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FINAL REPORT

El Salvador Damage Assessment:
The Economy and Private Sector

Contract No. PDC-1096-I-00-5051-00
Work Order No. 61

DEVELOPMENT ASSOCIATES, INC.

MANAGEMENT AND GOVERNMENTAL CONSULTANTS

2924 COLUMBIA PIKE • ARLINGTON, VIRGINIA 22204

PN-ABB-239

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Submitted To:

USAID/El Salvador

Submitted By:

Parke Massey, Team Leader
Alain Thery
Jorge Bustamante

DEVELOPMENT ASSOCIATES, INC.
2924 Columbia Pike
Arlington, Virginia 22204
(703) 979-0100

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I. INTRODUCTION

A. Purpose of Report

This report was prepared in accordance with Indefinite Quantity Contract No. PDC-1096-I-00-5051-00, Work Order No. 61. The report provides a quantitative assessment of the direct and indirect damage to the private sector of that economy caused by guerrilla activity and civil violence during the period 1979 to 1985. A similar report on Damages to the Public Services Sector was prepared by the same contractor in March and April of 1986. This report builds on the previous study.

In accordance with the statement of work for this work order, the first part of the assessment has established a cost to the economy in terms of the decline, or lack of growth, of the Gross Domestic Product of El Salvador for the civil war years. This was done through the development of scenarios showing what the behavior of macro-economic variables actually was during the violent years and what they might have been had no civil war occurred and normal economic development taken place. While the loss of Gross Domestic Product was the prime variable to be established, this report also establishes what should have been the behavior of other key macro-economic variables in the no-war scenario. The report then fleshes out the bare-bones macro-economic analyses with analyses of major economic sectors, especially the most important, agriculture and manufacturing. A section of the report is devoted entirely to the Eastern region of El Salvador, the most hard-hit area. There are a series of case studies designed to illustrate the impact of civil violence on individual firms and persons. These studies also illustrate how individual entrepreneurs have taken investment and operating decisions in war time.

The report is essentially descriptive but proscriptive recommendations for the recovery of the economy or for the re-building of economic sectors have been made where they seemed particularly appropriate or demanded.

B. Historical Setting

For the purposes of this report the civil violence in El Salvador is considered to have started late in 1979 or early in 1980. Violence, political murders and kidnappings, rural assaults, industrial and public sabotage all existed, and were even prevalent in the period of social and political upheaval that characterized the decade, 1969-1979, that followed the "football" war between Honduras and El Salvador. The roots of political and social disorder go back even further, well into the history of Central America and El Salvador in the XIXth Century. But the present crisis of guerrilla war and civil violence is considered to have started about six years ago.

The war has coincided with two other major developments of the 1980's. In January 1980 a Revolutionary Junta assumed power and various currents of a liberal, reform minded, non-authoritarian political movement have dominated the political scene since. There were three major acts of economic and social reform undertaken in 1980. These were: (a) the Agrarian Reform which sought to take land from large landholders (those owning more than 1,235 acres) and transfer it to peasant cooperatives; (b) the nationalization of coffee and sugar marketing through the creation of INCAFE, and INAZUCAR state marketing monopolies; and (c) the nationalization of the nation's banking system under the day-to-day operational control of the Central Reserve Bank.

During this period international economic developments were impacting on El Salvador. The Central American Common Market was losing its effectiveness as a stimulus to complementary national industrial developments, the world prices of basic products such as coffee, cotton, sugar and other agricultural items were dropping and the world price of petroleum was high.

During the period 1980 to 1985, the economy of El Salvador suffered. It is still suffering, but not so badly now; it has suffered more than its neighbors or other developing nations of similar size and nature. Much of this suffering has been the result of civil war violence. The principal purpose of this report is to separate the damage to the nation's economy that is attributable to the war and that which resulted from world economic conditions or from an unsettling period of social reform.

The development of the war itself has affected the economy differently over the years. The focus of revolutionary activity during most of 1980 was urban. In 1981, the guerrilla forces shifted to a rural strategy and went on the offensive. They very nearly won but by 1984 the country's military forces were gaining the upper hand. It now (mid-1986) appears that a triumphant guerrilla takeover of the country is impossible. Nevertheless, the guerrilla and revolutionary forces remain capable of doing continuing and extensive economic damage.

To understand the psychology of the urban or rural investor, it must be noted that over most of this period, but especially 1981 to 1984, a parallel, clandestine war of irregular, extremist forces of left and right was going on and taking thousands of lives, including Salvadorans and foreigners, and including U.S. citizens, private and official.

Some of the statistics of this report will reflect the cycle of war and violence here described.

II. EXECUTIVE SUMMARY

This report is based on several observations and assumptions including: (a) that the output of the Salvadoran economy has declined drastically in real terms during the six years, 1980 through 1985 and, (b) that a decline in growth, no growth, or negative growth was to be expected during those years as a result of international economic conditions and the strains of the period of social and economic reform through which El Salvador was passing. This was also a period of civil war and guerrilla violence and a key assumption has been that the negative impact on the economy of this violence can be separately identified and quantified. The inadequacy of economic data, both as to timeliness and detail, and the absence of an economic model of El Salvador that adequately describes important economic relationships have not fully invalidated this assumption.

A. Macro-economic Assessment

In order to establish the cost of the war in real terms, i.e., losses of gross domestic product measured in constant Salvadorean colones, a model of the Salvadoran economy was developed consisting of seven equations showing the relationships of imports, traditional and non-traditional exports, private consumption, private investment, money supply, inflation, government expenditures and gross domestic product. From the model was produced the classic identity: Gross Domestic Product is the sum of private consumption plus private investment plus government spending plus export minus imports. Applying war/no war variables to the model yielded the following result. From 1980 to 1985 the civil war and its related violence has cost the Salvadoran economy real output of goods and services valued at approximately 2.1 billion of 1970 colones. In inflated colones of the 1981-1985 period, this amounted to lost production valued at about 7.1 billion colones. Depending on the exchange rate considered most appropriate for the conversion this translates into a lost production during the war years worth from U.S. $1.4 to $1.8 billion.

Some of the data produced by the economic analysis was confirmed by interviews with individual entrepreneurs in the course of micro-economic or firm-level studies. Failure to maintain or expand output at the firm level was usually attributed to a lack of investor confidence and a reduction in real private investment in infrastructure maintenance or replacement. This matches the macro-economic finding that output is closely correlated to the private investment variable. As a matter of policy, future restoration of economic growth will be dependent upon a restoration of investor confidence.

Other macro-economic indications have equally important policy implications. For example, private consumption is down, the rate of inflation is up and agro-economic analysis shows food production lagging behind population growth. This means that the poor are getting poorer and hungrier. Similarly, the fact that government expenditures have remained fairly constant in real terms but shifted from health, education and infrastructure bodes ill for the future in terms of potential economic growth and social change.

B. Economic Sectors

Agriculture in El Salvador is usually divided into two sub-sectors: production for export and production for domestic consumption. The former has consisted of coffee, cotton and sugar, the latter of corn, rice, beans and sorghum. Coffee production during the war years has tended downward and may be going to decline further, but only in the Eastern Region of the country can the decline be attributed mostly to the war. Coffee production is a function of area planted to coffee trees and their maintenance and replacement. Coffee growers state that the failure to continue investment in maintenance and replacement is far less a consequence of wartime conditions than it is a response to governmental policies in pricing, marketing and land tenure and the uncertainties associated with those policies. Cotton growing is no longer an economically viable activity; costs are too high, world prices too low. There is no indication that the guerrilla war has seriously affected sugar production or investment decisions of sugar growers.

In marked contrast to the export crop picture, the production, or lack of production, of basic food and feed crops is directly linked to the war. Soldiers and guerrillas are recruited from the peasant population; thousands of peasant families have been displaced; large areas that once produced food crops are now isolated. Food production (rice, corn, beans, poultry, and meats) is at about the pre-war level. Population growth is reportedly holding at historic levels of 2.9% pe annum but may have delcined. In any post-war or post-violence situation a first agricultural priority of the government should be the restoration and expansion of food production.

El Salvador's traditional manufacturing sector -- textiles, plastics, steel products, food, beverages, pharmaceuticals, etc. -- is not producing at full output potential. Although virtually all manufacturing has suffered production losses from interruptions in electric power supply, the single most important reason cited for lower production, actual or potential, has been the lack of investor confidence. This has been most serious in the case of the assembly industry which has virtually disappeared. A first priority of governmental industrial policy must be the restoration of investor confidence. This will be a difficult task since the private sector considers the government, and especially the nationalized system, as inefficient, corrupt and antagonistic.

The transport sector is in a shambles. The rail system is not an effective mover of goods or people. The bus system, urban and inter-urban, has suffered greatly from guerrilla attacks and has limited resources, or access to resources, for rebuilding its fleet. The truck transport of goods has suffered from both direct attacks on the truck fleet (mostly small individual entrepreneurs) and from damage to highways and bridges.

This report says little about commerce per se other than to document the decline in exports and imports and to illustrate how commerce has been affected in the Eastern Region. However, the drop in commercial activity has been very important, about 37%, but largely as a reflection of difficulties in other sectors.

C. Damage to the Eastern Region

The Eastern or Fourth Region of El Salvador lies to the East of the Lempa River which cuts across the country from North to South. This region, in terms of agriculture, commerce, small industry, displacement of persons, destruction of public infrastructure, murders and maimings, has suffered more heavily from the war than all the rest of El Salvador. The area has been guerrilla infested or dominated for years. On the other hand, as conditions are improving, as the government is asserting its ability to re-establish order and security, the entrepreneurs of this area seem most interested in rebuilding for the future. The Government of El Salvador must be prepared to respond effectively to this local initiative.

D. Summary of Recommendations

Scattered throughout this report are suggestions and recommendations that are summarized here. They are all, consistent with the nature of this report, related to the problem of restoring private investor and private entrepreneur confidence in the political and economic future of the country.

1. Government spokesmen should avoid rhetoric that tends to strengthen private sector opinion that the interests of the sector and those of the government are divergent.

2. Confidence must be restored in the competence, integrity and fairness of the banking system, especially in the foreign exchange activities of the Central Bank.

3. The state marketing monopolies, INCAFE and INAZUCAR, should publish annual, independently audited financial reports.

4. Small entrepreneurs should have easy access to credit (but not cheap credit) for light industry, small commercial enterprises, low cost housing and service activities that can provide employment and opportunity for displaced persons.

5. As isolated areas are re-opened to returning peasants, food production should be stimulated by credit, market, land tenure and agricultural extension policies.

6. Credit and insurance should be made available to bus and truck transport investors, especially small entrepreneurs and cooperative associations thereof.

7. A special re-building fund should be made available to the Eastern Region. It should be locally managed with a minimum of state involvement.

III. MACROECONOMIC ASSESSMENT

Since 1979, El Salvador has been in an economic depression: real gross domestic product declined sharply between 1979 and 1982 and in the last three years the recuperation has been timid at best. As a result, the level of output in constant colones was lower in 1985 than in 1974. The country has lost 11 years of growth while its population kept on increasing at a rate of about 2.9% per year. Gross domestic product per capita is down to pre-1970 levels.

Several factors contributed to this decline. The international price of the country's main export, coffee, started to tumble from its high levels in the end of the 1970s. The Central American Common Market experienced difficulties and inter-regional trade decreased. Internally, the political and social tensions which began to escalate in 1977 erupted in 1979 into guerrilla warfare which has continued with varying degrees of intensity.

To assess the impact of the war on the economy, a simple economic model of El Salvador has been built. Details about the estimation of key equations are presented in an appendix. This model estimated on the period 1968-1983 differentiates between the pre-war period and the last six years of civil violence. Using this structure, a simulation of the hypothetical case of no war has been run by projecting the equations for the pre-war period through 1985 under a certain number of assumptions on exogenous variables such as external prices, external flows of funds and government spending.

A. Assumptions on Exogenous Variables

1. External Prices

El Salvador is clearly a geographically and economically small nation. Although it is a significant coffee producer, the volume of its production cannot affect world prices for this product. Its exports of other products also face a flat demand curve and their price is exogenously determined.

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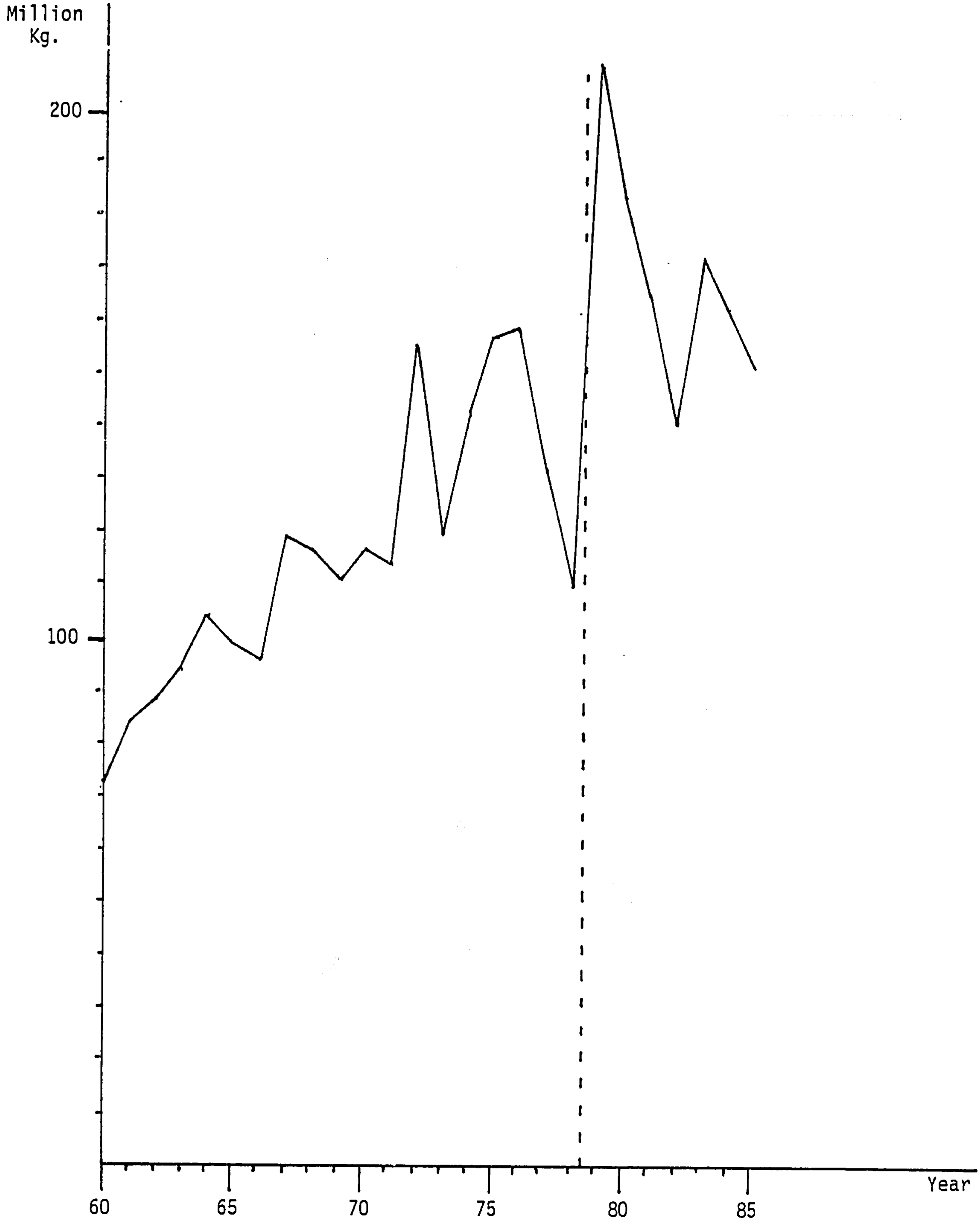
EL SALVADOR: VOLUME OF COFFEE EXPORTS



Source: BCRES

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Its demand for imports faces a flat supply curve and the price of the imports is exogenously determined for the country.

Therefore, for the purpose of the simulation, actual prices for imports and exports will be used: they obviously cannot have been affected by the internal situation of the country.

Traditionally exports have been estimated using coffee prices and volume exported. It has been impossible to estimate an equation for exports of coffee in volume. These exports could have been affected by the war. However, a brief study of Salvadoran coffee exports show that in five out of seven years of civil violence, coffee exports were higher than the previous peak of 1976. These exports were higher than in 1976 by 31.4% in 1979, 15.3% in 1980, 8.1% in 1983. It would then seem that if coffee exports were affected by the war, the loss must have been only marginal. This conclusion was confirmed by sources in the private coffee industry.

It seems then appropriate to use actual volume exported to project revenues from traditional exports.

2. The External Flows of Funds

External flows of funds are classified according to three sources: private, banks, and official institutions.

a. The problem with the data and the adjustment. As published by the Central Reserve Bank of El Salvador, the data on these flows show massive outflows of official capital in the years 1980-1983 which are not explainable in terms of the time structure of debt amortization. These years correspond to a period of private capital flight out of El Salvador.

   A brief study of the percentage share of the item "errors and omissions" in total inflows and outflows in the Balance of Payments of El Salvador show errors substantially higher than average for 1980-1983. An increase in the error item in Balance of Payments data is often an indicator of capital flight.

ERRORS IN THE BALANCE OF PAYMENTS

	Percent of Inflows	Percent of Outflows
68	6.8	--
69	--	5.5
1970	1.4	--
71	--	1.8
72	0.5	--
73	0.3	--
74	0.1	--
1975	1.0	--
76	--	2.4
77	--	2.1
78	--	3.6
79	--	4.0
1980	--	13.4
81	--	6.4
82	--	5.5
83	3.6	--
84	NA	NA
1985	NA	NA

Source: BCRES

At the same time, the share of official capital outflows in total capital outflows jumped to 51.1% in 1980 and remained substantially over 30% until 1983.

SHARE OF OFFICIAL CAPITAL OUTFLOW IN TOTAL CAPITAL OUTFLOWS

	Published Official Capital Outflows (Millions of Colones)	Percent of Total Capital Outflows (%)
68	7	7
69	15	10.5
1970	13	8.0
71	8	3.9
72	12	4.0
73	13	3.7
74	15	1.6
1975	52	8.1
76	21	3.0
77	130	9.2
78	36	2.0
79	53	2.3
1980	805	51.1
81	352	44.8
82	446	47.0
83	268	33.3
84	NA	NA
1985	NA	NA

Source: BCRES

It appears that the "errors and omissions" item has been aggregated to the official outflows.

To provide a more realistic picture of capital outflows it has been decided to reconstruct a table of capital outflows for these years by reallocating outflows between official outflows and private outflows using simple estimates. The resulting corrected table is displayed in Table III-1. The actual capital balance remains unchanged.

