one is  $-5.8$ .

These results suggest that quantitative restrictions affect service imports more strongly than any other category; for balance-of-payments constraint of services, quantitative restrictions are more effective than price-related measures unless the impact on domestic prices of the latter can be largely neutralized; QRs are also quite effective in restraining factor payments abroad despite the lack of evidence of any significant partial-equilibrium response (subsection 8.1.3).

## 8.2 CAPITAL AND GOLD FLOWS

The sum of movements in the merchandise, service, and transfer accounts, of course, were offset by flows in the capital and gold accounts (except for the

relatively small error and omissions item). The mean net inflows on the capital and gold accounts were positive in all the post-World War II phases and subphases (line C in Table 8.1).<sup>10</sup> Thus Chile was consistently a debtor nation.<sup>11</sup>

Variations in these means were not obviously primarily associated with degrees of liberalization or of restrictiveness. They rose in the more liberal phases of 1956-58 and 1959-61 and also in the more restrictive phases of 1962-64 and 1971-73. They fell in the more liberal phase of 1965-70 and the more restrictive subphase of 1952-55. Although these patterns in some ways directly reflected the nature of the regime (see below), of much greater importance was the situation in the world copper market and the general availability of foreign loans.

### 8.2.1 Net Capital Flows to the Nonmonetary Sectors.

Total net capital inflows to the nonmonetary sectors, in contrast to those to all sectors, clearly have been associated with the degree of liberalization. Means increased for each of the three more liberal phases and decreased for more restrictive phases and subphases (with the single exception of 1962-64). The ratio of these flows to all capital and monetary-gold movements rose in each more liberal phase and fell in each more restrictive one (although not in the 1952-55 subphase). Consideration of the four major components of the net capital flows to nonmonetary sectors facilitates understanding of these patterns.

#### LONG-TERM INVESTMENT FLOWS.

The most striking phase associations were in *net direct investment* (Table 8.1, line 10), which increased in each more liberal phase and decreased in each more restrictive one. The lags in these changes, moreover, were quite small; so the indicated movement generally was reached in the first year of each phase.<sup>12</sup>

This association of net direct investment inflows with phases partially reflects a similar pattern for the substantial share of these inflows going to large-scale mining. As is discussed in subsection 7.1.2.3, the *Nuevo Trato* of 1955 and the Frei Chileanization and nationalization programs of 1967-69 shaped much of the latter flow.<sup>13</sup>

In recent phases major total net direct investment inflows have been going to subsectors other than large-scale mining (line 10 less line 10.1). These flows, too, responded to specific policies which eased or restricted capital entry and subsequent repatriation (subsection 4.3.2). Of even more importance than such specific policies, however, apparently was the perception of a "favorable investment climate" caused by the over-all program of stabilization plus liberalization.

Larger net direct investment inflows by themselves did not guarantee that

the total direct impact of liberalization policies was to increase the net short-term command over foreign exchange related to direct investment.<sup>14</sup> Such policy changes also generally allowed larger net outflows of income from direct investments (Table 8.1, line 5.1). In fact, however, for all but one of the recent phases, the short-term command over foreign exchange rose in liberalization and fell in more restrictive periods even when both of these flows are taken into account.

The single exception was the Frei liberalization. For those years the mean net outflow with both factors taken into account rose more than 50 per cent over that of the previous phase. Most of this increased net outflow, however, only reflected the sharp shift in the composition of capital inflows to large-scale mining from direct investment to long-term loans, which was caused by the Chileanization and nationalization programs.

The ratio between net direct investment inflows and net income on direct investment outflows is also revealing. This ratio increased in each liberalization phase (including the Frei one) and fell in each more restrictive phase. Only during the 1956–58 and 1959–61 liberalizations in fact did this ratio exceed one-half (the values were 0.75 and 0.96, respectively). The implied large excess of outflows over inflows related to direct investment, of course, does not prove that Chile did not gain significantly from these investments. That this ratio averaged only 0.30 for 1947–69, however, caused many Chileans to question the appropriateness of the distribution of the gains from direct foreign investment.