Table III-1

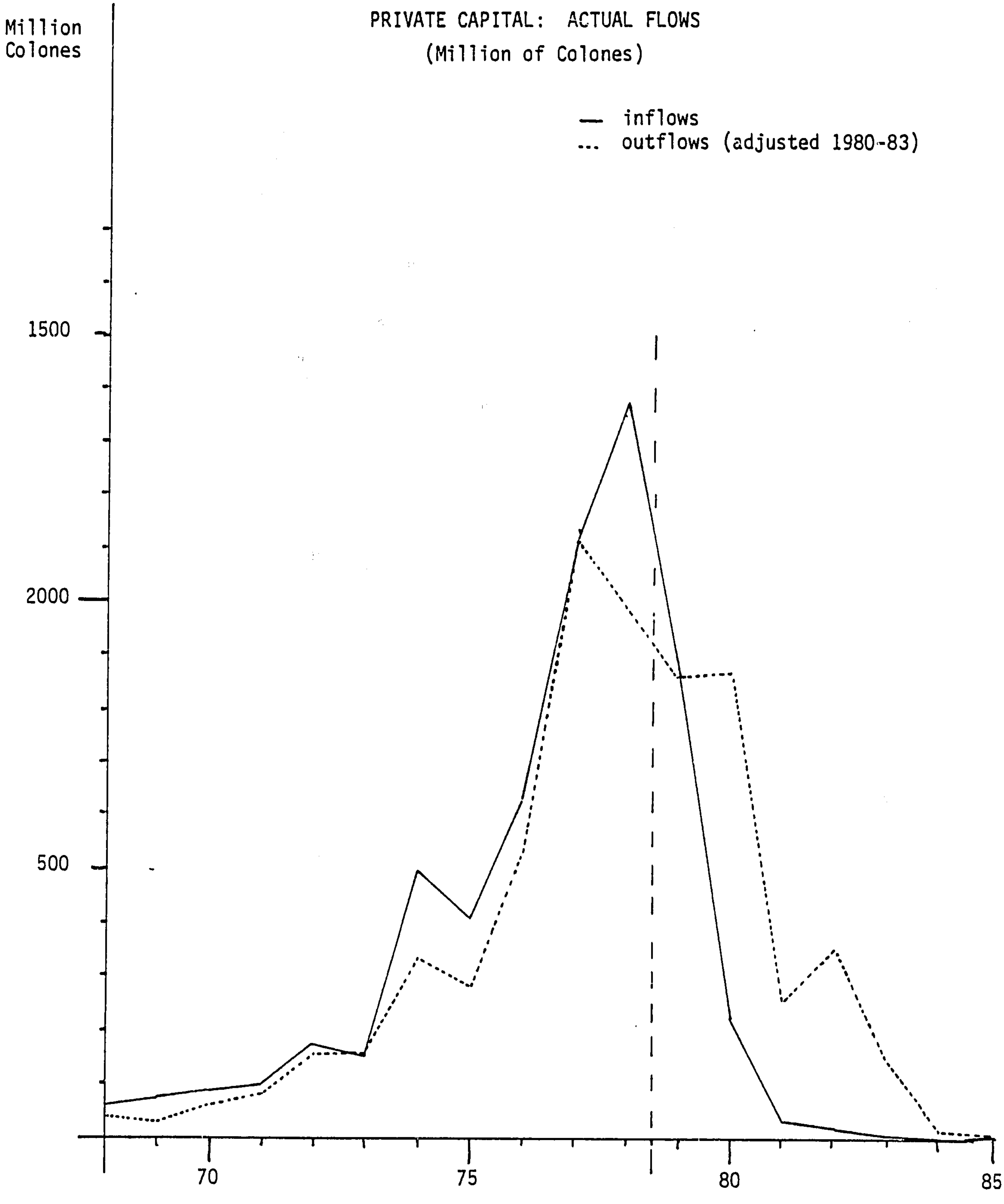
EL SALVADOR: CAPITAL BALANCE
INFLOWS AND OUTFLOWS ADJUSTED TO REFLECT CAPITAL FLIGHT

	Private Capital		Banking Official		Official Capital		Capital
	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow	Balance
1979	865	863	1248	1318	94	53	-27
1980	216	875 (A)	1091	551	307	150 (A)	38
1981	30	260 (A)	525	375	448	150 (A)	218
1982	6	362 (A)	511	436	633	150 (A)	202
1983	2	152 (A)	516	502	281	150 (A)	-5
1984	1.5	16.9	480	610	117	97	-124
1985	0.3	15.0	733	736	74.7	124	-67

b. Private capital flows. Private capital flows have experienced major changes after 1979. From basically positive in the pre-1979 period, the private capital balance turned negative. This reversal was caused by a dramatic drop in inflows as foreign capital looked for and found less risky opportunities and substantial outflows as Salvadorans took their wealth out of the country.

For the purpose of reconstructing a hypothetical situation of the absence of civil strife, it is necessary to construct a hypothetical table of capital inflows and outflows. Forecasting international capital flows is notoriously difficult since, along with economic variables, subjective

PRIVATE CAPITAL: ACTUAL FLOWS
(Million of Colones)



Source: BCRES

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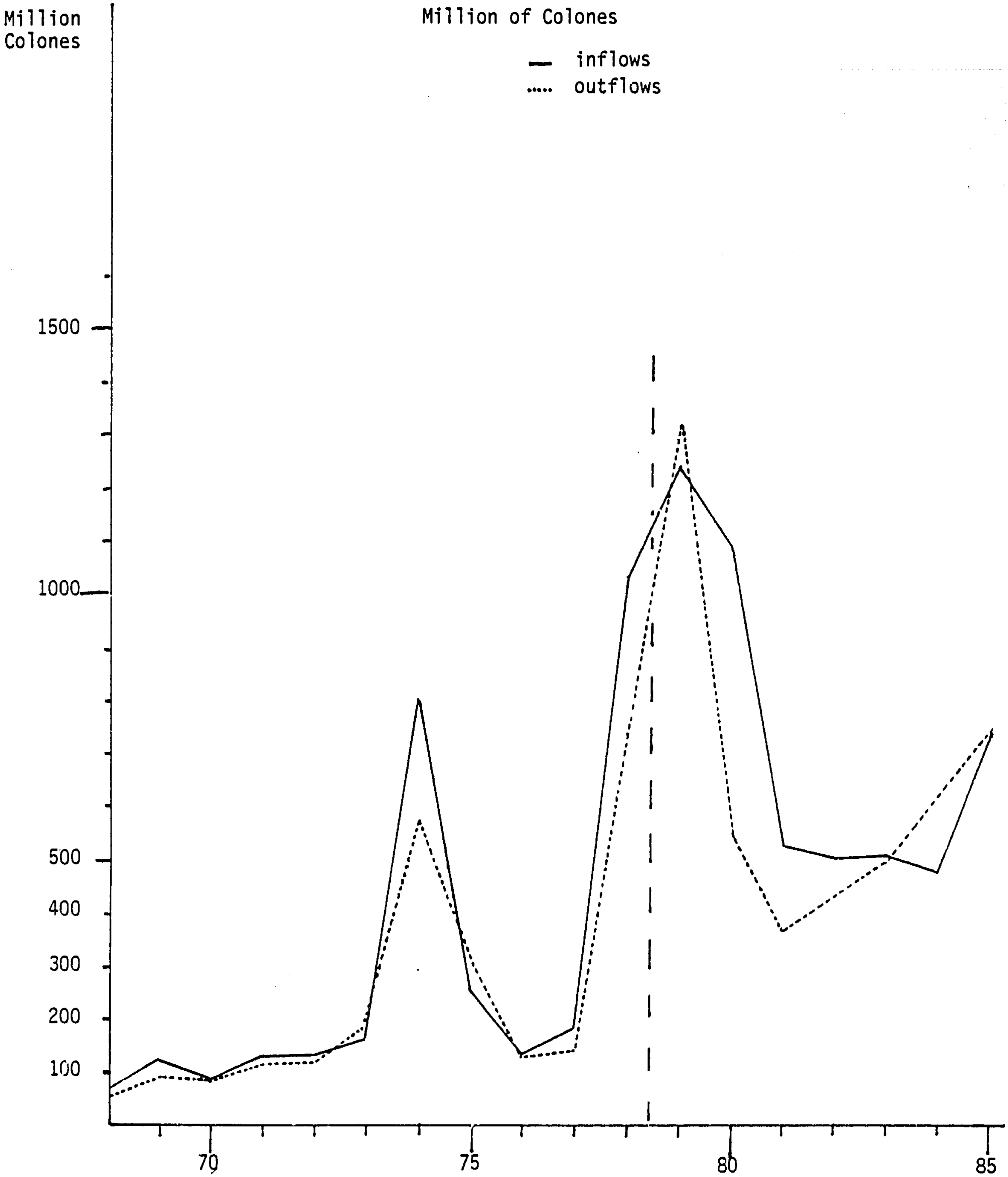
notions such as regional risk perceptions play a major role. In this case an ad hoc method has been used incorpora.ing the trend in the pre-war period and adjusting for the actual world situation. More precisely the data from 1968 to 1976 was projected through 1985: the years 1977 and 1978 were eliminated from the projection as they would have yielded unrealistically-high projected inflows. At the same time a gross measure of the frequency distribution of the private capital balance from 1968 to 1978 was also used to provide more information.

It has been assumed that: (1) the interest rates in the U.S. in the early 1980s and the generalized recession in industrialized countries at the beginning of the decade would have reduced the capital flows to El Salvador; (2) after 1982, a perception of increased regional risk based on the situation of most Latin American economies in the wake of the Mexican debt crisis would have contributed to a reduction in capital flows to El Salvador; and (3) in the absence of war, Salvadorans would have kept their wealth within the country.

Adjustments to the projections were made as the basis of these assumptions.

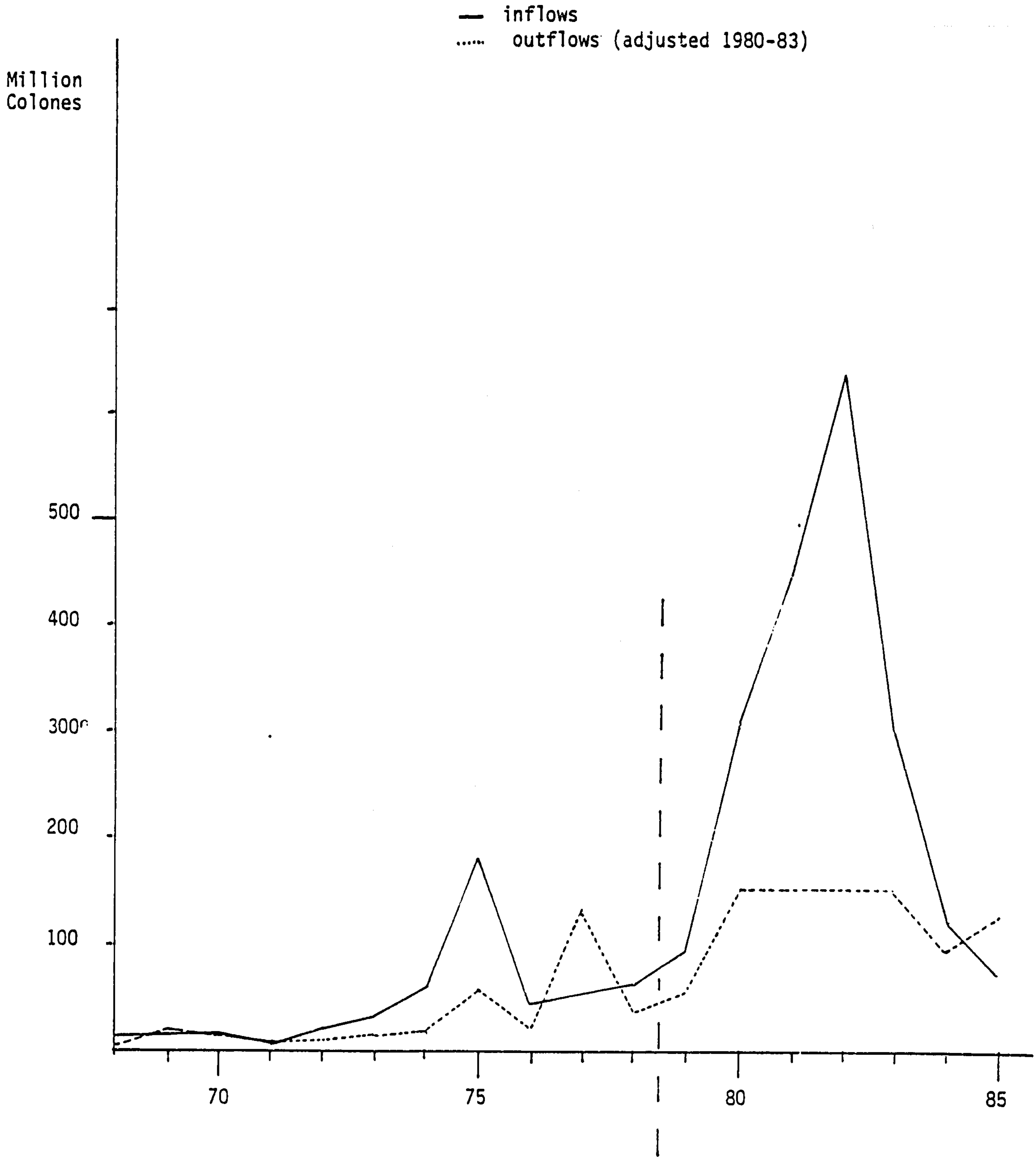
Private Capital Flows (No War)		Millions of Colones	
Year	Inflows	Outflows	Balance
1979	1099	878	220
1980	883	706	177
1981	834	667	167
1982	795	636	159
1983	765	612	153
1984	741	593	148
1985	722	578	144

BANK CAPITAL: ACTUAL FLOWS
Million of Colones



Source: BCRES

OFFICIAL CAPITAL: ACTUAL FLOWS
Million of Colones



Source: BCRES

c. Bank capital. Banking inflows and outflows maintained a positive balance until 1983 and do not seem to have been affected by the war. In fact these flows seem to have followed the general pattern of banking flows to and from less developed countries which occurred during the period in the world at large, and in Latin America in particular.

The debt crisis seems to have had more influence on banking flows than the war in El Salvador. The role of close allies of the country might have cancelled whatever negative effects the political situation might have had in the banks' decision making. It seems realistic to assume that bank capital flows would have been at approximately the actual levels in the case of no war.

d. Official capital. Once the inflows and outflows of official capital had been adjusted as described in a previous section the major change in official capital flows occurred in inflows.

The method used to project private capital flows was also used here.

In the case of outflows, it was impossible to determine what share of outflows were amortizations for increased war-related debt. The projection of outflows is strictly based on the data from the 1968-1978 period.

OFFICIAL CAPITAL FLOWS: NO WAR
(Millions of Colones)

Year	Inflows	Outflows	Balance
1979	63	37	26
1980	57	36	21
1981	57	36	21
1982	56	35	21
1983	55	35	20
1984	54	35	19
1985	53	34	19

Once these hypothetical capital flows were calculated, the resulting overall capital balance was checked against the actual pre-war capital balance.

As they stand, these figures for hypothetical flows do not appear unrealistic in the absence of war.

3. Non-visibles

This category includes insurances and reinsurances, commissions, governmental services, private services, transfers and donations, interests, and freights.

As a category, non-visibles represent a relatively small fraction of the current account debits and credits. A detailed analysis of each item did not seem warranted. The war did not have any discernible effects on most items with the exception of transfers and donations, and interest payments.

The inflows for transfers and donations increased substantially due to: (1) the payments to relatives made by Salvadorans who had left the country; and (2) donations and grants from a number of sources which can be directly attributed to relief efforts for the war civilian damages. The outflows for interest payments increased due to the larger debt accumulated by the country; however, there may be some questions as to whether, particularly in the early years of the war, these payments are war-related.

As a whole, the balance on non-visibles has generally been negative over the period 1968-1978. But the absolute outflow through this component of the Balance of Payment increased substantially from 1978 to 1982. Using data from 1968 to 1977, the values for 1979 to 1985 were projected: the year 1978 was eliminated from the projection for being a peak in outflows. The resulting data was then corrected for estimated increased interest payments related to debt accumulated in 1977-1978.

NON-VISIBLES BALANCE: NO WAR Millions of Colones	
1979	-150
1980	-120
1981	-100
1982	-75
1983	-95
1984	-85
1985	-80

4. Government Expenditures

Government spending in current colones had been expected to increase suddenly in the first or second year of the war period. No such jump can be found. The trend in nominal government spending which started in 1975 is kept up all through 1982 with an actual drop in spending in 1983.

If government spending is considered in real terms, i.e., deflated by the price index, the war years are remarkable for a actual decrease in real government spending from the peak of 1978.

This unexpected situation is due to two factors:

(1) A shift in spending between functions of the government. Increased outlays for military salaries and current expenditures (which are included in the category administrative and general services) were matched by decreases in social outlays such as health and education. The decrease in the share of expenditures for "Social Development" in the central government budget which was evident through the 1970s accelerated between 1980 and 1985. The only increased category of expenditure, other than "general and administrative services," has been "economic and financial services" which includes interest payments for the increased public debt; and

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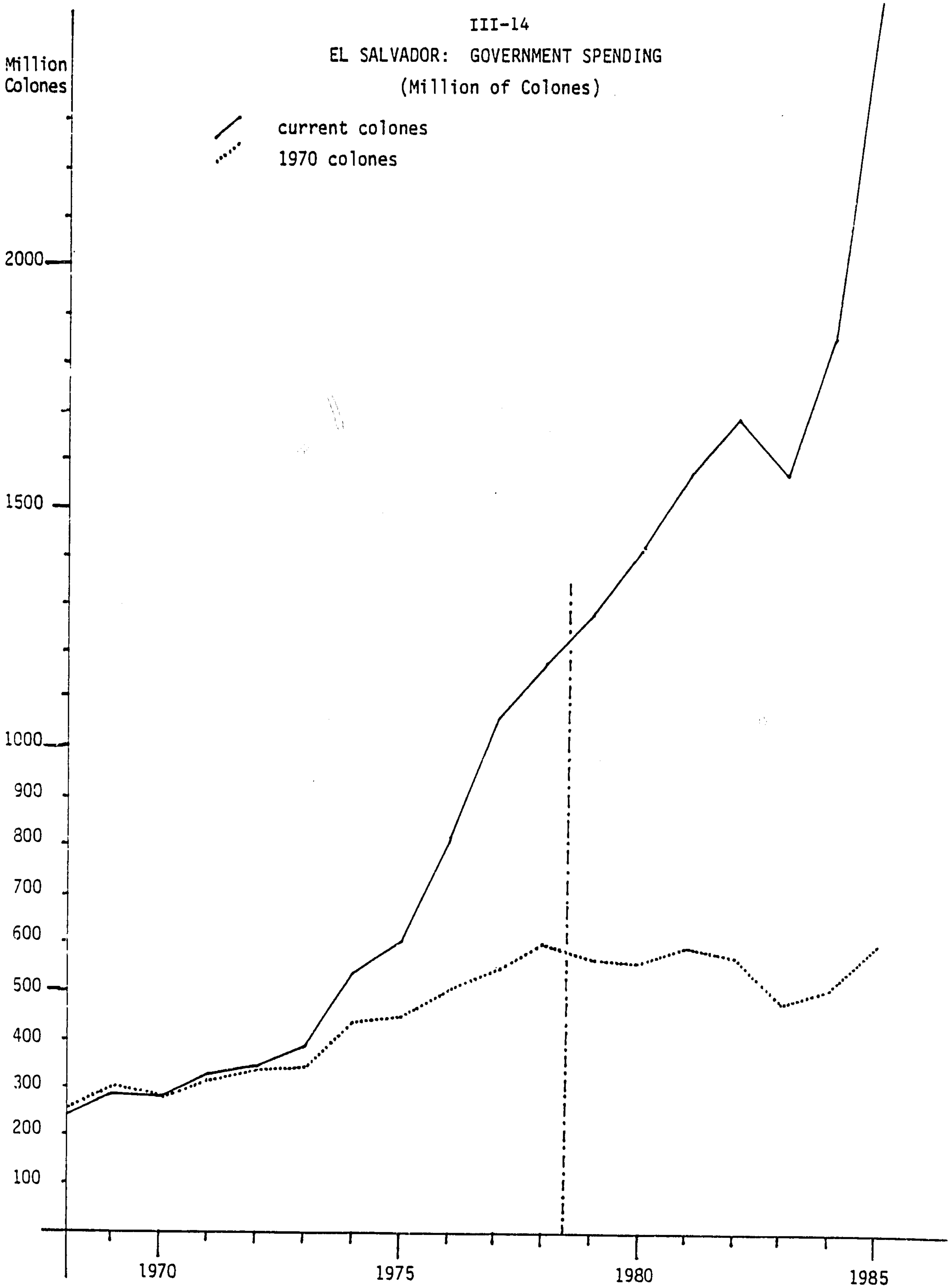
EL SALVADOR: GOVERNMENT SPENDING

(Million of Colones)



Source: BCRES

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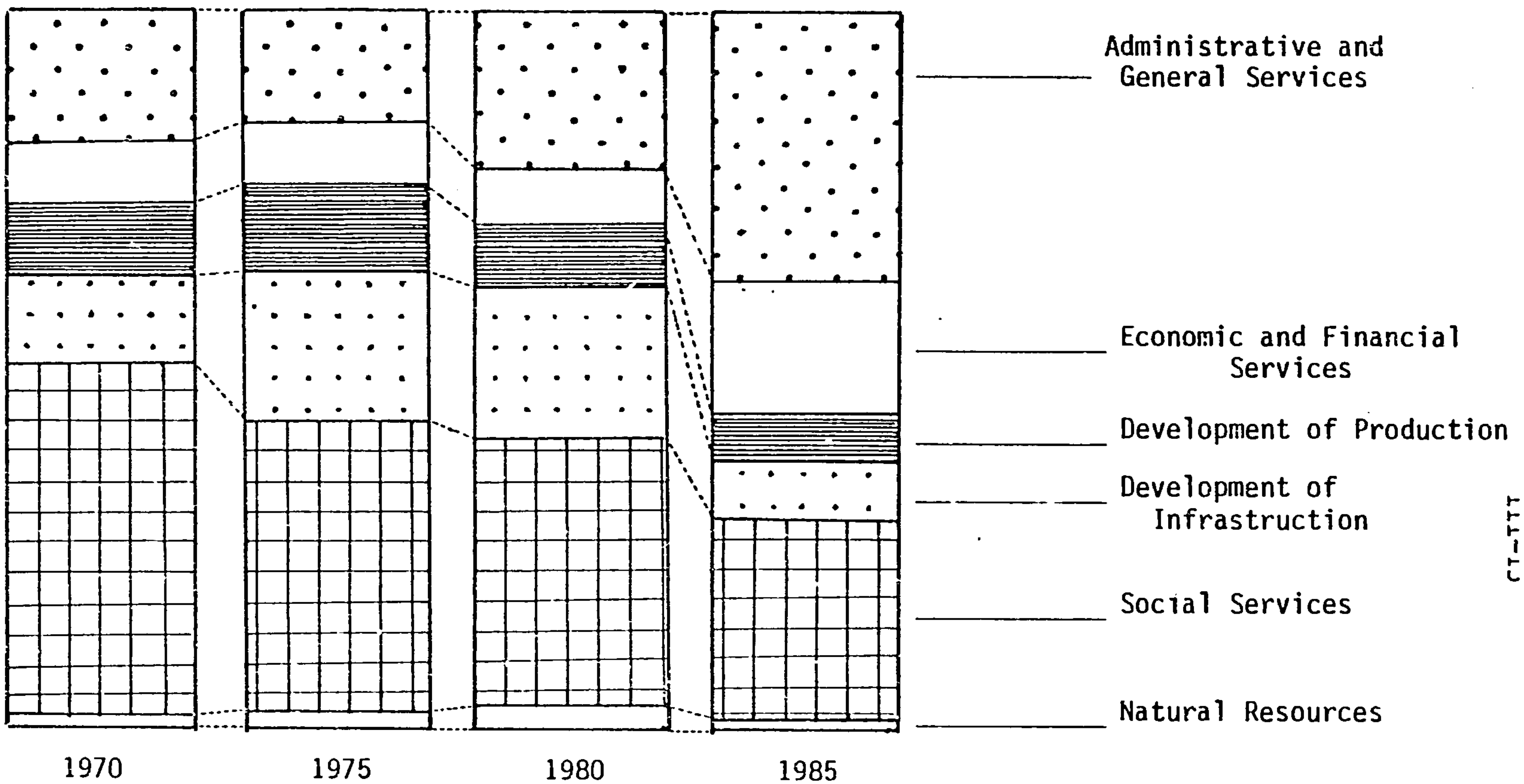
EL SALVADOR: COMPOSITION OF GOVERNMENT EXPENDITURES

By Functions

(Percentages)



Source: o FUSADES
o Ministerio de Hacienda

(2) Military expenditures on hardware do not appear to be registered in the government accounts either for reasons of national security or for being fully financed through external grants and loans.

This apparently conservative fiscal behavior was unexpected for a country facing an internal armed rebellion. It is difficult to predict what government expenditures would have been in the absence of war. But if a conservative fiscal behavior prevailed in the midst of such an extreme political situation, there are reasons to believe it would have prevailed in a more peaceful climate. For these reasons it appeared reasonable to maintain real government expenditures at actual levels for the purpose of the simulation through the period 1979-1985.

B. The Impact of the War

To assess the impact of the war on the economy of El Salvador, it has been decided to forecast the behavior of the economy in the absence of conflict and compare the results with the actual situation of the country.

1. The Simulation of the Absence of the War

The simulation of the absence of the war has been achieved using an estimated model of the Salvadoran economy which is presented on a following page. The estimation of the model is discussed in the an appendix to this report.

The model split the period 1968-1985 into two subperiods: pre-1979 to which corresponds the variable DUM1 and post-1979 to which corresponds the variable DUM2. The variable DUM2 clearly embodies some of the effects of the war. Another war-related variable has been used: WAR is a series of the number of attacks against public utility and transport companies in every year from 1979 to 1985.

For the purpose of the simulation, these variables DUM2 and WAR were assigned the value 0 (zero). The model then would forecast on the basis of a structure which eliminates the effect of the war.

LIST OF VARIABLES IN THE MODEL

DNFAUS	Change in Net Foreign Assets in US$, i.e., Balance of Payments
DUM1, DUM2	Dummy variables DUM1: pre-war period DUM2: war period

	1968 to 1978	1979 to 1985
DUM1	1	0
DUM2	0	1

EXPORT	Value of exports in colones
GASG	Government expenditures in current colones
GIMI	Index of the unit value of imports base 1970=1
IMPORT	Value of imports in colones
INDEF	Gross Domestic Product Price Deflator base 1970=1
INDCAF	Index of price of coffee base 1970=1
KBAL	Capital account balance
KGCAF	Volume of coffee exports in kilograms
M2	Money supply: currency in circulation, checking account deposits and time deposits
NEOEXP	Value of non-traditional exports
NFAUS	Net foreign assets in U.S. dollars
OTEXI	Index of unit value of non-traditional exports
PRCAF	International price of coffee in colones per kilogram
RCONSP	Real private consumption
RGDP	Real gross domestic product
RIKPR	Real private investment
RIM	Real level of imports
RRATE	Real interest rate
TRADEXP	Value of traditional exports
WAR	Number of attacks against public utility and transport companies

MODEL OF THE SALVADORAN ECONOMY

ESTIMATED EQUATIONS

(1) RIM = -229.539 DUM1 - 280.415 DUM2 + 0.9627 NFAUS(-1) + 0.2866 RGDP

(2) TRADEXP = -935.156 - 0.31 WAR + 8.287 KGCAF + 164.30 PRCAF

(3) RNEOEX = 81.568 DUM1 + 59.0647 DUM2 + 0.195 RIM

(4) RCONSP = 1008.2 DUM1 + 899.634 DUM2 + 0.722 RIM + 0.2328 RGDP

(5) RIKPR = 25.121 - 0.4897 WAR + -485.127 RRATE(-1) + 96.284 GIMI(-1)

(6) M2 = 136.6789 + 1.8976 GASG

(7) INDEF = 0.450 DUM1 + 0.601 DUM2 + 0.202 GIMI(-1) + 0.0005 M2(-1)

IDENTITIES AND DEFINITIONS

(8) RGDP = RCONSP + RIKPR + RGASG + REX - RIM

(9) GASG = RGASG x INDEF

(10) REX = RNEOEX + RTRADEX

(11) RTRADEX = TRADEXP/INDCAF

(12) IMPORT = RIM x GIMI

(13) NEOEXP = RNEOEX x OTEXI

(14) DNFAUS = [NEOEXP + TRADEXP] - IMPORT + NONVIS + KBAL

(15) NFAUS = NFAUS(-1) + DNFAUS

The equations (1) (3) (4) and (8) of the model constitute a system of simultaneous equations which were estimated using the appropriate technique for such systems while the other equations are part of a recursive system. The simultaneous equation part of the model was solved by computing a reduced form for Real Gross Domestic Product. The values for the key variables were computed using the hypothetical war-free values for exogenous variables discussed in a previous section.

Since all external variables are assumed given, the difference between the actual figures and the simulated results can only be attributed to internal factors of El Salvador. The guerrilla warfare has been the dominant factor in the political and economic life of the country since 1979.

2. The Impact of the War on the Salvadoran Economy

a. Output, consumption and investment. In 1979, only 28 attacks against public utilities and transport companies occurred. In comparison, 650 attacks were registered in 1980, 740 in 1981 and a peak of 983 in 1982. The impact of the war on the economy either through damages or through loss of confidence must have been felt beginning in 1980.

According to the simulation results, the performance of the Salvadoran economy in the absence of war would have been sluggish.

GROWTH RATES OF REAL GROSS DOMESTIC PRODUCT

Year	Actual	Simulated
1980	-8.6%	-3.4%
1981	-8.2%	+1.7%
1982	-5.6%	-0.4%
1983	+2.7%	+2.4%
1984	-0.5%	-1.8%
1985	+1.6%	-1.1%

This pattern of growth in the absence of war should not be surprising. It matches the actual situation of many other less developed nations in Latin America during the period.

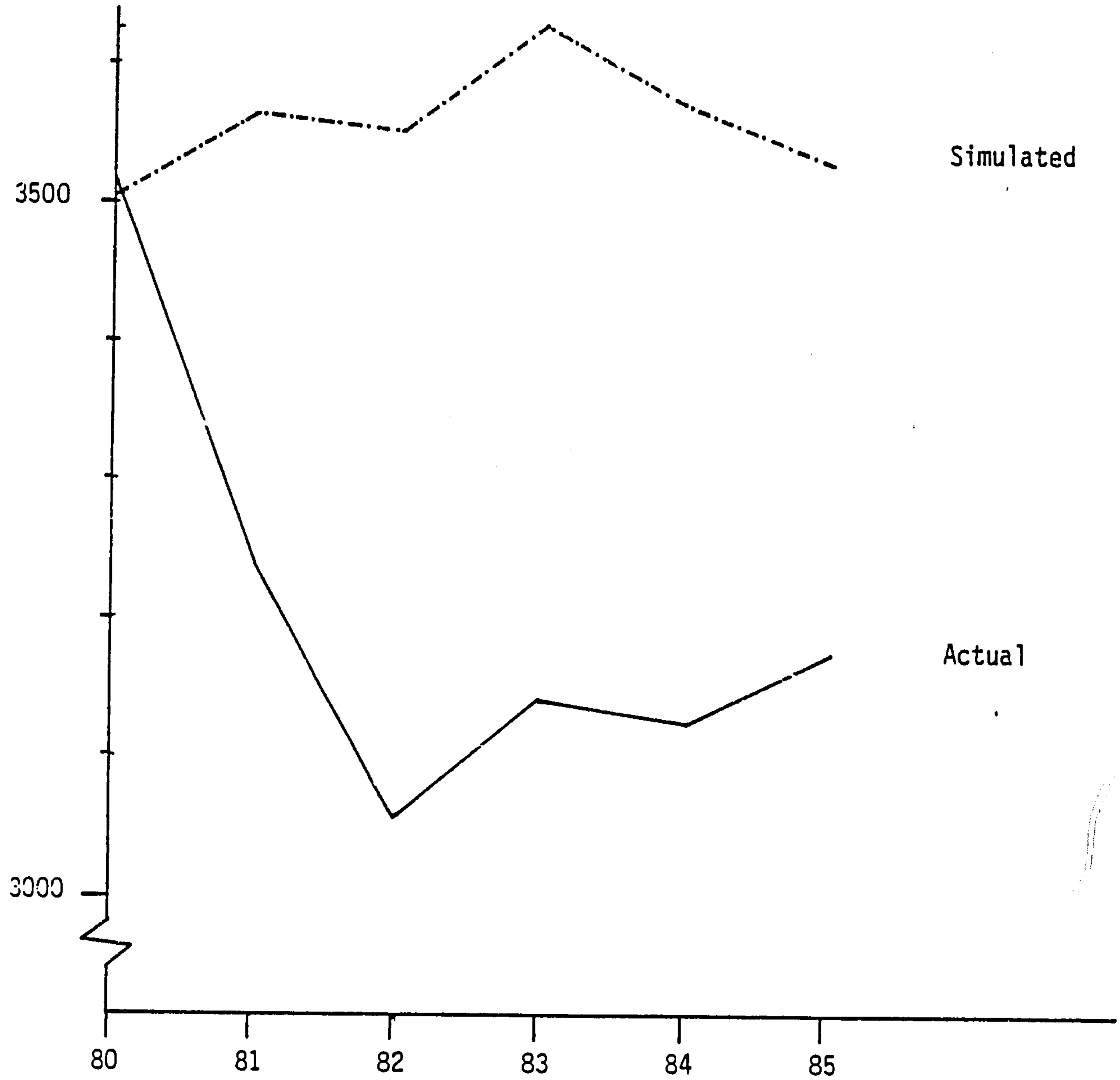
As disappointing as this outcome would have been in the absence of conflict, it is preferable to the actual outcome which shows precipitous drops in gross domestic product with very weak recuperation from depressed levels of output after 1983.

The figures for simulated Real Gross Domestic Product (RGDP) can be considered a measure of potential output for El Salvador for 1980-1985, all external demands being given.

EL SALVADOR: EFFECT OF THE WAR ON REAL GROSS DOMESTIC PRODUCT
(Millions of 1970 Colones)

	Real Gross Domestic Product (1970 colones)			
	Actual (A)	Simulated No War (B)	Loss C = A-B	Percentage loss D = C/B x 100
1979	3865.1	3629.5	235.6	
1980	3532.1	3504.6	27.5	N 0
1981	3240.1	3567.9	-327.8	-9.1%
1982	3057.7	3551.5	-493.8	-13.9%
1983	3142.1	3637.4	-495.3	-13.6%
1984	3126.4	3571.5	-445.1	-12.5%
1985	3176.5	3530.5	-354.1	-10%
TOTAL LOSS 1981-1985			2116	11.8%

EL SALVADOR: REAL GROSS DOMESTIC PRODUCT
(Million of 1970 Colones)



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The war led to an average drop of 11.8% from what the output could have been. The peak year for losses was 1982 which was also the year of greatest violence. These percentages may not appear as dramatic as could have been expected but one has to remember that these successive drops in RGDP occurred in addition to a slump -- from the 1978 level -- caused by a weakening of coffee prices and international trade.

As it is, the level of output in 1985 was the same as in 1974: 11 years of growth have been lost. In the hypothetical case of no war, the level of RGDP in 1985 would have been the same as in 1980: only 5 years of growth would have been foregone.

To translate this loss of output measured in 1970 colones into 1985 U.S. dollars the loss in current colones must be established by multiplying the loss in constant prices by the Gross Domestic Product deflator for each year. This is shown in the following table:

Year	Loss (constant prices)	GDP Deflator	Loss (current prices)	
1981	327.8	2.67	875.2	
1982	493.8	2.93	1,446.8	
1983	495.3	3.27	1,619.6	
1984	445.1	3.65	1,624.6	
1985	354.1	4.41	1,561.6	
		TOTAL	7,127.8	million colones

The official exchange rate between 1981 and 1985 was 2.5:1. converting at this rate would greatly inflate the value of lost production even in inflated dollars. During much of this period the parallel market rate hovered around 3.9 colones to one dollar, the black market rate was about five to one and in 1986 the new official rate was established at five colones to the dollar. To estimate the value in dollars of lost output this report uses shadow exchange rates of 3.9:1 to establish the upper limit and 5:1 to establish the lower limit. Hence, the cost of the war to the economy is estimated to range from about U.S. $1.4 billion to U.S. $1.8 billion in 1985 dollars.

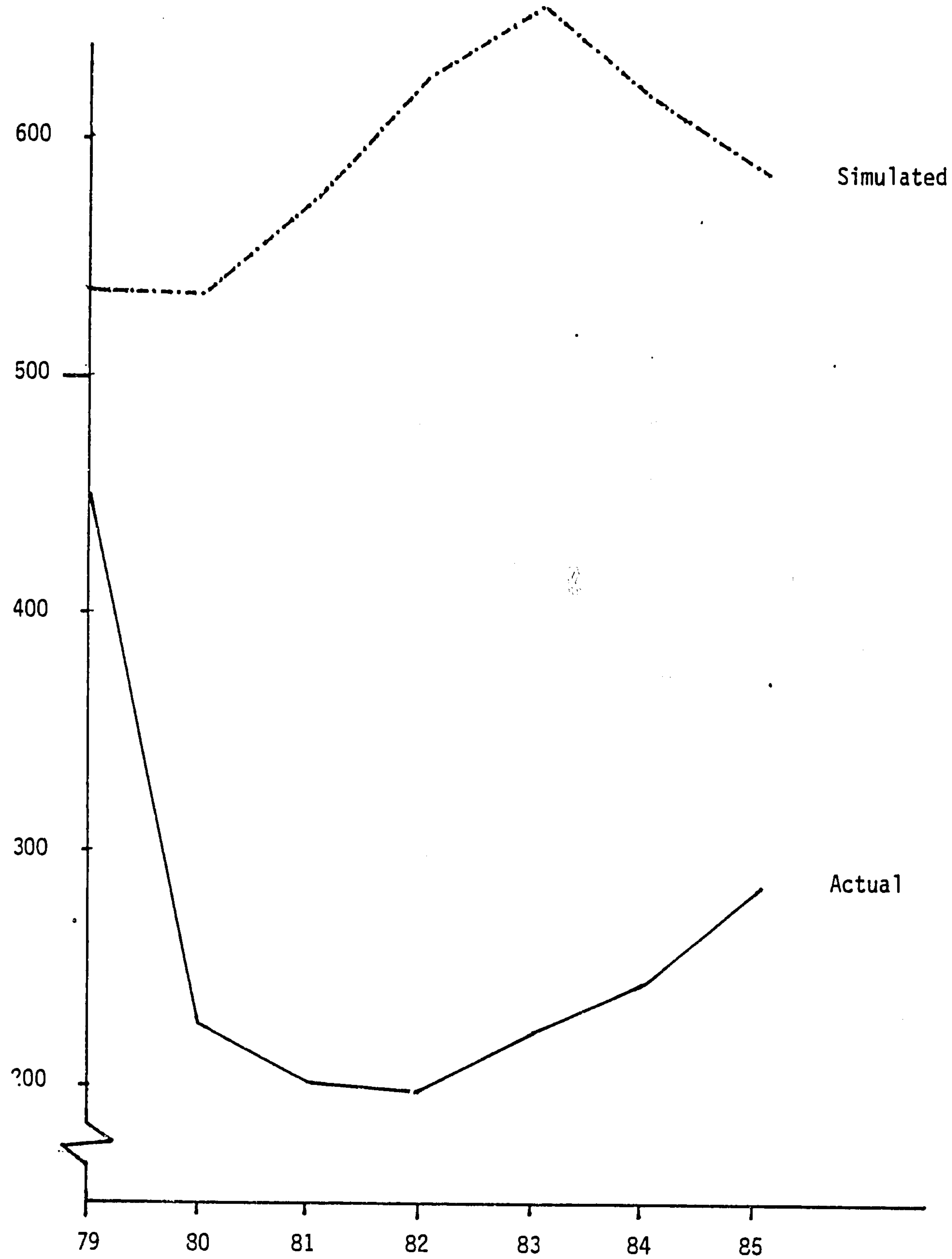
The tragic aspect of the Salvadoran situation appear clearly when the figures are considered on a per-capita basis.

EL SALVADOR: GROSS DOMESTIC PRODUCT PER CAPITA
(1970 Colones)

		Actual Gross Domestic Product		Simulated Gross Domestic Product	
	Population (Millions)	Millions of 1970 Colones	Per Capita 1970 Colones	Millions of 1970 Colones	Per Capita 1970 Colones
1970	3.4	2552	750.6	--	--
1975	3.9	3404	872.8	--	--
1980	4.5	3532	784.9	3504	778.6
1985	5.2	3176	610.8	3530	678.8

Maintaining all figures on an inflation-free basis, the levels of RGDP per capita in 1985 were down to early 1960s levels. In the absence of war, the RGDP per capita would still have been lower in 1980 than it was in 1970 but higher by over 11% than the actual level. Given the low levels of income per capita in real terms in El Salvador, this 11% gap could represent the difference between mere survival and starvation. The Salvadoran population growth rate of 2.9% per year implies an equal average growth rate of output for the level of income per capita to be maintained. These levels of growth have been rare among primary product exporting countries in recent times.

REAL GROSS PRIVATE INVESTMENT
(Million of 1970 Colones)



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These figures are averages. There are indications that all social classes were not affected evenly by the economic decline. If the poorest classes of Salvadoran society bore the brunt of the loss of income, the situation is particularly critical.

The drop in real gross domestic product is partially the result of direct damages caused by guerrilla action: disruption of transport, interruption of electric power, etc. But, the main cause of the economic decline as compared with the simulated alternative rests in the fall in private investments.

REAL GROSS PRIVATE INVESTMENT

Year	Actual	Simulated
1979	444.6	536.6
1980	227.7	533.4
1981	201.9	572.2
1982	199.4	621.7
1983	222.9	651.8
1984	241.4	614.3
1985	281.5	533.7

Private investment had been one of the engines of growth in El Salvador during the 1970s. But the uncertainties generated by the deteriorating political situation caused Salvadoran entrepreneurs to postpone their investments starting at the end of 1978. The slight recuperation in private investments which started in 1983 is the result of the impossibility to delay further some minor investments to maintain some business activities.