The Allende government therefore attempted to establish a more desirable distribution of the benefits from direct foreign investment and greater Chilean control over operations.<sup>15</sup> A number of existing foreign firms and some new ones agreed to continue or expand production, often with minority participation in mixed enterprises and with state-guaranteed minimum rates of net return of 5 per cent (e.g., RCA International, General Tire, FEMSA, General Electric, Gillette, Standard Oil of New Jersey, Pfizer, Renault, Citroen, Peggasso, and Fiat). Others, however, terminated their Chilean operations on terms apparently more or less satisfactory to the foreign owners, at least given their expectations about future developments there (e.g., the Bank of America, Northern Indiana Brass, Purina, First National City Bank, Dow Chemical, and du Pont). A few, the largest of which were International Telephone and Telegraph and Ford, had acrimonious interactions with the Chilean government concerning operations and compensation.<sup>16</sup> The over-all result was a large net direct investment outflow. This contrasted with most earlier phases (although not with 1962–64) and contributed to the drop of \$188.8 million in autonomous capital movements between 1970 and 1971.

*Other private long-term investment* movements were not particularly phase-associated (Table 8.1, line 11). Mean net inflows rose in each of the

phases for which data are available (but they almost certainly declined in the 1971-73 Phase II period, for which data are not yet available).<sup>17</sup> The largest absolute positive increment, on the other hand, also was for a Phase II period (1962-64).

Due to the secular increase (at least until the end of the 1960s), net flows from this source became substantially more important in the over-all net inflow of capital and nonmonetary gold. In the 1950s, for example, this source averaged 11 per cent of the total net inflow of capital and nonmonetary gold. In the 1960s it accounted for 37 per cent.

This level of aggregation, however, does conceal one important change which occurred in the late 1960s. Because of the Frei Chileanization and nationalization programs for large-scale mining, substantial long-term private loans were made to that subsector starting in 1967. Such inflows accounted for 80 per cent of net other long-term private capital movements in 1965-69, although they had been insignificant earlier because capital inflows to this subsector previously had been in the form of direct investment. Thus, underlying the aggregate increase in this phase was a substantial drop in net inflows other than to large-scale mining. Therefore, this liberalization really resulted more in a shift in composition than an increase in total private long-term capital inflows.

For both these other long-term capital inflows and for direct investment, outflows for income also must be considered in evaluating the total direct impact on the balance of payments. The available data, unfortunately, do not distinguish income on these other private long-term capital movements from that on private short-term capital movements. However, a comparison can be made between total other private inflows (Table 8.1, line 11 + line 12) and the resulting outflows for income (line 5 less variable 5.1). In such a comparison two features stand out:

i. The mean ratio of the former to the latter for 1947-69 is 0.89, which is much higher than the comparable ratio for direct investment. Differences in timing of the flows account for only a part of this discrepancy.<sup>18</sup> Apparently the more important factor was that direct investments were much more profitable from the point of view of foreigners than were these other inflows.

ii. The over-all short-run impact of these other private capital movements, in contrast to those for direct investments, was not increased control of foreign exchange in periods of liberalization and vice versa in restrictive periods. In fact, for all recent phases for which data are available, except the 1959-61 liberalization, the pattern is the opposite.

#### SHORT-TERM INVESTMENT FLOWS

*Other private short-term capital flows* may be very volatile in a country with a history of inflation and foreign-sector policy like Chile's. The repeated

pattern of maintaining the NER fixed and then devaluing substantially to a new fixed level was a strong inducement for speculative short-term capital movements. The real rates of interest as seen by foreigners and by nationals often diverged by large amounts, and both rates also varied greatly over time. After a devaluation and while the NER remained unchanged, for example, the real interest rate for foreigners was equal to the nominal rate. The latter, in turn, was quite high because of internal inflation. As a result, the real return on foreign loans probably exceeded their real product.

Mean net other private short-term capital inflows reflected the degree of liberalization (Table 8.1, line 12). For each more liberal phase except 1956–58 they increased.<sup>19</sup> For each more restrictive phase or subphase they fell.

In the 1959–61 liberalization effort the special repatriation arrangements and the establishment of dollar accounts induced part of the expanded inflow. In the 1965–70 attempt, the sliding-peg NER apparently had the same effect by reducing uncertainty about future PLD-NER variations and encouraging investment in export industries (but see note 19). In both of these phases revised expectations about the over-all performance of the economy resulting from the program of stabilization plus liberalization probably also contributed. The gains in short-run control over foreign exchange helped to extend these liberalization attempts. In neither case, of course, did such inflows offset the effects of overvaluation. In the first case, moreover, the increasing real interest rates for foreigners resulting from inflation in combination with the fixed NER meant that the real return on such loans probably exceeded their real product.