The precipitous fall in investments had a short-term effect on output. But its major consequence will be felt in the future. The accumulated postponed investments have to result in a lower productive capacity which will make it more difficult for the country to respond to surges in demand. The lack of investment activity has not only affected national income in every year but will constrain income growth in the future.

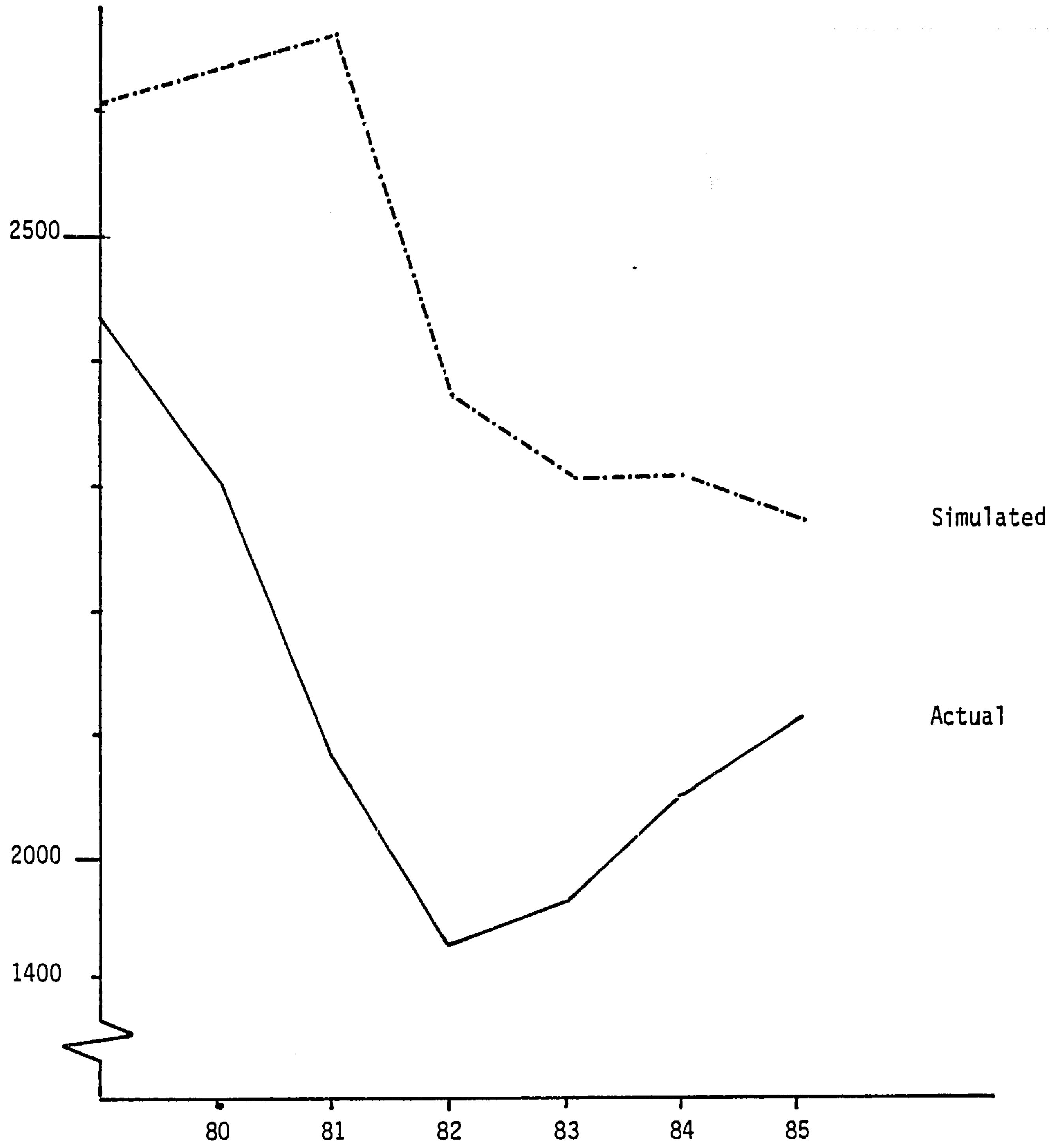
In the short-term there was no matching increase in government spending to slow the decline.

There is an added dimension to the decision of Salvadorans not to invest within the country. A close link between investment decision and the level of net foreign assets existed. When Salvadorans did not invest, they also took their wealth out of the country and depleted the net foreign assets of the nation. In turn, the ability to import decreased and firms dependent on imported inputs had to reduce their activities.

As the equation for private investment clearly shows, the impact of the war on investment decisions has been crucial.

Real private consumption in 1982 in El Salvador dropped to the level of 1970. The slight recuperation which followed still left 1985 consumption at the level of 1972. Given the increase in population between 1970 and 1985, private consumption per capita adjusted for inflation is probably down to the level of the mid-1960s. In the absence of war, real private consumption would have been substantially higher, but would have decreased in 1982: the poor performance of exports would have indirectly affected it through its effect on net foreign assets.

REAL PRIVATE CONSUMPTION
(Million of 1970 Colones)



REAL PRIVATE CONSUMPTION
(Millions of 1970 Colones)

Year	Actual	Simulated
1979	2532.8	2602.9
1980	2302.3	2632.4
1981	2080.3	2668.8
1982	1926.7	2357.9
1983	1963.8	2312.5
1984	2048.2	2307.0
1985	2113.8	2271.9

b. Exports, imports. The results of the simulation of the absence of war and the actual data both show a steady decline in exports revenues over the period.

1. Exports

EL SALVADOR: EXPORTS
(Millions of Current Colones)

	Actual			Simulated		
	Traditional	Non-Traditional	Total	Traditional	Non-Traditional	Total
1979	2383.6	674.4	3051.0	2125.2	639.8	2765.1
1980	1382.6	554.7	1937.3	1962.4	863.7	2826.1
1981	1453.8	538.1	1991.9	1560.1	1024.9	2585.1
1982	1289.2	459.3	1748.5	1460.7	684.7	2145.4
1983	1375.8	462.3	1838.1	1495.8	624.9	2620.7
1984	1329.4	464.0	793.4	1472.1	635.3	2107.4
1985	NA	NA	1610	1338.1	616.1	1954.2

Traditional and non-traditional exports would not have been affected in the same way.

- Traditional Exports

The major cause of the drop in revenues from traditional exports has been the drop in prices of these products mainly coffee, cotton and sugar.

Since actual prices have been used for the simulation, the difference between the actual and the simulated data can only come from the quantities exported, and the way they were affected by the violence.

During the period 1980 to 1985, the absence of war would have consistently resulted in higher export revenues. The year 1980 has been the year of maximum loss to these exports: the loss that year amounts to over 29% of the no-war value. In the rest of the period the loss osciliates around 10%.

Clearly, the guerrilla actions have affected traditional exports but it is clear that the fall in prices of exports had a more significant impact on traditional export revenues than the war. (See Note)

- Non-traditional Exports

Non-traditional exports were severely hit by the war. The absolute value of the loss is higher than in the case of traditional exports.

The impact of the war can be best measured by looking at the relative losses in non-traditional exports revenues. The losses amount to 35.8% in 1980; 47.4% in 1981; 32.9% in 1982; 25.9% in 1983; and 26.9% in 1984.

The share of non-traditional exports in total export revenues dropped during the period even though traditional export revenues were negatively affected by the drop of coffee, cotton and sugar prices.

The consequence of the war has been to reverse the trend of diversification of exports which had been building up through the 1960s and the 1970s. The country has to rely more on its traditional export revenues in 1986 than it did in 1978. Since primary product prices are on the average more volatile than prices of manufactured products, the export revenues will turn even more unpredictable.

The non-traditional exports were growing fairly rapidly thanks to the development of light assembly plants. The war period has put an end to this process and in 1985 few such plants still existed or were operating. The problems of the non-traditional exports industry are not transitory as they may be in the simulation but appear to be of a long-term nature.

Note: For a discussion of government policies and coffee production see pages IV-22 and IV-24.

- Total Lost Export Revenues

Since El Salvador is a country which depends on its exports for its economic well being, it is interesting to check what has been the total loss in export revenues in U.S. dollars over the period.

EXPORTS: LOSSES DUE TO WAR
(Millions of U.S.$)

Year	Traditional Exports	Non-Traditional Exports	Total Exports
1980	-231.9	-123.6	-355.5
1981	-42.5	-194.7	-237.3
1982	-68.6	-90.1	-158.8
1983	-47.9	-69.2	-113.0
1984	-57.1	-68.5	-125.6
1985	NA	NA	NA
TOTAL			1,127.9

The total foregone revenues from exports because of the war amount to U.S. $1.1 billion over a period of six years. This figure gains significance when one understands that it is obtained by comparing with levels of export revenues already depressed by the fall in prices of major commodities. The war substantially worsened a situation which would have been difficult in its absence.

2. Imports

IMPORTS
(Millions of Current Colones)

Year	Actual	Simulated
1979	2565	2481.6
1980	2425	3399.3
1981	1920	3892.2
1982	1521	2659.6
1983	1594	2127.10
1984	1620	2121.3
1985	1650	2011.2

The figures for imports yielded by the simulation of the absence of war are higher than the actual figures. The higher levels of gross domestic product would have generated a demand for imports, inputs and consumer goods which could have been satisfied due to the healthy levels of net foreign assets at the beginning of the period. However, this situation would have generated an import boom which could not have been supported by the falling export revenues. As a result the level of net foreign assets would have dropped constraining the capability to import.

In the absence of action from the state, imports would have reacted slowly to the constraint and the situation of net foreign assets would have worsened before imports started to fall. Adjustment is not instantaneous.

NET FOREIGN ASSETS
(Millions of U.S.$)

Year	Actual	Simulated
1979	126.4	357
1980	-62.9	375
1981	-187.5	-53
1982	-215.8	-187
1983	-19	-153
1984	10	-178
1985	NA	-168

It is unlikely that Salvadoran authorities would have let the level of net foreign assets drop so drastically between 1980 and 1981 without taking action either through stricter foreign exchange controls or import restrictions.

c. Money and Prices

From equation (7) it is clear that a consequence of the war has been an autonomous increase in the levels of prices: the estimated coefficient for the dummy variable DUM2 (war period) is higher than the coefficient for the dummy variable DUM1 (pre-war period). Delays in transports, interruptions of productive processes because of energy failures resulted in cost increases which were passed on.

This autonomous war-associated inflation pushed nominal levels of government spending to levels higher than in the absence of war. The financing of government expenditures through Central Bank credit increased the levels of the money supply M2 and generated an induced inflation.

MONEY SUPPLY M2
(Millions of Current Colones)

Year	Actual	Simulated
1979	2641.8	2285.3
1980	2855.2	2357.3
1981	2864.4	2662.1
1982	3433.2	2841.0
1983	3451.7	2505.0
1984	4195.1	2443.2
1985	5539.1	2758.7

The combined effects of autonomous and induced inflation resulted in price levels substantially higher than they would have been in the absence of war. El Salvador has generally been a country with very moderate inflation. The inflation rates have often been below world rates or industrialized country rates. In the last six years the Salvadoran population has had to learn to live with increasing inflation.

GDP Deflator base 1970=1

Year	Actual	Simulated
1979	2.23	1.97
1980	2.52	2.08
1981	2.67	2.24
1982	2.93	2.46
1983	3.27	2.60
1984	3.65	2.38
1985	4.41	2.33

As a consequence, Salvadorans looking for ways to protect their purchasing power will be more likely to try to convert their holdings of Salvadoran currency into U.S. dollars. The Salvadoran national currency, which for an extended period of time had a fixed exchange rate, will come under severe pressures. Because of the existing foreign exchange restrictions, the holdings in dollars will be held in bills outside the financial intermediaries thus limiting deposits and the possibility of credits.

C. Conclusion

The war in El Salvador had a significant impact on the economy of the country. The losses may not be as spectacular as one could have expected but they are added to severe losses resulting from a deterioration of the demand for Salvadoran exports. As a result, the gains which were achieved through the 1970s have been lost. On a per capita basis, this economic decline combined with a continuous rapid population growth resulted in levels of income adjusted for inflation down to early 1960 levels.

The war also had consequences which will be felt for many years to come. The trend toward diversification of exports which developed through the 1970s has been reversed making the country more vulnerable to the sharp variations in the prices of its traditional exports. In the hypothetical situation of a prompt solution to the conflict, a resumption of growth of non-traditional exports could become difficult because of increased competition of established producers in other countries.

The drop in private investments during the period implies a deterioration of the productive capacity of the country. Decreased capital stock and aging machinery will impede future growth for many years.

The shifts in government spending from long-term concerns such as health and education to short-term needs such as military expenditures will have long lasting consequences which are not easily quantifiable but cannot be but significant.

IV. IMPACT ON ECONOMIC SECTORS

A. Agriculture

The important export crops of El Salvador are coffee, cotton and sugar. Coffee remains far and away the most important; cotton is becoming less and less important as costs of production exceed world prices; sugar is exported as crude sugar, as alcohol and in some alcoholic beverages. It is consumed locally as "plantation white" sugar and in alcoholic and non-alcoholic beverages and sweets. The possible use of alcohol as a motor fuel mixer is only in the experimental stage in El Salvador. The export crops are further discussed following the discussion of domestic consumptions crops.

1. Production for Domestic Consumption

The basic crops are corn, rice and beans plus sorghum for animal feed. Other food products of importance include beef, poultry and pork. Cattle production is second only to coffee in terms of annual value of production and is about equal to corn, rice, beans and sorghum combined. As discussed below in a particular case, imported powdered milk seems more important in the urban diet than liquid milk.

Poultry and egg production remained fairly constant during the war years although increasing markedly in value. Aviculture is second in importance only to corn among the basic crops. However, in a country like El Salvador statistical discussion of chickens and eggs is unrewarding, the statistics are not to be trusted. Dispersed small farm chicken populations are very hard to count.

The following tables (Tables IV-1,2,3,4) showing production figures for corn, sorghum, beans, rice and cattle are broken down by regions which are:

Region I- The Western departments of Ahuachapan, Santa Ana and Sonsonate

TABLE IV-1

CORN - AREA, PRODUCTION AND YIELD

	REGION I			REGION II			REGION III			REGION IV		
	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD
	mz	qq	qq/mz	mz	qq	qq/mz	mz	qq	qq/mz	mz	qq	qq/mz
75/76	93,050	3,199,650	34.4	81,055	2,413,135	29.8	44,605	1,298,465	29.1	132,990	2,637,550	19.8
76/77	88,495	2,418,680	27.3	77,090	1,881,183	24 4	42,424	995,012	23.5	126,491	2,149,225	17.0
77/78	71,561	2,021,830	28.3	86,617	2,577,478	29.8	50,781	1,103,882	21.7	140,819	2,551,978	18.1
78/79	77,415	2,701,870	34.9	92,573	3,381,290	36.5	54,753	1,470,760	26.9	152,859	3,466,680	22.7
79/80	95,537	3,442,792	36.0	104,480	3,470,732	33.2	64,199	2,034,696	31.7	130,084	2,416,280	
80/81	105,090	3,480,919	33.1	111,720	3,552,866	31.8	67,770	2,047,118	30.2	132,420	2,366,845	17.9
81/82	112,439	3,259,258	29.0	111,168	3,329,898	30.0	53,953	1,904,040	35.3	117,440	2,374,619	20.2
82/83	114,898	3,191,050	27.8	68,700	2,275,050	33.1	54,752	1,657,450	28.6	102,650	1,966,450	19.2
83/84	110,185	3,854,800	35.0	70,320	2,707,200	38.5	54,645	1,294,970	23.7	109,850	1,776,030	16.2
84/85	111,700	3,873,500	34.7	72,800	3,029,100	41.6	56,300	1,845,200	32.8	106,900	2,713,700	25.4
85/86	113,000	3,392,300	30.0	88,100	3,100,100	35.2	57,900	1,978,800	34.2	103,100	2,298,000	22.3

Area: Manzanas, 1 manzana = 1.7 acres

Production: Quintales, 1 quintal = 100 avoirdupois pounds

TABLE IV-2

BEANS - AREA, PRODUCTION AND YIELDS

	REGION I			REGION II		
	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD
	mz	qq	qq/mz	mz	qq	qq/mz
1975/76	28,090	305,900	10.9	15,495	179,055	11.6
1976/77	23,693	281,246	11.9	12,268	154,691	12.6
1977/78	19,064	189,412	9.9	11,194	115,564	10.3
1978/79	18,951	267,790	14.1	25,640	307,603	12.0
1979/80	24,638	349,268	14.2	27,393	301,928	11.0
1980/81	23,645	311,465	13.2	25,830	257,078	10.0
1981/82	22,384	298,999	13.4	24,452	271,789	11.1
1982/83	32,290	343,350	10.6	23,594	232,848	9.9
1983/84	35,360	459,840	13.0	25,550	266,520	10.4
1984/85	36,300	476,100	13.1	26,800	340,000	12.7
1985/86	36,100	318,800	8.8	29,800	270,900	9.1

	REGION III			REGION IV		
	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD
	mz	qq	qq/mz	mz	qq	qq/mz
1975/76	22,205	243,145	11.0	14,010	133,700	9.5
1976/77	14,881	179,255	12.0	7,620	93,508	12.3
1977/78	27,064	280,867	10.4	1 ,801	147,695	8.3
1978/79	20,526	235,637	11.5	8 983	121,970	13.7
1979/80	15,331	203,471	13.3	11,338	156,673	13.8
1980/81	14,598	165,193	11.3	10,927	132,764	12.2
1981/82	13,819	158,581	11.5	10,345	102,451	9.9
1982/83	14,616	157,475	10.8	8,900	96,327	10.8
1983/84	10,500	121,040	11.5	9,090	70,900	7.8
1984/85	10,300	143,800	14.0	9,100	96,100	10.6
1985/86	8,900	87,300	9.8	8,500	74,200	8.7

Area: Manzanas, 1 manzana = 1.7 acres

Production: Quintales, 1 quintal = 100 avoirdupois pounds

TABLE IV-3

RICE - AREA, PRODUCTION AND YIELDS

	REGION I			REGION II			REGION III			REGION IV		
	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	AREA
	mz	qq	qq/mz	mz	qq	qq/mz	mz	qq	qq/mz	mz	qq	qq/mz
1975/76	6,300	350,400	55.6	4,871	275,935	56.6	7,129	384,465	53.9	5,900	309,200	52.4
1976/77	5,130	205,899	40.1	3,968	162,128	40.8	5,807	226,078	38.9	4,805	181,995	37.8
1977/78	2,632	112,145	42.6	4,243	163,453	38.5	4,045	167,819	41.5	6,877	269,181	39.1
1978/79	3,680	205,700	55.9	4,350	251,400	57.8	4,300	212,000	49.3	7,520	435,400	57.9
1979/80	6,710	441,904	65.9	4,895	305,154	62.3	6,900	379,860	55.0	2,595	139,282	53.7
1980/81	4,464	248,575	55.7	5,311	297,416	56.0	1,853	112,107	60.5	12,372	661,902	53.5
1981/82	4,030	224,605	55.7	4,746	265,800	56.0	1,366	82,715	60.6	9,658	516,670	53.5
1982/83	4,367	222,438	50.9	3,835	183,716	47.9	1,269	65,754	51.8	6,529	298,092	45.7
1983/84	5,020	298,100	59.4	5,250	306,600	58.4	3,400	164,500	48.4	4,330	170,800	39.4
1984/85	5,100	316,300	62.0	6,300	436,500	69.3	5,900	355,300	60.2	4,600	268,800	58.4
1985/86	5,200	323,800	62.3	7,400	494,700	66.8	5,300	302,100	57.0	6,800	376,800	55.4

Area: Manzanas, 1 manzana ≈ 1.7 acres

Production: Quintales, 1 quintal = 100 avoirdupois pounds

TABLE IV-4

SORGHUM - AREA, PRODUCTION AND YIELDS

	REGION I			REGION II			REGION III			REGION IV		
	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD
	mz	qq	qq/mz	mz	qq	qq/mz	mz	qq	qq/mz	mz	qq	qq/mz
1975/76	28,300	600,200	21.2	38,278	697,845	18.2	33,422	772,155	23.1	89,100	1,729,800	19.4
1976/77	27,380	522,149	19.1	32,592	700,262	21.5	32,327	671,945	20.8	86,201	1,504,844	17.5
1977/78	22,327	393,885	17.6	40,003	724,048	18.1	21,135	359,102	17.0	105,333	1,807,963	17.2
1978/79	30,690	569,080	18.5	35,310	657,365	18.6	37,595	636,350	16.9	91,805	1,655,905	18.0
1979/80	27,060	564,570	20.9	38,745	703,970	18.2	35,260	592,450	16.8	103,935	1,624,010	15.6
1980/81	22,532	492,6[illegible]6	21.9	32,262	614,262	19.0	29,360	516,953	17.6	86,546	1,417,059	16.4
1981/82	30,917	665,059	21.5	31,989	566,377	17.7	22,353	385,230	17.2	79,741	1,333,614	16.7
1982/83	51,452	828,775	16.1	17,348	257,685	14.9	22,005	322,613	14.7	79,195	1,290,927	16.3
1983/84	61,700	1,284,200	20.8	23,100	463,600	20.1	14,990	225,100	15.0	58,210	704,200	12.1
1984/85	65,400	1,400,900	21.4	25,500	510,800	20.0	15,400	277,700	18.0	59,700	864,500	14.5
1985/86	56,000	1,032,400	18.4	34,000	680,000	20.0	16,300	280,100	17.2	57,100	890,300	15.6

Area: Manzanas, 1 manzana = 1.7 acres

Production: Quintales, 1 quintal = 100 avoirdupois pounds

Region II- The Central departments of Chalatenango, La Libertad, San Salvador and Cuscatlan.

Region III- The East Central departments of La Paz, Cabanas and San Vicente.

Region IV- The Eastern department of Usulutan, San Miguel, Morazan and la Union.

Area planted, production and yields for the years 1976/77 to 1985/86 of corn, sorghum, beans, rice as well as cotton are shown in Table IV-5. We will discuss each product briefly, referring occasionally to the regional breakdowns.

Corn production in recent years is up over the earlier years of the period but there were two bad years at the beginning of the period. The average corn production over the period was just over 10 million quintales (1 quintal = 100 pounds). This is just about the same as the 1985/86 crop year production. It can be said that during the civil war years, on the average, corn production remained stable at pre-war levels. But the population of El Salvador has grown by over eighteen percent over the six years. The drop in per capita corn production and resultant foregone consumption is part of the overall picture of a war induced decline in all production. We cannot say with precision what part of this foregone consumption was caused by the war but can make some estimates or informed judgment.

The production of beans on the national scale resembles that of corn. In 1985/86 the bean crop was the worst since 1977/78 but 1984/85 was the best since 1979/80 an extremely good year. The national increase in area planted over pre-war years was concentrated in Regions I and II. Region III has been losing area as has Region IV. The key relationship is the same as for corn. Beans are an essential part of the daily diet of virtually every Salvadoran and production has not kept up with population growth.

The same holds true for rice, which is the third basic item along with beans and corn, in the Salvadoran diet. The two most recent years have been very good and the average for the last five years, 1.1 million quintales, is 14% higher than the average for 1976/77 to 1979/80, 965,000 quintales. Production has still not kept up with population growth.

AREA, PRODUCTION AND YIELDS PRINCIPAL CROPS TABLE IV-5

CROP YEAR	CORN			SORGHUM			BEANS			RICE			COTTON		
	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield	Area	Production	Yield
1976/77	334,500	7,444,100	22.3	178,500	3,999,200	19.0	75,540	870,100	11.5	19,710	776,100	39.4	113,300	3,965,500	35.0
1977/78	344,780	8,255,170	23.6	188,800	3,285,000	17.4	75,125	733,540	9.8	19,800	712,600	40.0	142,100	4,705,900	33.1
1978/79	377,600	11,020,600	29.2	195,400	3,517,700	18.0	74,000	933,000	12.6	19,850	1,104,500	55.6	146,100	4,407,800	30.2
1979/80	394,300	11,364,500	28.8	205,000	3,485,000	17.0	78,700	1,011,330	12.8	21,100	1,266,200	60.0	120,800	4,046,800	33.5
1980/81	417,000	11,447,748	27.5	170,000	3,040,900	17.8	75,000	866,500	11.6	24,000	1,320,000	55.0	83,200	2,542,000	30.6
1981/82	395,000	10,867,875	27.5	165,000	2,950,280	17.9	71,000	831,820	11.7	19,800	1,089,790	55.0	75,000	2,464,600	32.9
1982/83	341,000	9,000,000	26.4	170,000	2,700,000	15.9	79,400	830,000	10.5	16,000	770,000	48.1	69,800	2,370,000	33.9
1983/84	345,000	9,633,000	27.9	158,000	2,677,100	16.9	80,500	918,300	11.4	18,000	540,000	52.2	52,500	1,680,000	32.0
1984/85	347,700	11,461,500	33.0	166,000	3,053,900	18.4	82,500	1,056,000	12.8	21,900	1,378,500	62.9	53,300	1,737,000	32.6
1985/86	362,400	10,769,200	29.0	163,400	2,882,800	17.0	83,300	751,200	9.0	24,700	1,497,400	60.6	38,900	1,182,100	30.4

Area: Manzanas
Production: Quintals
Yields: Quintals per Manzana

As stated above for corn, it is not possible to quantify precisely how much the foregone consumption has cost or how much should be attributed to the war. Basic food crop production should have followed population growth. Production could have increased through improved technology and higher yields without any expansion in area planted. Whether, in the absence of war, production would have increased would have depended on such variables as government price or subsidy policies, levels of non-farm income, availability and prices of substitute foods such as bread for tortillas and potatoes for rice. This report assumes that the supply response would have taken place, particularly if the rural population and rural labor force had not been diminished by refugee flight to the cities which converted productive small subsistence farmers into dependent non-producers. Moreover, it is assumed that all of this lost consumption can be attributed to the war. Even where disincentives to production have arisen from government attempts to hold down prices of basic goods the government policies have been themselves war-induced.

It is assumed that corn production for the five year period would have been nine percent (average population difference) higher than actual. Bean production would have been higher by the same amount. Rice would have been five percent higher. This gives the following table:

COST OF FOREGONE CONSUMPTION

Product	Production 82/86 Quintales	Foregone (000) Quintales	Price Per Quintal Colones	Cost Colones
Corn	51,731,575	4,624	34	157,216,000
Bean	4,387,320	395	73	28,835,000
Rice	5,674,090	284	80	22,720,000
		TOTAL COST.............		208,771,000

The agricultural sector has not produced food valued at ¢208,771,000 (US$83,508,400). Part of this has been replaced by imports, but certainly not all of it. The inescapable conclusion is that the war has had a serious impact on nutrition.

The production of sorghum has dropped a bit, but that reflects the drop in the cattle population. However, when one compares cattle population in 1977 per quintal of sorghum available with the same relationship for 1985, 2.65 quintals per animal versus 2.94 quintals, it would appear that animals are being better fed than humans. The other item worth noting is that sorghum production has moved from the Eastern Region to Zone I in the West to follow the shift in the cattle population.

Change in the cattle population is shown in Table IV-6. The drop has been most pronounced in Region IV and is discussed below in the section devoted to that region. The increase in trends in the West have made up for the losses in other regions only in small part. Animals slaughtered are down but the percentage of herd slaughtered was markedly higher for several years, apparently an attempt to meet demand and a response to a price on the hoof that went from 1.05 colones in 1981, to almost double. The decline in herd size is partly and possibly largely a result of the war. Animals have been stolen or indiscriminately slaughtered; they have been driven off into the hill and dispersed. However, the herds have also declined as a result of agrarian reform. The reform was first applied to large holdings, over 500 hectares, and when land was taken so were the animals with it. Many cattle owners cut their herds in anticipation of land reform and since 1980 others have either done the same or have not built up herds. There have been stories of clandestine export on the hoof to neighboring countries.

Earnings from beef cattle are up since price increases more than cover reduction in animals slaughtered. The capital value of the herd in current prices is actually higher than pre-war.

The drop in slaughter from pre-war levels is at least 40,000 head. Average slaughtered animal weight, on the hoof, is 700 lbs. Return of meat is a bit over 50% of live weight. Over the last five years (1981-1985) the availability of beef has been down by at least 14 million pounds per year. The loss to cattle growers can be estimated by multiplying 40,000 animals by 700 lbs. per animal by the average price on the hoof of ¢1.50 per pound which works out to ¢42,000.000 (US$16.800.000) per year. This makes ¢210.000.000 on the equivalent of 84 million just for the five war years of 1981 to 1985.

Table IV-6

CATTLE POPULATION - EL SALVADOR - HEADS

YEAR	REGION I	REGION II	REGION III	REGION IV	TOTAL	SLAUGHTER	PERCENT SLAUGHTER
1977	247,370	259,602	250,252	525,476	1,282,700	188,368	14.6
1978	NOT	AVAIL	ABLE			217,169	-
1979	"	"			1,386,702	202,771	14.8
1980	"	"			1,210,660	185,430	15.3
1981	"	"			1,105,700	147,946	13.4
1982	"	"			945,000	148,864	15.6
1983	328,900	224,600	145,900	227,400	936,800	146,703	15.7
1984	308,000	222,900	14[illegible],900	254,900	9[illegible]8,700	147,538	15.9
1985	303,165	212,785	188,995	275,045	979,990	140,511	14.3

Pork production dropped drastically in 1980 and 1981, from a three-year average for 1977, 78 and 79 of 158,000 hogs slaughtered to only 126,000 in 1980 and 121,000 in 1981. There was a marked recovery in the next two years, up to 155,000 in 1983. There does not seem to have been any noticeable shift to pork consumption related to a drop in availability of beef. The report has not assigned any war-related loss to the drop in pork production because no evidence was found of direct or indirect war damage to the swine population. Apparently, small pig producers withheld animals from market as an economic preference.

The following are some additional statistics on agricultural prices, production and value of output. These statistics clearly support the conclusion, arrived at above, that part of the cost of the war, nutritional damage to the poor, may never be quantified.

PRICES PER THOUSAND QUINTALS
(SALVADORAN COLONES)
C 2.5 = $1.00

YEAR	1980	1981	1982	1983	1984
Products					
Coffee	363.30	301.54	289.54	266.88	364.63
Cotton	63.88	73.98	59.53	74.08	89.72
Sugar cane	26.64	27.61	27.61	29.60	31.94
Corn	17.52	17.64	17.68	28.17	33.92
Beans	61.82	85.59	73.74	66.46	73.21
Rice	48.37	40.20	34.95	66.79	79.71
Sorghum	17.15	20.75	19.75	24.29	22.36

Source: Central Bank

GROSS VALUE OF PRODUCTION AT CURRENT PRICES
(Thousands of Salvadoran Colones)

YEAR	1980	1981	1982	1983	1984
Products					
Coffee	1,575,633	1,160,935	1,00,239	1,011,739	1,090,969
Cotton	258,537	188,059	146,751	175,566	150,733
Sugar cane	103,566	104,455	116,727	150,820	170,097
Corn	199,128	201,920	192,126	253,556	326,723
Beans	62,499	74,204	61,353	55,164	67,204
Rice	59,784	63,106	58,266	65,589	59,856

Source: Central Bank

VOLUME OF PRODUCTION
(Thousands of Quintals)

YEARS	1979/80	1980/81	1981/82	1982/83	1983/84 (P)
Products					
Coffee	4.337	3.850	3.800	3.791	2.992
Cotton	4.047	2.542	2.465	2.370	1.680
Sugar cane	3.889	3.783	4.228	5.095	5.326
Corn	11.365	11.448	10.868	9.000	9.633
Beans	1.011	867	832	830	918
Rice	823	858	727	513	583
Sorghum	3.485	3.041	2.950	2.700	2.677

(P) PRELIMINARY FIGURES

Source: Central Bank

Basic grain marketing in El Salvador includes a trucker as wholesaler, a tradition similar to marketing arrangements in many developing countries. The trucker buys at the farm gate and sells in the city market to the retailer. The trucker functions as a credit source, an entrepreneur and a means of transport. One result is that determining the cost of transport of a major part of the nation's production, commerce and consumption is almost impossible. The price trends and relationships in the San Salvador marketplace are shown below:

TRUCKER PRICES
(Salvadoran Colones per 100 pounds)

YEAR	CORN	RICE	BEANS
1978	24.17	68.33	66.56
1979	18.04	53.17	52.52
1980	20.54	55.92	99.63
1981	23.08	58.58	96.77
1982	22.79	60.42	80.21
1983	26.33	71.84	60.30
1984	28.50	66.25	63.71

PRICE TO CONSUMER
(Salvadoran Colones per pound)

YEAR	CORN	RICE	BEANS
1978	0.29	0.68	0.78
1979	0.24	0.61	0.67
1980	0.26	0.63	1.13
1981	0.28	0.67	1.16
1982	0.29	0.68	1.00
1983	0.34	0.84	0.86
1984	0.35	0.85	0.81

Most Salvadorans eat corn in the form of tortillas everday. Rice and beans are a part of the daily diet of almost every Salvadoran. Only governmental interventions and subsidies have held the price increases of these basic daily food necessities down to tolerable levels. Another example of an unquantifiable indirect cost of the war impacting on the least affluent.

2. Production for Export

a. Coffee

The economic motor of El Salvador is coffee. It makes up just under sixty percent of the value of its exports. In 1983, coffee alone was nine percent of gross domestic product and nearly half of all agricultural production by value. As noted elsewhere in this report, El Salvador does not control the price of its main product. It sells at one price to member states of the International Coffee Agreement, at a lower price to non-members. The sales to non-member states are highly variable ranging from a low of less than one percent of total coffee exports in 1981/82 to a high of 22 percent in 1983/84 (Table IV-7). Sales to non-member states are determined by how much production is left over after El Salvador has sold all it can to the member states. In sum, El Salvador does not determine price, market or export earnings of its most important product. Since production is the only internally determined variable this report seeks to measure war damage to coffee production.

Coffee is an orchard crop, grown in association with shade trees on mountain slopes. A coffee tree usually bears fruit when it is about five years old and starts to lose fertility at about twenty years. This sets up a twenty year cycle of culling old trees and planting young seedlings. Coffee production is sensitive to weather, temperature, rainfall and sunshine and the timing of them. Productivity seems to follow a two year cycle. Coffee is processed by removing the husk and drying the bean. The generally accepted ratio is 500 pounds of berries will produce 100 pounds (a quintal) of beans. The production statistics used in this report are in quintales, or thousands of quintales, of coffee beans, called in Spanish <u>Cafe Oro</u> or "gold coffee."

TABLE IV-7

EL SALVADOR
COFFEE EXPORTS TO MEMBER AND NON-MEMBER COUNTRIES
INTERNATIONAL COFFEE ORGANIZATION
(000'S)

CROP YEAR	MEMBER COUNTRIES			NON-MEMBER COUNTRIES			TOTAL		
	QUINTALES	VALUE ($)	AVERAGE PRICE ($)	QUINTALS	VALUE ($)	AVERAGE PRICE ($)	QUINTALS	VALUE ($)	PRICE ($)
1979 / 80	2,788.6	453,886.4	163.97	-	-	-	2,788.6	453,886.4	163.97
1980 / 81	3,682.5	444,765.6	120.77	35.3	2,459.2	69.71	3,719.8	447,224.8	120.29
1981 / 82	2,709.4	368,852.6	134.92	2.6	275.3	106.72	2,712.0	369,127.9	136.11
1982 / 83	3,085.2	380,545.8	123.60	728.6	35,166.8	48.27	3,813.8	415,712.6	109.00
1983 / 84	3,265.9	456,087.7	138.95	939.8	39,108.2	41.61	4,205.7	495,195.9	117.74
1984 / 85	3,027.9	390,488.4	132.69	78.3	3,439.8	43,95	3,106.2	393,928.2	126.82

There is a lack of agreement as between sources of production information. Table IV-8 on the following page shows production figures from three sources one of which purports to cite the other but disagrees for several years. The trend line, if there is one, is probably to be found in the two year moving average.

In addition to weather, production is a function of area planted, average age of trees, use of fertilizer and pesticides, especially fungicides, and cultivation practices including care of the shade trees. The most important variable seems to be area planted. As of 1985/86 there was no statistically reliable evidence that yields were markedly different than what they were ten or fifteen years ago.

Labor availability is important at the time of berry picking which extends over several weeks or even months. There was some anecdotal evidence of labor forces being terrorized by guerrillas but there is no statistical data available.

The production of coffee (Table IV-8) seems to have been in decline since 1979/80. But there are not enough years of data to establish a trend for such a long term orchard crop. On the two year average line there seems to be a flat trend (with variations) from 1971/72 to 1977/78, an upward trend to 1979/80 and a sharp drop since to 1984/85. By combining source C with source A we could extrapolate a two year moving average figure of 3,175,000 quintales for 1984/85, a continuation of the trend, but flattening. Source B for 1985/86 would appear to reinforce the trend but it is too early to tell, this is a most preliminary figure. As a tentative conclusion, coffee production is down about 22 percent from a 1980 high. However, in the past, year-to-year production drops have been as high as 29% and even two-year averaged drops have been fourteen or fifteen percent. Nevertheless, the report accepts as a premise that there has been a five-year sustained trend of declining coffee production and that some part of this lost production is war related.

Table IV-8

PRODUCTION OF COFFEE
(Quintales 000)

Crop Year	Source A	Source B	Source C	Two Year Moving Average - FUSADES
1970/71		3,187	2,815	
1971/72		3,858	3,473	3,144
1972/73		3,656	3,003	3,238
1973/74		3,459	2,498	2,750
1974/75		4,187	4,435	3,466
1975/76		2,971	2,739	3,587
1976/77		3,575	3,424	3,081
1977/78	3,130	2,967	3,130	3,277
1978/79	3,913	4,000	3,913	3,525
1979/80	4,337	3,732 (#)	4,337	4,125
1980/81	3,850	3,885	3,850	4,093
1981/82	3,800	3,393	3,100	3,475
1982/83	3,791	3,790	3,400	3,250
1983/84	2,992	2,229 (a)	3,000	3,200
1984/85	3,350	3,562		
1985/86		2,580		

Source A Banco Central de Reserva

Source B INCAFE

Source C FUSADES citing Banco Central

Note: (a) Probably a typographical error-transportation of numbers.

(#) Almost certainly a misprint or type, should read 4,732.

As noted above, the only determining variable that could explain a long term trend in coffee production would be area planted. The area devoted to coffee has dropped nearly twelve percent since 1977 (see Table IV-9). The next question is what part of the drop in area is war-related.

Areas have been lost to coffee for five main reasons: break-up for sale; failure to replant; landslides; substitution of other crops and burning of trees. A number of coffee plantations, or parts of plantations have been sold off for other uses, urban or rural. Parts of central, urban San Salvador were recently large coffee fincas and at least one large suburban area will probably be covered with condominiums and residences within five years. In rural areas, coffee areas suitable for other uses., i.e., not too hilly, are sold off as farms for other crops or for rural land investments. This sort of activity is usually economically motivated and not war-related.

Failure to replant, which means failure to replace old trees with new, may or may not be war related. In the Eastern Region and in some northern areas it probably is.

Crop substitution means shifting from coffee to other crops on larger holdings most of which remain in coffee. It has been encouraged on some agrarian reform sector cooperatives. There have been reports of guerrilla forces in some areas requiring coffee planters to cultivate areas of basic food crops as a sort of war-tribute. This rumored war-related crop substitution cannot account for even a small fraction of the shift in land use.

Table IV-10 shows the result of a mid-July 1985 study made by the Salvadoran Coffee Research Institute to show why coffee lands have been taken out of production. It is assumed, in the absence of details for other years, that 1984/85 was fairly typical for Regions I and II. It is also clearly typical for Region III where coffee is grown mostly in the central Cabanas department, an area of maximum guerrilla violence and influence. It might be a bit atypical for Region IV where burnings would have dominated the statistics for earlier years.

TABLE IV-9

AREA PLANTED TO COFFEE

BY REGION - BY YEAR (manzanas)

REGION	1982/83	1983/84 1/	1984/85 1/	1985/86 1/
I	117,712	115,404	113,211	109,428
II	69,783	68,595	67,466	64,543
III	14,587	14,114	13,664	12,696
IV	51,656	50,087	49,596	47,544
TOTAL	253,738	248,200	243,937	234,211
PERCENTAGE DECLINE 2/	4.5 %	6.6 %	8.2 %	11.87 %

SOURCE: ISIC - INCAFE

1) Causes for the decline in area include: failure to replant, breaking up for sale, burnings, landslides, and substitution of other crops.

2) Percentage decline calculated on basis of ISIC area determination of 1977 which was 265,759 manzanas.