Under the Allende government short-term capital inflows dropped considerably (although data comparable to those in Table 8.1 are not available). This fall reflected speculation about NER movements, capital flight to avoid nationalization and redistribution policies, and the cutting off of short-term credits by many traditional suppliers in retaliation for the compensation decision for large-scale copper mining.<sup>20</sup> This decline exacerbated an already difficult foreign-exchange situation.

The annual data underlying Table 8.1 provide further information about speculative movements of short-term capital. If speculation were successful enlarged outflows would be expected in the last year of phases in anticipation of devaluation. Countermovements in the first year of liberalization attempts would reverse the process.

Only limited support for such patterns is found in the annual data for short-term capital inflows. They decreased in half of the last years of phases and increased in only one-third of the first years of liberalization. If errors and omissions are also considered because they include unrecorded short-term capital movements, however, the patterns were more consistent with those hypothesized. In three-fourths of the last years of all phases, drops were reported and in two-thirds of the first years of liberalizations increases were



recorded. If such a phenomenon prevailed, therefore, it operated largely through unrecorded movements.<sup>21</sup>

### CAPITAL FLOWS TO THE CENTRAL GOVERNMENT

Net capital movements to the central government were not highly associated with the degree of liberalization (Table 8.1, line 13). Mean ratios decreased for two of the three liberalization efforts and rose very sharply in the 1962–64 Phase II period. Annual ratios fell in the first year of two of three liberalization attempts and increased in 1962.

Loans to the central government were the most important component of total net capital movements to the government (Table 8.1, lines 13.1–13.5). The pattern of the latter largely reflected movements in the former. The net balance for these loans, in turn, reflected both supply and demand considerations.

On the supply side the most dominant single factor was the Alliance for Progress. In the 1960s the United States considered Chile to be an important alternative to Castroism and militarism in Latin America. Therefore, the United States made available substantial capital funds. As a result, net loans received by the central government expanded enormously in the early 1960s and remained at almost as high a level under the Frei regime.<sup>22</sup> After Allende was elected, however, that support from the United States dried up quickly, although it was partially replaced by new sources.<sup>23</sup>

Other fairly important supply factors were increased funds made available in response to major earthquakes in 1939 and 1960 and in support of the three stabilization efforts. The impact of these inflows, however, was much less than that of those mentioned in the previous paragraph.

Demand factors included, first of all, the need for repayment of previous debts. Owing to such repayments, for example, in 1956–58 outflows exceeded inflows despite foreign support for the program of liberalization and stabilization. A second factor was the attempt to facilitate price stabilization by financing government deficits abroad during the stabilization programs. In each case the plan was to utilize such measures only until the government deficit was eliminated, but that plan was not realized.

Together these supply and demand factors resulted in great command over foreign exchange from capital received by the government in the late 1940s and the 1960s. The net impact in the 1950s and early 1970s, however, was small or negative because of repayment requirements and the political views of potential donors.

#### 8.2.2 Net Capital and Gold Flows to the Monetary Sectors.

Net credits resulting from flows to and from the monetary sectors followed two patterns. Before 1965 the total and most of the components rose on the

average for each liberalization effort and fell in each more restrictive phase or subphase. During 1956–58 and 1959–61, for example, large increases in net loans from stabilization funds and in the use of IMF credit offset the greater deficits on the goods and services account (Table 8.1, lines A, 15.1, and 15.2). These credits were critical for these liberalization efforts.<sup>24</sup>

But because of such credits, together with ones in the nonmonetary sectors, foreign debts grew and foreign reserves shrank. During the 1956–58 phase total public-sector foreign debt increased 56 per cent to a level of \$392 million, and net foreign reserves held by the banking system fell from \$88.6 million to –\$13.4 million. During the 1959–61 period total public-sector foreign debt increased 101 per cent to a level of \$788 million, total Chilean debt in foreign currency<sup>25</sup> rose 82 per cent to a level of \$954 million, and net foreign-exchange reserves held by the banking system plummeted to –\$164.8 million. The foreign debt in 1961 was equal to 183 per cent of exports or 22 per cent of GDP. These liberalization attempts with an overvalued NER thus had a definite cost in terms of the longer-run command over foreign exchange.

For the 1965–70 Phase III years and the Phase II period thereafter, the previous pattern was in some important respects reversed. During 1965–70, foreign exchange for expanded imports was available from enlarged export revenues and capital inflows to the nonmonetary sectors. As a result, net credit from monetary sectors fell from \$24.9 million to –\$74.2 million. Net international reserves held by the banking system increased from \$238.7 million at the end of 1964 to over \$300 million at the end of 1970. Foreign debt, however, grew from \$1,896 million at the end of 1964 to over \$3,000 million at the end of 1970. At the end of the period this debt equaled about two and a half years of exports and over a quarter of annual GDP.

In 1971, the Allende government introduced a more restrictive regime. The enlarged deficit on current account and the sharp drop in credits from the nonmonetary sectors nevertheless implied that compensatory capital movements had to increase substantially. Between 1970 and 1971, in fact, they rose by over \$285 million. Additional credits from international organizations were very limited, in part because of United States pressure. The net international reserves of the banking system that had been accumulated in the previous phase were quickly depleted. In addition large debt payments were due, in part because of debt rescheduling in 1965. The combination of a decline in the world copper price, the inability to exploit the expanded copper capacity, the unavailability of capital from traditional sources, the inability to obtain sufficient capital from new sources (e.g., the Socialist nations), and the large foreign debt all led to a foreign-exchange crisis. As is described in subsection 4.3.3, at the end of 1971 Chile stopped payment on her foreign debt and asked for renegotiation of these obligations. In 1972 some relief was provided by the debtors, but the foreign-exchange shortage continued to pinch the economy. When the Allende

government fell, in September 1973, discussion about further relief was scheduled.

## NOTES

1. Given that the black market has been used more for nongoods than for goods transactions, the changes in the mean PLD-NER for that market provides further evidence of this pattern (line 1.1.3 in Table A.1).

2. Some of the variance originated in exports of services. For example, in 1972 exports of services to visitors rose substantially because of attractive bargains for tourists dealing in the black market and because UNCTAD III was held in Santiago in April.

3. The coefficient of variation (i.e., the ratio of the standard deviation to the mean) of the secular time trend for service imports for 1947-65 was 0.30; for service exports, it was 0.20. Among all import categories a higher ratio was reached only for transportation-related investment goods. Among all export categories, in contrast, higher ratios than those for service exports were experienced in all cases except for large-scale mining.

4. The estimates in Table A.2 suggest that the rate of growth of both exports and imports of services declined in the first year of liberalization attempts and that the former declined more than the latter. This result probably reflects the extensive dependence of service exports on total imports, which also fell significantly in the first year of liberalization efforts.

5. For the sample period the PLD-EER and PLD-NER for services are almost identical. For 1956-70 the former fell 46 per cent and the latter, 52 per cent (column 12 in Table 3.2 and column 2 in Table 5.1).

6. That is, quantitative restrictions beyond those which limited large-scale mining to a special NER for currency to pay for domestic inputs.

7. For the larger deviations to the Bacha-Taylor equilibrium values (simulation 2.1.3), however, the absolute value of the first-year deviation is larger for imports than for exports, although the discrepancy still is not as great as the partial-equilibrium estimate might suggest.

8. The relatively large elasticities, however, may reflect in part the fact that this variable is the difference between two flows. See note a to Table A.11.

9. By the third year, however, the response to a one-time change reverses in sign.

10. They were positive, in fact, in all but three years (1954, 1955, and 1969) when copper-export booms were unusually important.

11. The data line of 1.2.6.5 of Table A.1 suggest that Chile also was a substantial debtor nation during the decades before the Great Depression. In most years external public foreign debt exceeded ordinary government income or total export value.

Data consistent with those in Table 8.1 are not available for the 1930s. The piecemeal evidence extant, however, indicates that capital movements plummeted to almost nothing in the early 1930s and recovered slowly thereafter. Baerresen [1966:2], for example, reports that the foreign investment inflow was \$232 million in 1930, \$16 million in 1931, and effectively zero in 1932. Marshall [1957:51] claims that foreign loans contracted to the government in the same three years were \$85 million, \$3 million, and zero. According to Senado, Oficina de Informaciones [1971:48, 54], finally, in no year in the 1931-46 period did direct gross investment in large-scale mining (the dominant destination for foreign investment in the previous two decades) exceed amortization charges.

12. The only exception was in the 1965-70 liberalization phase, when an increase did not occur until the second year of the phase.

13. Somewhat earlier, the introduction of more favorable NERs for the domestic cost of investment in large-scale mining in 1948 and 1950 also coincided with substantial expansion in capacity at Chuquicamata, Chile's largest copper mine. However, Mikesell [1971:370-371] maintains that this investment would have occurred without this policy change because Anaconda long had been concerned about maintaining its 13-14 per cent long-run share of world copper production—and 70 per cent of Anaconda's output came from its Chilean mine.