Table IV-10

Estimated Coffee Area
Gains and Losses - 1985
(manzanas)

	REGION I Ahuachapan Santa Ana Sonsonate	REGION II La Libertad San Salvador Cuscatlan Chalatenango	REGION III San Vicente Cabanas La Paz	REGION IV Usulutan San Miguel Morazan La Union	TOTAL
Break up for sale	1,260	795	--	50	2,105
Burning	36	825	602	390	1,853
Land Slides	465	236	--	100	801
Substitution by Other Crops	135	30	--	95	260
Area Lost	1,896	1,886	602	635	5,019
New Coffee Areas	195	35	25	--	255
Net Loss	1,701	1,851	577	635	4,764

SOURCE: Two surveys carried out by the Salvadoran Coffee Research Institute in May and July 1985.

Taking all of the production and yield data together, this report assumes that there has been a downward trend in coffee production from 1979/80 through 1984/85 and probably continuing through 1985/86. This last was probably a cyclic year and trend and cycle are mixed together. It is also assumed that twenty percent of the lost production in Regions I and II was war-related (Informed observers say that only ten percent was war-related). All of the losses in Cabanas were war-related one way or another. About 80 percent of the production loss in Region IV is assumed to be the result of guerrilla violence. Percentage shares of national production are: Region I, 49.9%; Region II, 29.3%; Region III, 4.2%; Region IV, 16.6%.

Using the two-year moving average for coffee production, a loss for the five years 1980/81 to 1984/85 of 3.432.000 quintales is established as the result of the assumed downward trend. Applying this to production shares the following table is constructed:

	Loss	Percent	War-related
Region I	1,712.6	20%	342.5
Region II	1,005.6	20%	201.1
Region III	144.1	100%	144.1
Region IV	569.7	80%	455.8
	3,432.0		1,143.5

Using the FUSADES figures for annual production plus the Banco Central figure for 1984/85, total production for the five years was 16,700.000 quintales. Loss in production was about twenty percent and loss from war about seven percent. The average weighted price received by El Salvador for all export sales during this period was $122 per quintal. The cost of war related loss in production was $139,507,000, if it is assumed that <u>all</u> the missing production could have been sold at the average price. It represents about six percent of foreign exchange earned from coffee sales, over the five year period.

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If war damage accounts for at most a third of the drop in coffee production unrelated to the weather, what accounts for the rest? There are no unbiased sources to be consulted. Private coffee growers and processors insist that productivity on the agrarian reform cooperatives has dropped drastically. The only statistics (Table IV-11) available indicate a higher productivity on the government collectives than in the private sector. This is to be expected, these were the largest and most modern fincas when they were in private hands. There are no before and after statistics but a drastic drop in output on the collectives seems unlikely. Other reasons for the drop in production might be lower uses of fertilizer and pesticides. There is some indication that imports of these products are down slightly but no evidence of a real trend. The best explanation for the decline in production is probably the taking of coffee land out of production, failure to replant with new trees, and general lack of maintenance of land, coffee trees, shade trees and machinery and equipment. This is supported by all the interviews held with coffee growers, and coffee producer associations. Those expenditures that represent long-term investment are not being made. Application of fertilizers and pesticides when made regularly positively affect output and income.

The failure of the private coffee growers to maintain their investments is ascribed to three causes: An uncertainty as to the future of agrarian reform; uncertainty as to the share of national coffee earnings that will go to growers; distrust of the intentions, efficiency and integrity of INCAFE and its management. At the moment, coffee growers do not know with certainty what they can expect from the next phase of agrarian reform; what will be the maximum size (now supposedly 245 hectares) of an individual holding; how will it be defined; what will be the owner's reserve rights; will owners be compensated; how, how much, when. Obviously, anyone would be reluctant to invest in a property that may soon belong to someone else.

Coffee growers receive a price for their coffee set by INCAFE which starts with the world price, share of the Coffee Agreement market, non-agreement price and market and then adjusts for processing costs, administrative costs and coffee export taxes. Growers feel that these

TABLE IV-11

AREA PLANTED TO COFFEE

REGION \ YEAR	1982-1983	%	1983-1984	%	1984-1985	%	1985-1986	%
REGION I	117,712	46.4	115,404	46.5	113,211	46.4	109,428	46.7
" II	69,783	27.5	68,595	27.6	67,466	27.7	64,543	27.6
" III	14,589	5.7	14,114	5.7	13,664	5.6	12,696	5.4
" IV	51,656	20.4	50,087	20.2	49,596	20.3	49,544	20.3
TOTAL	253,738	100.0	248,200	100.0	243,937	100.0	234,211	100.0

COFFEE - PRODUCTION AND OUTPUT BY SECTOR

HARVEST	REFORMED SECTOR			NOT REFORMED SECTOR			NATIONAL LEVEL		
	Thou. of qq Production	Mz	Output	Thou. of qq Production	Mz	Output	Thou. of qq Production	Mz	Output
1982 / 83	527	27,643	19.06	3,263	226,095	14.43	3,790	253,738	14.94
1983 / 84	390	27,105	13.65	2,559	221,095	11.57	2,929	248,200	11.80
1984 / 85	501	28,161	17.79	3,061	215,576	14.20	3,562	243,737	14.61
1985 / 86	344	27,402	12.55	2,236	206,809	10.81	2,580	234,211	11.02

Reformed sector refers to coffee lands distributed to peasant cooperatives under Agrarian Reform Law.

Not Reformed refers to lands still under private cultivation.

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calculations are arbitrary and tend to leave them with only a small share of any increase in world prices while they bear the risk when prices fall.

Finally, the growers do not believe that INCAFE is managed with a view to maximizing Salvadoran earnings from coffee in either the short or long run. They believe that it is trying to maximize government revenues in the short term and nationalize all coffee production in the long run. They also accuse employees of INCAFE of personal profitering and general corruption. All persons interviewed stressed the fact that INCAFE, despite the terms of its basic law, has never published an annual financial report. Obviously, any revenue producing agency that avoids full financial disclosure leaves itself open to charges of mismanagement and corruption.

For the future of the country the lack of investor/producer confidence in the coffee sector is dangerous. A lack of maintenance and tree-replacement, a diversion of areas to other uses, or the abandonment of areas, all imply a steady decline in coffee production and ultimately in national income.

It should also be noted that the lack of investor confidence in the coffee sector is mirrored in the manufacturing sector and is rooted in government policies, not the war.

b. Cotton

There is a discussion of war-induced losses in cotton in that section of this report which deals with war damage to the Eastern region. The principal conclusion drawn about cotton production for that region applies equally to the country as a whole. The production of cotton in El Salvador is not an economically viable activity under current conditions. Costs of production, especially fertilizer and pesticides, are too high; they exceed the world price of cotton several times over. Cotton technology in El Salvador has not kept up. Each year heavier applications of fertilizer and pesticides are called for and yields are still dropping. Table IV-12 shows the situation clearly. Over the last

TABLE IV-12

COTTON - AREA, PRODUCTION, YIELDS

	REGION I			REGION II			REGION III			REGION IV		
	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD	AREA	PRODUCTION	YIELD
1975/76	4,789	194,155	40.5	3,220	128,148	39.8	32,927	1,035,376	31.4	64,764	2,292,321	35.4
1976/77	4,134	155,965	37.7	4,291	171,436	39.9	32,640	1,093,831	33.5	72,235	2,544,268	35.2
1977/78	5,651	192,661	34.1	4,661	182,303	39.1	40.735	1,397,072	34.3	91,053	2,933,862	32.2
1978/79	5,810	180,456	31.1	4,792	170,755	35.6	41,881	1,308,573	31.2	93,617	2,748,013	29.4
1979/80	4,350	161,830	37.2	4,200	157,810	37.6	36,850	1,214,040	33.0	75,400	2,513,120	33.3
1980/81	3,677	101,654	27.6	2,462	99,128	40.3	25,768	762,600	29.6	51,293	1,578,618	30.8
1981/82	1,649	59,200	35.9	3,402	124,120	36.5	23,517	758,780	32.3	46,432	1,522,500	32.8
1982/83	1,607	55,087	34.3	2,748	110,283	40.1	20,279	722,546	34.9	44,716	1,482,084	33.1
1983/84	2,100	70,800	33.7	3,400	114,500	33.7	16,400	533,100	32.5	30,600	961,600	31.4
1984/85	1,435	41,800	29.1	2,560	92,400	36.1	18,145	563,000	31.0	31,160	1,039,800	33.4
1985/86	1,875	57,200	30.5	1,950	68,300	35.0	12,375	358,800	29.0	22,700	697,800	30.7

Area: Manzanas, 1 manzana = 1.7 acres

Production: Quintals, 1 quintal = 100 pounds

Yield: Quintals per Manzana

ten years production has dropped from a high of 4,706,000 quintales in 1977/78 to 1,182,00 quintales in 1985/86 a drop of 75%. Next year, 1986/87 production will be even lower, probably down to about fifteen percent of ten years ago. Area planted to cotton has dropped from 142,100 manzanas to 38,900 manzanas or 73 percent. Yields are down about ten percent from previous highs. Both production and area planted have declined more in the Eastern region than elsewhere. In the Eastern region both sets of forces have been at work, guerrilla violence and economic reality. However, there has been relatively little violence in the cotton growing areas of the other regions. Elsewhere in this report war related losses of cotton production in the Eastern region are valued at 68.2 million colones or $27,280,000. The loss to the Eastern region is the only war loss that can be assigned to cotton for the nation as a whole.

c. Sugar

The political or administrative history of sugar production resembles that of coffee. In 1980, the government marketing monopoly, INAZUCAR, was created. The agrarian reform transferred ownership of the large plantations from the private sector the the state and the sugar mills (ingenios) became simply processors rather than parts of the marketing chain. The sugar mills no longer grew their own cane after 1980.

Sugar production for the years 1980/81 to 1984/85 has averaged 4,850,000 quintales of raw sugar per annum. Production for the six years preceding the establishment of INAZUCAR averaged 5,611,000 quintales. There is no production of refined sugar in El Salvador. The sugar refinery was closed on the grounds that refined sugar is an unnecessary luxury. The sugar sold to the public is "plantation white". In the first six months of 1985, El Salvador imported 5,878,000 colones ($2,351,200) worth of sugar and sugar products.

Only two percent of area planted in cane lies east of the Rio Lempa and only two percent of the sugar produced comes from the Eastern region. The other regions have suffered guerrilla damage but it has been minimal. Often cited has been guerrilla burning of cane fields at the time of harvest. This cannot be very important; burning and bulldozing is the standard method of harvesting in Hawaii, it is cheaper than cutting. Cane stalks do not burn and if they are processed quickly there is no productivity loss. In fact some growers burn their own cane to get priority at the mill.

The head of the cane-growers' association attributes most of the drop in sugar production to world price-changes and government policies particularly the lack of production incentives and continued uncertainty as to the future of agrarian reform. An important grower said much the same thing and described his response as a search for alternative production. Although the drop in production between the peak years just before the start of the civil warfare and the recent recovery of production coincided with years of peak violence, the drop itself was not attributed by those interviewed primarily to the violence. In fact, the most important violent impact mentioned was the extra cost and trouble involved in trucking workers into towns to get paid because of the threat to payrolls.

The national sugar export agency, INAZUCAR disagrees and states specifically that for the 1979/80 crop year 3,000 manzanas were not cleared and planted and 2,000 manzanas in 1980/81 were not planted entirely as a result of guerilla violence or threats. This represents a loss for the two years of about 272,000 tons of sugar cane which would have produced sugar worth about 13,500,000 colones or $5,400,000.

Table IV-13 shows cane sugar and molasses production 1974/75 to 1984/85. The table shows the sugar mills stopping their own cane growing as required by law. This accounts for most of the decline in area noted for 1980/81 and 1981/82. However, both area and productivity have come back up and sugar has now replaced cotton as El Salvador's second most important export crop.

TABLE IV-13

SUGAR CANE, SUGAR, MOLASSES
AREA, PRODUCTION, YIELD
1974 - 1985

CROP YEAR	AREA PLANTED TO SUGAR CANE: Planted by Mills	AREA PLANTED TO SUGAR CANE: Planted and Milled	AREA PLANTED TO SUGAR CANE: Area of Cane Bought	AREA PLANTED TO SUGAR CANE: Total Cane Area	SUGAR CANE MILLED: From Mills	SUGAR CANE MILLED: Bought (long tons)	SUGAR CANE MILLED: Total	Yield Tons per Manzana	Crude Sugar Production	Molasses Production
1974/75	14 793	10 474	36 967	47 441	625 42[illegible]	2 218 038	2 843 459	60	5 581 667	168 812
1975/76	10 816	8 722	39 241	47 963	460 139	2 354 488	2 814 627	59	5 691 247	183 508
1976/77	9 917	8 640	40 910	49 550	473 509	2 715 091	3 188 600	64	6 217 800	228 894
1977/78	9 281	7 598	41 522	49 120	421 895	2 721 805	3 143 700	64	6 261 020	261 929
1978/79	8 067	7 372	40 298	47 670	399 085	2 584 879	2 983 964	63	6 027 408	218 814
1979/80	8 954	8 420	30 580	39 000	373 431	1 821 371	2 194 802	56	3 887 156	182 628
1980/81	*	*	38 000	38 000	*	1 982 718	1 982 718	52	3 782 940	150 835
1981/82	*	*	39 200	39 200	*	2 117 462	2 117 462	54	4 227 774	156 707
1982/83	*	*	45 000	45 000	*	2 711 400	2 711 400	60	5 095 145	227 667
1983/84	*	*	48 600	48 600	*	3 119 115	3 119 115	64	5 326 062	228 961
1984/85	*	*	52 000	52 000	*	3 212 738	3 212 738	62	5 817 336	245 687

SOURCE: INAZUCAR

Area in manzanas

Crude sugar in quintals (100 lbs.)

Molasses in 110 gallon barrels

B. Manufacturing

The Salvadoran manufacturing sub-sector has traditionally been focused on food processing, tobacco, bottling and textiles which comprise approximately 70% of total output.

Drawback operations in the apparel, electronics, chemical, pharmaceutical, and other light industries have been functioning in El Salvador for more than 20 years. There are some joint ventures with firms from Japan, South Korea, West Germany and the United States, that are high technology companies. However, due to the confluence of negative international and domestic conditions, security risks and weak economy, many of the companies have left the country and new investments are understandably discouraged thus aggravating the unemployment problem of the country. The labor force in El Salvador, is estimated at 1,753,233 (Est. June 30, 1985) and is broken down into the following categories:

Area	Percent	No. of Workers
Agriculture	44	771,422
Commerce	16	280,517
Manufacturing	15	262,984
Services	14	245,452
Construction	4	70,129
Transportation	3	52,597
Banking and Finance	2	35,066
Others	2	35,066

Available statistics on employment are not fully consistent. Official estimates show unemployment at 36%. Other independent sources indicate 38% for unemployment and 80% for underemployment and unemployment combined. Based on the official estimate the unemployed in El Salvador would be 631,164 workers.

There is, therefore, a large supply of skilled, semi-skilled and unskilled labor in El Salvador as a result of the unemployment situation. Work force with technical experience gained from local and foreign firms is available. Salvadorans seem to have quick learning abilities that provide at reasonable cost, skilled labor which is easily trained. Discouraged by the prevailing situation in the country, many of the skilled workers are now emigrating in search of better and more stable conditions and the pursuit of economic well being.

General consensus within the industry leaders visited to prepare for this report, indicates that there is an installed capacity that under normal circumstances could generate 20% more production.

Gross production value of the manufacturing industry for 1985 was estimated at ¢ 5.648 billion o US$ 2.259 billion. Work force employed by the manufacturing sector amounts to 262,984 individuals. This implies a per worker output of about $8,500 per year.

A 20% increase of the gross production in the industrial sector would represent ¢ 1.130 billion. One can not assume, however, that a 20% increase in production would necessarily mean a 20% increase in the labor force in the manufacturing sector, which in this case, would be 52,419 new workers. However, one-half of this number would be an acceptable estimate considering that it represents only 4% of the total unemployed in the country or 26,298 workers. It would not represent any great increase in per worker productivity.

Minimum daily wage in the urban area is ¢ 15.00. Besides the regular salary, Salvadoran workers are entitled to the following fringe benefits, representing 26% over and above the basic salary:

Social Security	8.25%
Social Housing Fund	5.00%
Annual vacation (15 days)	4.19%
Thirty percent (30%) vacation surcharge	1.25%
Vacation social security surcharge	0.60%
Christmas bonus (12 days per year)	3.30%
Optional but customary: Christmas party, picnics, sporting activities, etc.	2.50%
Industrial safety clothing and equipment	1.00%

There are many other benefits that union labors may obtain within the terms of labor contracts. For example, even though the ordinary working week is limited to 44 hours in 5.5 days, workers are often entitled to a full seven days weekly pay which is to say that a permanent worker gets paid 365 days a year, provided he or she is not absent without a justified cause.

Based on minimum salaries plus ordinary fringe benefits, an estimation of additional earnings by the industrial sector, in the event that a 20% output increase is obtained, would be as follows:

Minimum daily salary	¢ 15.00
Twenty-six percent (26%) additional fringe benefits	3.90
Total daily salary	¢ 18.90

Adding 26.298 new workers at ¢ 18.90, salaries and benefits amounting to ¢ 497,032 a day would be paid, representing ¢ 181,416,753 or US$ 36,283,350 (¢ 5.00 = 1 US$) per year.

There is one economic activity in El Salvador that could generate thousands of new jobs, given the proper incentives and assistance. "The Maquileros" are entrepreneurs whose activity is to provide labor for assembling industries such women's apparel and other labor intensive manufacturing processes.

Under contracts with overseas merchants, particularly from the United States, "Maquileros" receive, free of customs duties, the necessary fabrics, materials, patterns and designs of predetermined styles and they proceed then to assemble, pack and return the finished product to its point of origin. Maquileros provide only for the labor. This operation does not demand any foreign exchange on the part of the assembling plant since the foreign materials belong entirely to the overseas party and they go back to him in their entirety.

CASE STUDIES

The case studies prepared for this report are intended to give a practical expression to the more generalized economic information used in describing what has happened to the economy of El Salvador. When this report speaks of a loss of investor confidence, it is explaining in broad terms what the reader will find in the case studies in very specific terms. Failure to invest in the repair, replacement or maintenance of an industrial machine is the kind of investment decision which this report describes. On the following pages we present a series of these case studies.

Pineda Hermanos, S.A.

PINEDA HERMANOS, S.A., is an example of the "Maquileros" industry. The company was organized in 1973 as a family business by the Pineda brothers who returned from the United States after working for many years in the garment industry in California. The Pinedas' brought back with them the know-how, experience and necessary business connections within the industry that allowed them to start this business with success.

Three years later they established their own organization in California ... today are creating and merchandizing their own designs. Part of the family is now in California and the other is in San Salvador where the plant is operating. The company produces also for the local market 25% of total output while 75% goes to the U.S.

The Company Manager stated that before the war, in 1978, export sales amounted to ¢ 75 million or US$ 30 million a year from the "Maquileros" as a whole. This represents only the billings for the amount of labor and it was produced by approximately 30 assembling plants, employing an average of 500 each or 15,000 workers. However, as a result of the attacks to the plants, fires, strikes and the like, between 1979 and 1980, many of them disappeared and the rest lost their contracts as a result of their inability to comply with orders.

Pineda, however, managed to survive. At this moment, the company has an expansion program to add 150 machines in a new building attached to the existing one at a cost of approximately ¢ 3,000,000 (US$ 600,000 at the new rate of 5 to 1.)

It is estimated that a plant like this can be set up with an investment of US$ 750,000 and that it would employ about 500 workers. As stated by a company official, a factory this size will invoice approximately US$ 20,000 a week or US$ 1,040,000 a year. A skilled seamstress will average ¢ 23 a day or ¢ 6,578 a year.

If the "Maquileros" were again at the 1979 levels, 15,000 more workers would be employed full time, earning nearly ¢ 100,000,000 or US$ 20,000,000 (¢ 5.00 x US$ 1) per year.

Those interviewed estimated that an investment of US$ 625,000 was needed before the war to set up a factory within this industry. It also stated that approximately 30 "Maquileros" plants went out of business, between 1980 and 1981, as a result of the guerrilla action. One can assume then, that the capital investment lost by this industry amounted to about US$ 418,750,000.

It was stated that an average of 500 people were employed by each factory and therefore, 15,000 jobs were lost. Some of these people were, no doubt, absorbed by other factories. However, we believe that this could happen only, by displacing somebody else within the industry, since the unemployment figure are always on the rise.

Based on the total daily minimum salary of ¢ 18.90, a total of ¢ 283,500 (US$ 113,400) a day or ¢ 81,000,000 (US$ 16,200,000) a year in minimum salaries are being lost. We have seen that an average of US$ 1,040,000 per year per factory in foreign exchange produced by this industry is also being lost. That is more than the export value of cotton and sugar combined.

The loss for this industry since 1980 including cost capacity and foregone production can be estimated at ¢ 580,000,000 (U.S.$ 231,000,000).

Finally, company officials stated that the future of this industry depends upon the following:

- a finance program to purchase machinery and equipment;
- incentives to local investors, especially with outside contacts that would allow them to obtain the necessary manufacturing contracts; and
- an effective training program to prepare skilled labor for a high and profitable operation.

Corporación Bonima, S.A.

A subsidiary of McKesson Corporation, this pharmaceutical company was established in El Salvador in 1966. Generic drugs and antibiotics are the main production lines. Sales which are estimated at 4.3 million colones (US$ 860,000) a year, 50% to the local market and 50% to the export market which covers the Central American area, the Dominican Republic and Haiti.

Up until last year, Nicaragua was the second largest buyer of this industry in the Central American region. However, a demand made by the Central Bank of El Salvador requesting Nicaragua to establish Letters of Credit payable in U.S. dollars at U.S. banks, forced the Nicaraguans to withdraw from the market. Attempts were made to maintain the trade through barter of Nicaraguan products for the medicines made by this company but the position adopted by the Nicaraguans of dictating their products for the barter, resulted in the total cancellation of the trade.

The company complains that it is losing the chance to participate in both local and international bids because of its inability to obtain the necessary foreign exchange for the importation of essential raw materials. For the same reason company executives estimate that production levels are at least 25% lower than expected not only for this company but for the whole pharmaceutical industry in El Salvador as well.

This is the largest producer of antibiotics in the Central American area, according to the interviewed and they are looking with great expectation at the future of this line in the local market. However, cooperation from the Central Bank is needed to procure the indispensable raw materials which are 70% of foreign origin and 30% from the Central American region.

Investors have a conservative attitude at the present time, because of the actual production levels and because no dividends have been repatriated since 1981.

No direct loss has been experienced by this company on account of the war. Nevertheless, to prevent attacks, security measures were taken at a relatively small cost.

Lost production time from power blackout is estimated to cost ¢ 411.25 per hour. The company lost 10 hours a week on the average, or ¢ 4,112.50 which represents ¢ 213,850 a year or ¢ 1,496,950 during the seven-year period.

No financial data was made available. However, in the course of the interviews enough information was gathered to be able to form a qualified opinion on the amount of loss through various estimates. The estimated indirect cost of the civil violence can be set at ¢ 28,000,000 or US$ 11,200,000 at the rate of ¢ 2.50:1.

The company has no intention to replace equipment on a large scale in the future, and it is not planning any new investment or expansion. They are now, however, considering the marketing strategy that would allow them to penetrate more deeply into the local market and to increase sales in neighboring countries.

It is the management's opinion that the ability to achieve production capacity depends greatly on the availability of the foreign exchange to purchase the necessary and vital raw materials for this industry.

Foremost Industrias Lacteas CentroAmericanas

This dairy plant was established in El Salvador in 1960 with an undisclosed U.S. capital investment. Four years ago, the U.S. Investors sold their interest to a Salvadoran group. The plant is domiciled in the industrial sector of San Salvador and at the present time employs 270 people including administrative staff.

Milk represents 65% of the basic raw material of this industry and is 100% of Salvadoran origin. Artificial and natural flavors, essential oils, food colorings and butter constitute the other 35% of the raw materials and are imported mainly from the U.S. and the Central American region.

The quantity of milk used by this company, estimated at 5,800,000 gallons, represents 10% of the total production of the country which is approximately 58,000,000 gallons annually.

Dairy plants in El Salvador capture only 20% of total milk production which makes this company the largest consumer of milk in the country.

According to company officials, most of the remaining 80% of the milk goes to a group that is commonly known as "aguateros" (waterman) who are individuals monopolizing the milk by paying higher cash prices for it and then diluting it with water before taking it to the consumer market. Because of the health hazard they represent, "aguateros" are forbidden by law, however, they continue to carry out their trade freely and are preferred by the ranchers.

Besides pasteurization, bottling and distribution of fluid milk, this plant also produces ice cream and ice cream bars, ice sherberts and orange juice. Sales are estimated at ¢ 2,670,000 a month or ¢ 32,040,000 a year. Commercialization of the production of this industry is conducted through a network on independent distributors and the supermarkets.

Company executives estimated lost sales revenues related to civil violence at approximately 8% or ¢ 2,560,000 (about $ one million) per year between 1980 and 1985. No supporting financial data was made available but the estimate is not out of line with reports from other commercial activities and distributors.

They also stated that no new investments have been made in the last 10 years and no new ones are contemplated in the near future in view of the socio-economic and political uneasiness that is going on in the country.

All the equipment now in use is totally depreciated and none would be renewed in the near future. This fact has prevented the company from growing at least 25% from the level at which it has been for the last six years.

Another factor that the company considers to be detrimental to increased sales and profits is the price control exercised by the government and the competition they are facing from IRA (Instituto Regulador de Abastecimientos) which is governmental institution providing subsidized food to the urban area and importing powdered milk and selling it below cost.

Because of an attack made in 1979 by guerrilla units infiltrated in the labor union, with the abduction of some company directors, security precautions were undertaken bringing in additional personnel and equipment at a cost of ¢ 614,000 over six years period or US$ 245,600.

TABLE IV-B-1

INDUSTRIAS LACTEAS CENTROAMERICANA (FOREMOST).
INDIRECT COSTS OF CIVIL VIOLENCE.
IN SALVADORAN COLONES (₡ 2.50 = 1 US$.

	1979	1980	1981	1982	1983	1984	1985	TOTAL
A - Lost Revenues		2,600,000	2,600,000	2,600,000	2,000,000	2,600,000	2,200,000	15,200,000
B - Security Personnel		69,000	69,000	69,000	69,000	69,000	69,000	414,000
C - Security Installations		-	-	-	-	-	200,000	200,000
D - Additional Personnel		7	-	-	-	-	-	7
E - Overtime		90,000	100,000	112,000	125,000	140,000	153,000	906,300
F - Special Training Costs								
G - Air Transport								
H - Land Transport								
I - Additional Energy, Fuel, etc		50,000	50,000	56,000	82,000	102,000	123,000	463,000
J - Heavy equipment								
K - Light equipment							350,000	350,000
L - Insurance Indemnities		12,000	33,000	42,000	129,000	62,000	112,000	390,000
Others - Electrical Plants		50,000	50,000	50,000	50,000	50,000	50,000	300,000
TOTAL								₡ 18,223,300
								US$ 7,289,320

Continuing electricity interruptions have forced the company to pay excessive overtime labor to be able to process the milk received every day and prevent spoilage. This represents a cost of ¢ 906,300 or US$ 362,520 over a seven-year period. This has also forced the company to purchase generators and equipment to supply energy representing a cost of ¢ 620,000 or US$ 248,000.

The cost of additional energy and fuel during the period is ¢ 463,000 or US$ 185,200.

Table IV-B-1 on this case indicates a total of indirect costs of civil violence for this company of ¢ 18,223,300 or US$ 7,289,320 (¢ 2.50 = 1 US$).

No disclosure was made of financial statements, therefore no comments are made on the subject. However, there is the impression that it is a well run and organized enterprise that is doing the best under the circumstances.

Company directors are looking at the future with the hope that soon they could be in a position to run their company with more economic efficiency and less government intervention.

McCormick de Centro America, S.A.

This subsidiary of McCormick products of the United States was established in El Salvador in the late sixties. No disclosure was made of the capital participation. It was stated, however, that a controlling interest is held by the American company.

No financial or statistical information was released by the interviewed executive that would permit financial evaluation of the company. Nevertheless, the following facts were developed during the conversation.

- In 1979 as a result of a takeover of the installations by the labor union, the American management left the country and is now domiciled in Panama. A team of young Salvadorans are now in charge of the management and after moving the administrative offices out of the plant for three years, they returned to it in 1983. No new labor problems have developed since and normal relations prevail now.

- The production of this company covers a wide variety of spices, sauces and dressings. It includes also mayonnaise, tea and herbs. At the present time mayonnaise accounts for 70% of the total production of the company.

- It was stated that 85% of sales goes to the domestic market while only 15% is exported to the Central American area. By contrast, in 1978, 60% of production was exported to the Central American region and only 40% was sold in El Salvador.

- Eighty percent (80%) of the raw materials are imported from the United States and 20% are from local production. However, items such as oil and refined sugar are now very scarce and they are facing the need to import them soon, and difficulty in obtaining the foreign exchange to cover the purchase of materials.

- Management estimated that raw materials cost now 130% more than in 1979. One hundred percent (100%) of this increase is attributed to the devaluation of the local currency and 30% is the effect of inflation.

- The machinery and equipment now in use is between 15 to 17 years old and is totally depreciated. No new investments are being considered now or for the immediate future, because the home office feels there are not enough incentives and it feels very insecure about the future. No credit terms are being extended by the home office and it seems as if this company has been left pretty much on its own.

- No foreign exchange has been authorized to pay dividends for the last five years except for some bonds payable in U.S. dollars that are now slowly being paid.

- No direct attacks have been made against the installations so security is only what is considered normal under the circumstances.

- There is no evaluation of additional production costs caused by the guerrilla action such as lost time by the frequent interruptions of energy. This case study then is only a narrative.

Management stated at the end of our interview that an investment of ¢ 3,000,000 (US$ 600,000 at the present rate of 5:1) would be necessary to reactivate this company. This would double present production in a two years period. In the mean time, management is looking at the future with reservation.

Productos Del Cafe, S.A.

This industry was founded in 1954 with an undisclosed 100% American controlled capital, to produce decaffeinated and soluble coffee, as well as caffeine extract.

It was the only industry of its kind in El Salvador and has experienced steady growth according to the executive we interviewed.

In 1975 the Americans sold the company to a Salvadoran group and today it is 100% controlled by the nationals.

In 1979, in spite of the war, plans were developed to improve the manufacturing process for decaffeinated coffee. The company claims that it is the only one of its kind in Latin America and that offers have been made to purchase from them this new technology. This plant represented an investment of ¢ 6,000,000 or US$ 2,400,000 and was also intended to increase the production level from approximately 1,650,000 kilos in 1978 to 2,000,000 in a ten-year period. This increase, however, has not been accomplished according to company executives, for reasons other than the war, especially the stagnation of the Central American Market. Another reason is the continuous struggle they have with INCAFE which is the Government monopoly controlling the marketing of coffee in El Salvador.

The company claims that because of the controls in INCAFE it can only maintain limited amounts of raw material, enough for ordinary production schedules; however, when new orders are received, the bureaucracy of INCAFE is incapable of supplying the necessary coffee on time. Orders cannot be served on time and business is lost that way.

In less than two years, according to those interviewed, this industry, in what seems to be a paradox, will have to import the necessary coffee if it is going to survive.

Revenues have been steadily growing not because of a continuous production increase, which, on the contrary, decreased to its lowest level of 1,130,818 kilos in 1982, but because prices have gone up 67% during the seven-year period. Management stated that if production estimates could be achieved as planned, 1986 would mean a total of 1,900,000 kilos with revenues of ¢ 82,764,000 instead of the 60 to 65 million colones then are expected at the end of this year.

TABLE IV-B-2

PRODUCTOS DEL CAFE, S. A.

ANALYSIS OF LOST REVENUES

		1979	1980	1981	1982	1983	1984	1985	TOTAL
ACTUAL PRODUCTION IN KILOGRAMS		1,653,065	1,499,414	1,429,132	1,130,818	1,489,257	1,561,097	1,380,262	10,143,04
PRICE PER KILOGRAM	¢	26.00	28.78	33.33	36.23	36.23	36.23	43.56	-
ACTUAL REVENUES	¢	43.017.178	42,642,462	41,132,154	43,095,305	53,955,787	56,558,576	60,132,140	340,533,60
ESTIMATED PRODUCTION IN KILOGRAMS		1,653,065	1,677,859	1,703,026	1,728,571	1,754,500	1,780,817	1,807,529	12,105,36
ESTIMATED INCOME	¢	43,017,178	48,288,782	56,761,856	62,626,127	63,565,535	64,517,999	78,735,963	417,514,4
ESTIMATED LOST REVENUE	¢		5,646,320	15,629,702	19,530,822	9,609,748	7,960,423	18,603,823	76,980,8

The enclosed table shows an estimated amount of ¢ 76,980,838 (US$ 30,792,335) as lost revenues for the seven-year period.

Company executives stated that since 1980 when the plant was occupied by the labor union, no labor problems have emerged since. There is a 300-worker labor force and labor relations are going well. Without disclosing figures, management stated that salaries are above average for this industry.

No losses have been caused by direct actions of the guerrillas. Security precautions are no more than the ordinary and they are considered only a normal business expense.

No major problems are caused by the continuous electricity failures, since the plant was originally built with its own generating capacity.

Fifty percent of the production is sold to the local market and 50% to the export market. United States and Japan are the larger buyers of the export trade. The company is aiming at this market rather than the Central American. Management strongly believes that before new investment or development plans are undertaken, confidence in the economic policies must be gained, political stability obtained and social reforms finally achieved.

In the meantime, plans to reach the desired levels of production are on the way, hoping to penetrate new markets especially those that could generate the foreign exchange that is so badly needed in the country.

La Constancia, S.A.

This brewery was established in 1906 and is the only one of its kind in El Salvador. Total production averaged 3,860,550 cases of 24 bottles every year, valued at 93,406,714 colones or US$ 37,362,685 (2.50:1) per year between 1979 and 1985. As shown on Table "A," beer represents 32% of the total production of beverages in the country, preceded by soft drinks which in turn account for 33% of the output.

Labor force consists of 780 people including administrative staff.

Raw materials such as malt and hops are imported from the United States, France and Germany. Rice and sugar are of local production. Bottles are from Guatemala.

Sales showed an increase from ¢ 67,115,000 or US$ 26,846,000 in 1979 to ¢ 140,305,000 or US$ 56,122,000 in 1985, caused by a price increase as shown on the enclosed Table "B" from ¢ 15.60 to ¢ 33.60 per case. However, production by number of cases showed a reduction from 4,302,244 cases in 1979 to 3,442,421 cases in 1983 or 20%. In 1984 and 1985 there was a recovery that brought production up to a level of only 3% less than 1979.

The company is hoping to regain in 1986 the level of cases sold in 1979.

At the end of 1978, the company completed plans for a new brewery plant at a cost of US$ 25 million that would partially replace the traditional glass bottle with aluminum cans and would allow the market to expand into the Central American area. This new plant could have increased production by 20%. Had this been accomplished, sales would have increased to 5.1 million cases a year representing an estimate gross revenue of ¢ 172,607,000 of US$ 69,042,800 for 1985. However, in 1979, in view of the increasing violence, the expansion plan was postponed.

It was definitively abandoned when in 1980, the agrarian reform took the land in which the new plant was going to be built. This was part of a farm owned by the same group and it was considered the ideal site for a brewery, because of the abundant water provided by the river crossing the ranch. This land, by the way, is now part of a cooperative that is idle and unproductive according to company executives.

During 1979-1981, numerous direct attacks were made against the company. Labor strikes and abduction of the owners by union members took place in 1980. These are some of the reasons for the production drop as well as the increase of violence in the Eastern Region which caused this market to be lost almost entirely.

TABLE IV-B-3

LA CONSTANCIA, S. A.

ANALYSIS OF LOST REVENUES

	1979	1980	1981	1982	1983	1984	1985	TOTAL
COST PER CASE SOLD	15.60	19.20	20.16	22.56	27.84	30.96	33.60	
NUMBER OF CASES SOLD	4,302,244	3,421,198	4,104,613	3,863,032	3,442,421	3,714,600	4,175,744	27,023,852
REDUCTION PER YEAR		20%	5%	10%	20%	14%	3%	
ACTUAL REVENUES	67,115	65,687	82,749	87,150	95,837	115,004	140,305	635,847,000
ESTIMATED SALES BY CASES	4,302,244	4,431,311	4,564,250	4,701,178	4,842,213	4,987,479	5,137,103	32,965,778
ESTIMATED REVENUES	67,115	85,081	92,015	106,058	134,807	154,412	172,607	812,095,000
LOST REVENUES		19,394	9,266	19,908	38,970	39,408	32,302	158,248,000

Attacks on the distribution trucks were also frequent during these years. Losses are estimated at ¢ 500,000 or US$ 200,000.

As stated by the management, Table IV-B-3 shows estimated lost revenues of ¢ 158,248,000 or US$ 63,299,920 for the seven-year period or US$ 9,042,742 a year.

At this point, company executives do not have any new development plans. The main interest is to recapture the levels of production of 1979. Management is very concerned that production programs are often delayed by the inability to obtain the foreign exchange to pay for imported raw materials.

Cigarreria Morazan, S.A.

This cigarette manufacturing company was established in 1929. The company produces a variety of filter cigarettes under seven different brand names. Its work force is made up of approximately 300 people and it is domiciled in the industrial sector of the city of San Salvador. The tobacco used by this industry is 100% Salvadoran, while the cellulose and paper are usually imported from Europe.

The executive we interviewed during our visit stated that the company has captured 85% of the total tobacco market and that the remaining 15% is in the hands of a Guatemalan controlled enterprise, called Tabacalera de El Salvador, S.A., which produces under license some of the traditional U.S. brands. The market for cigars, pipe and chewing tobacco is negligible in El Salvador.

At the time of this writing, the cigarette industry benefits from the prohibitions placed on the imports of tobacco products into the country. Company sales are estimated at ¢ 160,000,000 for 1986.

The production of this company is geared to the local market, and only 1% of its output goes to the export market. Efforts are being made, however, to increase export sales, particularly in the Central American Common Market.

Company officials, stimulated by the increase of sales during 1986, are hoping to regain the levels of growth shown in years prior to 1979 or 5% yearly.

No balance sheets of profit and loss statements were submitted, that would allow us to analyze performance or financial status. Therefore, we are depending entirely on the information furnished by those interviewed.

An analysis of the sales records between the years 1979 and 1986 indicates an increase of 16% on the average. However, as stated by the interviewed, under normal circumstances, sales would have experienced an increase of approximately 25% during this period.

The company estimates that it has lost 10% of annual sales because of the guerrilla, which amounts to ¢ 55.208 million during these seven years period of ¢ 7,886,857 every year.

The company has suffered serious and costly attacks to its distribution trucks with the loss not only of merchandise but cash carried by drivers, particularly during the years of 1980, 1981 and 1982. These attacks were reduced during 1983 and 1984. However, in 1985 new attacks took place, during the general strikes or highway blockades ordered by the insurgency which again increased the losses. The interviewed stated that a new kind of attacker has emerged and they cannot now differentiate between guerrilla actions or acts of banditry and plunder. The estimated cost of the attacks amounted to ¢ 2,624,000 during the period. Through the years, the damages sustained by trucks amounted to ¢ 76,000.

Insurance premiums have also increased at a rate of ¢ 230,000 additionally every year since 1980 or ¢ 1,380,000 during the period. Security personnel and installations are now necessary and they represent a cost of ¢ 328,000 during the period.

Table IV-B-4 indicates a total direct cost of the insurgency to this industry to be ¢ 2,700,000 due to attacks and robberies, or US$ 1,080,000. Table IV-B-5 shows an estimated indirect cost of the violence to be ¢ 56,840,000 or US$ 22,736,000 (1 US$ = ¢ 2.50), mostly because the value of lost sales, which appears to be a conservative estimate.

Finally, no new major investments are being considered for the immediate future. In the meantime, company officials, are looking at the future with reserve until the social and political reforms which are going on in El Salvador are completed and stability is achieved.

Kimberly-Clark De C.A., S.A.

A subsidiary of Kimberly-Clark Corporation of the United States, this company was established in 1972 with the expectation of supplying not only the local market but the Central American Common Market as well. This manufacturing plant produces paper products such as tissue paper and towels for the consumer market and the traditional brands of sanitary napkins.

Raw material consumed by this company such as virgin wool pulp, secondary fibre and chemical colorings, which present 70% of their needs, are imported from the U.S., Mexico and Switzerland. The remaining 30% is mainly recycled paper and comes out of a local plant. The firm employs an average labor force of 250 skilled and semi-skilled workers.

Company sales at this point are estimated at ¢ 72,000,000 (US$ 14,400,000) a year. Seventy percent (70%) goes to the local market or ¢ 50,400,000 and the 30% balance which amounts to ¢ 21,600,000 is exported to the Central American Common Market.