14. In addition to that direct impact, of course, direct investment caused other changes in the balance of payments indirectly through effects on imports and exports.

15. This paragraph is focused on foreign investments other than in large-scale mining (on the latter, see subsection 7.1.2.3, above). Szulc [1970:2] reports that such investments from the United States totaled over \$400 million at the time of Allende's election. According to Picks' [1965:121], six years earlier direct investments of other foreigners totaled more than \$300 million.

16. In 1967 ITT agreed to sell up to 49 per cent of its common stock in its Chilean Telephone subsidiary to Chileans and to the Chilean government with the added stipulation that Chile could purchase the entire system in 1980. By early 1971, 30 per cent control of the subsidiary lay in Chilean hands, but the government wished to include this operation in the state area of control; long negotiations for nationalization were therefore initiated. On September 15, 1971, ITT was informed that it would be nationalized, but discussions continued over the terms of compensation for what ITT claimed was a \$153 million investment. In March 1972 relations between ITT and the Chilean government were severely strained by the charge of Jack Anderson in his syndicated column that ITT had been attempting to prevent the inauguration of President-elect Allende in the fall of 1970. As one result ITT was not compensated for its former Chilean holdings. For details as reported in United States newspapers, see Anderson [1972a, 1972b], de Onis [1971d, 1972e], Hammer [1972], Jensen [1971], *New York Times* [1972a, 1972b], Philadelphia *Evening Bulletin* [1972], Szulc [1972], and Welles [1972b].

17. Regular patterns of a type did occur, however, within phases. In every case (except for 1956) during the first year of a phase net other long-term capital inflows fell. In every phase they also rose in the last year.

18. The other inflows were relatively concentrated near the end of the period, thereby increasing this ratio, *ceteris paribus*.

19. Errors and omissions may consist primarily of unrecorded short-term movements. Net errors and omissions plus recorded net short-term capital movements rose in 1956-58, but not in 1965-69.

20. For example, according to a speech of July 1972 by Minister of Finance Orlando Millas, short-term credit lines from United States banks had been reduced from \$220 million to \$32 million, a decline which had been only partially offset by increased short-term credit from Japan and from European banks. The Chilean government claimed that this drop reflected implementation of a policy of financial blockade imposed by the United States. Anibal Palma, the Chilean Under Secretary of Foreign Affairs, so described United States actions and pressures on the IBRD and IDB in his address of April 14, 1972, before the General Assembly of the Organization of American States in Washington, as did Allende in his address to UNCTAD III in Santiago the previous day and also in his subsequent 1972 May Day address. Also see Welles [1972a].

21. Picks' [1955:59; 1965:121; and 1970:129] gives evidence of quite large capital movements which he speculates occurred in substantial part through black markets. The

PLD-NER for this market also reflects strong phase associations (line 1.1.3 of Table A.1).

22. Contrary to widespread impressions, United States [1960-70] reports that mean annual aid flows from the United States did not increase during the Frei period, but instead dropped by 20 per cent as compared to the previous phase. The average terms of such loans also became somewhat less favorable.

23. The United States long had used credits and loans to attempt to shape Chilean policies. For example, Cohen [1960:15] suggests that credits from the Export-Import Bank and the Institute of Inter-American Affairs were used by the United States to put pressure on Chile to break relations with Germany during the Second World War. Also Moran [1970:58-59, 65-69] relates the following events: Early in his term President Gonzalez sent the Pedregal Mission to Washington to renegotiate the Chilean foreign debt and to arrange new credits. The mission met with less than complete success, however, and was advised that Chile should treat the United States-owned large mining companies better. Subsequently, in 1948, after the passage of the Law for the Defense of Democracy which banned the Chilean Communist party (three members of which had been in the first cabinet of President Gonzalez, a situation about which the United States had expressed open concern), Export-Import Bank credits were increased substantially. As a result net loans to the central government for 1947-51 also rose to a level that was exceeded only in the 1960s.

24. It is interesting to note that the large increase in the use of these credits came not in the first year of the liberalization attempt, but thereafter. This suggests that they were not used to counter initial speculation about the seriousness of the liberalization attempt. Instead, they prolonged the maintenance of the overvalued NERs.

25. This figure does not include direct private credits or deferred payment import credits because data are not available for these items.