Sales between the years of 1981 and 1985 have increased from ¢ 48,000,000 to ¢ 72,000,000 or 33%. In dollar terms, because of the 100% devaluation, sales have actually declined from 19.2 million to 14.4 million. However, company

TABLE IV-B-4

SUMMARY OF DIRECT COST OF DAMAGES TO INSTALLATIONS.
PRIVATE SECTOR -- 1979-1985.
CIGARRERIA MORAZAN.

	1979	1980	1981	1982	1983	1984	1985	TOTAL
BUILDINGS								
HEAVY DUTY EQUIPMENT								
LIGHT WEIGHT EQUIP. AND TOOLS								
OTHER -VEHICLES		45,900	9,500		11,600	3,000	6,000	76.000
MERCHANDISE STOLES DURING HIGHWAY ROBBERIES		480,000	516,000	564,000	193,000	368,000	503,000	2,624,000

TABLE IV-B-5

INDIRECT COSTS OF CIVIL VIOLENCE.
CIGARRERIA MORAZAN
IN SALVADORAN COLONES (¢ 2.50 = 1 US$.

	1979	1980	1981	1982	1983	1984	1985	TOTAL
A - Lost Revenues	5,699,000	7,347,000	7,468,000	7,752,000	8,580,000	9,839,000	10,523,000	55,208,000
B - Security Personnel							73,000	73,000
C - Security Installations		96,000	-	-	-	-	16,000	112,000
D - Additional Personnel			10,000	20,000	20,000	20,000	25,000	95,000
E - Overtime		5,000	5,000	5,000	5,000	5,000	5,000	30,000
F - Special Training Costs			3,000					3,000
G - Air Transport								
H - Land Transport					5,000	5,000	5,000	15,000
I - Additional Energy, fuel,etc								
J - Heavy equipment								
K - Light equipment								
L - Insurance Indemnities		230,000	230,000	230,000	230,000	230,000	230,000	1,380,000
Others								

TABLE IV-B-6

CIGARRERIA MORAZAN.

Comparative Analysis of Sales.
(In thousand colones.)

YEARS	100% Industry	Share of Market (85%)	% Increase
1979	67,051	56,993	
1980	86,436	73,471	29 %
1981	87,853	74,676	2 %
1982	91,200	77,520	4 %
1983	100,937	85,796	11 %
1984	115,747	98.385	15 %
1985	123,800	105,230	7 %
1986	160,000	136,000	29 %

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officials claim that the actual sales are at least 10% lower than the projected amounts, mainly because of the production lost during the times of the electricity failures and the inability to meet their production schedules.

During an interview with the Production Manager of the company, a cost estimate of the time lost during power failures was made. It indicates that an average of 80 hours a month has been lost for the last six years. One production hour is estimated at ¢ 1,800 which represents ¢ 144,0000 a month or ¢ 1,728,000 every year lost production cost. An estimated total of ¢ 8,640,000 was lost because of power failures.

This has adversely affected the company sales program especially within the Central American Common Market. The company estimates that a total of ¢ 27,000,000 in sales have been lost during this period.

Another important factor in the production programs of the company and subsequently in its sales is the increasing problems they have in obtaining, on time, the necessary raw materials that have to be imported. This is due to the overwhelming red tape they have to overcome at the Central Bank's level in order to acquire the foreign exchange needed to pay for these raw materials at the point of origin.

In 1980 the plant was occupied by the workers' union. Some of the executives were abducted but no physical harm was done to them and no damages were caused to the installations.

A compromise was made and no further labor problems have developed since. However, this prompted the management to increase security by constructing huts, installing electrical gates and adding personnel and equipment. The cost of security amounts to ¢ 1,035,000 during the six-year period.

No other data was provided that would allow comment on financial status, but a short visit to the plant and offices indicates that this is a well-organized, well managed enterprise. Company officials stated that no new development or investment plans are being considered for the immediate future.

The social and political reforms going on in El Salvador, discourage U.S. investors. No repatriation of dividends have been authorized during the last five years. Bonds in U.S. dollars, with a five-year maturity to cover dividends were issued for the last time in 1981 and are now being redeemed. The uncertain revitalization of the Central American Common Market is also preventing this company from fulfilling its sales objectives.

In a nutshell, a conservative estimate of indirect cost of the civil violence for this company so far amounts to ¢ 36,675,000 or US$ 14,670,000. However, company officials are hesitant to charge it all to the war.

Conelca - Conductores Eléctricos De Centro América

In 1962, Phelps Dodge de Centro America was established as a wholly-owned subsidiary of PHELPS DODGE CORP., of the United States. In 1978, however, a Salvadoran group bought 23% of the stock for an undisclosed amount, thus reducing the American participation to 77% and changing the name to Conductores Electricos de Centro America. The management team is now strictly national but policies are established at the Home Office in the States.

The labor force is made up of 254 Salvadorans. Raw materials consisting of copper, aluminum, cooperclad, brass, steel, P.V.C. and polyethylene are 90% imported from the States, Mexico, Japan, Canada and France. Only 10% is of local production. Company officials claim that the normal importation of raw materials is being hindered by the paperwork at the Central Bank which delays applications for foreign exchange and results, on many occasions, in the lost of sales caused by the lack of raw materials.

Sales are estimated at ¢ 70,000,000 (US$ 14,000,000) for 1986. Sixty percent (60%) are local sales or ¢ 42,000,000 and 40% are exports to the Central American Market.

It is estimated, however, that an average of 12% of potential annual sales between 1979 and 1985 were lost, particularly in the Eastern Region of the country and in the Central American market, because of the inability to fulfill sales orders. The estimated total lost sales amounts to ¢ 24,292,000 during this period or US$ 9,716,800 (¢ 2.50 = 1 US$).

Security personnel are also very expensive for this company and it is estimated at ¢ 2,028,000 or US$ 811,200 for the seven-year period. Overtime needed to make up for lost production time has been estimated at ¢ 855,000 or US$ 342,000 during the same period.

Lost production time, caused mainly by energy failures, is estimated at 80 hours per month. One production hour is valued at ¢ 850 which represents ¢ 68,000 every month or ¢ 816,000 every year. Therefore, the total amount of lost production time caused by the interruption of the normal supply of energy amounts to ¢ 5,712,000 or US$ 2,284,000 during this time.

Distribution costs have gone up by ¢ 446,000 during this period, mainly because inland freight charges increased due to fuel prices.

Balance sheets or profit and loss statements were not disclosed by the management of this company, that would allow us to prepare an analysis of the financial indicators. Therefore, this case study is based only on the figures and information obtained during personal interviews.

The total value of indirect costs of the civil violence for this company has been estimated at ¢ 33,333,000 or US$ 13,333,000. However, managers are not certain whether all can be attributed to the war or how much of it has been caused by other factors such as depression of the Central American Market or the economic policy of the government.

No new investment plans are in the works for the immediate future of this business. Company management estimates that installed capacity could generate approximately 20% more production which would increase annual sales up to ¢ 84,000,000 or US$ 16,800,000, provided that the foreign exchange necessary for the raw materials is readily available. They are confident they could accomplish this sales expansion in less than a year. A wait-and-see attitude is prevailing among the members of the management team until the socioeconomic and political reforms in El Salvador are consolidated.

Corinca - Corporación Industrial CentroAmericana, S.A.

This steel mill produces wires, nails, spikes, bars and plates for the construction industry. It has a work force of 300 workers operating out of two plants. One located in Quezaltepeque, Northwest of San Salvador, and the other one in the industrial sector of the capital city. One produces steel plates and the other produces wires, nails, spikes and bars. Sales for 1985 amounted to ¢ 21,218,977 (US$ 8,487,590) which is the highest since the civil war began in 1979.

A comparative analysis indicates that sales during 1981 were 46% lower than in 1979. The reason given for this decrease was the fact that in 1980 and 1981 the plants were occupied by the labor unions and management was not allowed inside the plants. However, in 1982, under new management, the company regained control and normal operations were re-established. That year, sales went up 28% to ¢ 10,429,176 (US$ 4,187,670), still 30% lower than in 1979. Since 1982, sales have increased 52% to the level previously indicated. An average of 70% of total sales goes to the local market and 30% to the Central American region, especially Honduras.

Financial statements for a period between 1979 and 1985 were provided. Comparative analyses of both balance sheets and profit and loss statements follow which indicate that this company has been operating for many years under a very strong financial stress, caused mainly by excessive debt as expressed by the current ratio. Company officials under the new management have refinanced this debt and this is why the amounts of long-term debt are higher between 1981 and 1984.

Company executives stated "that this situation was aggravated during the years when the plants were occupied by union members," but indications are that the increase in sales between 1984 and the first five months of 1986 will definitely eliminate the accumulated deficit that in 1983 was ¢ 6,126,967 (US$ 2,450,786).

Since the days of the occupation of the plants by the union, security installations were made and special personnel were added. This represents an indirect cost of ¢ 1,732,848 (US$ 693,139) during the past six years.

Distribution costs have gone up to ¢ 425,27? (US$ 170,109) during the same period mainly because inland freight increases were caused by higher fuel prices. Electricity failures are causing an estimated lost of production time of 60 hours a month at ¢ 101.50 per hour. This represents ¢ 6,090 a month or ¢ 73,080 (US$ 29,232) a year for a total of ¢ 511,560 (US$ 204,624) during the period.

Additional energy needed to regain temperature in ovens and furnances after electricity blackouts is estimated at ¢ 638,969 (US$ 255,587) for the last six years.

Lost revenues from sales during the same period are estimated at ¢ 21,000,000 (US$ 8,400,000). This amount will bring up to ¢ 24,343,649 (US$ 9,737,459) the total of indirect costs of the Civil War for this company.

The company complains that the new system instituted by the Central Bank in January 1986 makes the opening of letters of credit for the purchasing of raw material cumbersome and very expensive. Upon the presentation of the application for L/C, a deposit in colones for 25% of the value of the merchandise must be made. The commercial bank opening the letter of credit establishes, in the name of the importer, a certificate of deposit earning 11.5% interest per year. When the shipping documents arrive in El Salvador, a new deposit for 50% of the value has to be made and a new C.D. under equal terms is then opened.

Finally, after a mandatory 90 days, the credit becomes due and the importer must pay the remaining 25%. During this time, however, the commercial bank is charging interest since the opening day of the L/C for the total amount of the credit at rates higher than the 11.5% the importer is earning from his certificates of deposit.

Company officials feel that the recuperation experienced between 1982 and 1986 is due, in part, to the ability to obtain, during this time, the necessary foreign exchange to purchase the raw material needed for the production; however, they strongly believe that it is now in serious jeopardy since the new measures taken by the Central Bank are making it almost impossible to maintain the production schedules. These feelings and fears are shared, by the way, by almost all the executives of the companies visited during the preparation of this report. They are all afraid that the small recovery experienced between those years (1982-1985) is going to come to a halt as a result of the economic measures taken by the central government in February 1986, which are making it very difficult for the manufacturing sector to maintain the level of raw material inventories that would allow them to continue this small recovery trend.

Discouraged by the prevailing situation in El Salvador, the management of this company has decided to put aside plans to improve the manufacturing technique in the laminating plant, at a cost of US$ 1,850,000, that would allow them to accelerate the process and increase production.

It is estimated also, that to bring this particular industry to a full capacity level, the labor force would be working three shifts a day at a cost of ¢ 3,520,000 a month, or ¢ 42,240,000 a year (US$ 8,448,000 at the a new rate of ¢ 5 to $ 1).

CORPORACION INDUSTRIAL CENTROAMERICANA, S.A.

COMPARATIVE ANALYSIS OF GENERAL BALANCES PERIOD 1979 - 1985 (IN SALVADOREAN COLONES)

CURRENT ASSETS	1979	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
ASH AND BANKS	66.216	103.818	57	143.074	38	454.023	217	354.425	22	98,930	72	1,113.105	1027
CCOUNTS RECEIVABLES	2,143.916	1,629.187	24	1,673.742	3	2,422.957	45	682.724	72	2,687.543	294	2,694.701	0.5
NVENTORIES	6,681.682	5,957.181	11	4,923.744	17	4,334.410	12	3,824.758	12	4,673.746	22	6,1663.376	32
NVESTMENTS IN OTHER COMPANIES	99.990	99.990	-	104.990	5	104.990	-	104.990	-	104.990	-	104.990	-
IXED	7,615.616	9,986.504	31	10,081.396	1	9,890.166	2	11,026.049	11	10,502.096	5	9,815.487	7
THER ASSETS	313.083	873.776	179	1,125.925	29	1,385.596	23	170.142	88	116.063	32	79.173	32
EFECITS PREVIOUS YEARS	524.256	-	100	-		-		-		-		-	
THER EXPENSES	916.541	552.326	40	598.167	8	624.300	4	-	100	-		-	
TOTAL ASSETS	18,361.300	19,202.782	5	18,651.038	3	19,216.441	3	16,163.088	16	18,183.368	12	19,972.832	10
LIABILITIES													
CCOUNTS AND PAYABLES	6,745.619	7,920.979	17	3,168.543	60	4,877.672	54	1,522.395	69	3,760.759	148	6,212.991	64
ONG TERM DEBTS	3,194.437	3,536.257	11	8,409.351	138	7,491.045	11	10,707.290	43	9,552.158	11	8,178.005	14
ESERVES AND CAPITAL	8,421.244	7,744.500	8	7,073.144	9	6,847.724	3	3,933.403	43	4,850.451	23	5,581.836	15
THER LIABILITIES	-	1.046	100	-		-		-		-		-	
TOTAL LIABILITIES	18,361.300	19,202.782	5	18,651.038	3	19,216.441	3	16,163.088	16	18,183.368	12	19,972.832	10

	1979	1980	1981	1982	1983	1984	1985
) CURRENT ASSETS / CURRENT LIABILITIES =	2,210.132 / 6,745.619 =.32:1	1,733.005 / 7,920.979 =.21:1	1,816.816 / 3,168.543 =.57:1	2,876.980 / 4,877.672 =.58:1	1,037.149 / 1,522.395 =.68:1	2,786.473 / 3,780.759 =.73:1	3,809.806 / 6,212.991 =.61:1
) DEBT / NET WORK =	9,940.056 / (4,535.487) =(2.19)	11,457.236 / (6,187.974) =(1.85)	11,577.894 / (1,351.727) =(8.56)	12,368.717 / (2,000.692) =(6.18)	12,229.685 / (485.246) =(25.20)	13,332.917 / (994.286) =(13.40)	14,390.996 / (2,403.185) =(5.98)
) NET WORK / FIXED ASSETS =	(4,535.487) / 7,615.616 =(.59)	(6,187.974) / 9,986.504 =(.13)	(1,351.727) / 10,081.396 =(.13)	(2,000.692) / 9,890.166 =(.20)	(485.246) / 11,026.049 =(.04)	(994.286) / 10,502.096 =(.09)	(2,403.185) / 9,815.487 =(.24)

CORPORACION INDUSTRIAL CENTROAMERICANA, S.A.

COMPARATIVE ANALYSIS OF PROFIT AND LOSS PERIOD 1978 - 1985 (in salvadorean colones)

	1979	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
GROSS SALES	15,160,297	9,191,260	(39)	8,315,860	(9)	10,603,776	28	14,941,354	41	NA		NA	
Less: DEDUCTION OVERSALES	131,084	59,384	(55)	137,629	132	134,600	(2)	136,700	2	NA		NA	
NET SALES	15,029,213	9,131,876	(39)	8,178,231	(10)	10,469,176	28	14,804,654	41	18,690,999	26	21,218,977	14
TOTAL COST OF SALES	11,945,128	7,648,783	(36)	6,459,640	(15)	7,977,574	23	10,728,738	86	14,270,502	33	16,146,980	13
GROSS PROFIT	3,084,085	1,483,093	(52)	1,718,591	16	2,491,602	45	4,075,916	64	4,420,497	8	5,071,997	15
SELLING EXPENSES	811,267	526,080	(35)	384,477	(27)	539,570	40	785,735	46	1,204,865	53	1,504,504	25
ADMINISTRATIVE EXP.	1,072,834	1,217,499	13	677,855	(44)	655,270	(3)	650,084	(1)	1,001,526	54	1,320,518	32
FINANCIAL EXP.	1,535,658	1,291,487	(16)	1,301,398	1	1,483,030	14	1,815,031	22	1,393,385	(23)	1,536,504	10
TOTAL OPERATIVE EXPENSES	3,419,759	3,035,066	(11)	2,363,730	(22)	2,677,870	13	3,250,850	21	3,599,776	11	4,361,526	21
TOTAL OPERATIVE PROFIT AND LOSS	(335,674)	(1,551,973)	362	(645,139)	(58)	(186,268)	(71)	825,066	342	820,721	(1)	710,471	(13)
OTHER INCOME	197,327	53,792	(73)	11,031	(79)	125,436	1,037	121,984	(3)	235,764	93	167,930	29
OTHER EXPENSES	12,523	152,930	1,116	37,251	(76)	164,589	342	519,604	216	139,437	(73)	147,016	5
TOTAL OF OTHER INCOME & EXPENSES	184,804	(99,138)	(46)	(26,220)	(74)	(39,153)	49	(397,620)	916	96,327	76	20,914	(78)
TOTAL PROFIT & LOSS	(150,870)	(1,651,111)	994	(671,359)	(59)	(225,421)	(97)	427,446	90	917,048	114	731,385	(20)
ACCUMULATED DEFICIT AT BEGINING OF YEAR								(1,725,340)		(6,127,967)		(5,210,919)	
CORRECTION TO ENTRIES OF PREVIOUS YEARS (NOTE 8)								(4,829,073)					
ACCUMULATED DEFICIT								(6,126,967)		(5,210,919)		(4,478,534)	

	1979	1980	1981	1982	1983	1984	1985
1 NET SALES / ACC. RECEIVABLES	15,028,214 / 2,143,916 = 7.01	9,131,876 / 1,629,187 = 5.60	8,178,231 / 1,673,742 = 4.88	10,469,176 / 2,422,957 = 4.3	14,804,654 / 682,724 = 21.68	18,690,999 / 2,687,543 = 6.95	21,218,977 / 2,694,701 = 7.84
2 NET SALES / INVENTORIES	15,028,214 / 6,681,682 = 2.24	9,131,876 / 5,957,181 = 1.53	8,178,231 / 4,923,744 = 1.66	10,469,176 / 4,334,410 = 2.4	14,804,654 / 3,824,758 = 3.87	18,690,999 / 4,673,746 = 3.99	21,218,977 / 6,163,376 = 3.44
3 NET SALES / FIXED ASSETS	15,028,214 / 7,615,616 = 1.97	9,131,876 / 9,986,504 = 0.91	8,178,231 / 10,081,396 = 0.81	10,469,176 / 9,890,166 = 1.0	14,804,654 / 11,026,049 = 1.34	18,690,999 / 10,502,096 = 1.77	21,218,977 / 9,815,487 = 2.16
4 NET INCOME / NET WORTH	(150,869) / (4,535,487) = 0.03	(1,651,112) / (6,187,974) = 0.26	(671,355) / (1,351,727) = 0.49	(225,420) / (2,000,692) = 0.1	(6,126,967) / (485,246) = 12.62	(5,210,919) / (994,286) = 5.24	(4,478,534) / (2,403,185) = 1.86

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Textiles San Andres, S.A.

Situated 32 kilometers West of San Salvador, on the road to the city of Santa Ana, this textile industry was founded by Salvadorans more than 20 years ago. Eighty percent (80%) of the main production lines, towels and bedspreads, are sold in the export market in Central America, Europe, South America and in the United States. As compared to 1979, the company's sales showed a decrease from ¢ 98,747,000 (US$ 39,498,000) to ¢ 89,430,000 (US$ 35,772,000) or 9% in 1985.

As stated by company executives, sales projections show a difference between actual sales of ¢ 98,747,000 (US$ 39,498,000) in 1979, which is the base year of this analysis, and the estimated sales for 1985, ¢ 117,909,000 (US$ 47,163,000), of ¢ 19,162,000 (US$ 7,664,800), 16$ less.

The company's production represents, on the average, 30% of output of the textile industry in El Salvador. This company also claims that it consumes annually, an estimated 20% of the total production of cotton in the country. This cotton has an approximate total value of ¢ 266,843,000 (US$ 106,737,200) during the seven-year period.

On the following page is a table indicating the average cost of cotton per quintal, paid by this company during the same period.

No financial statements or profit or loss statements were revealed by the company so no comments can be made. However, during the course of the interviews, company officials agreed to release some information in terms of percentages and those were the basis for this analysis.

Looking at the tables, one can see that 1982 shows a decrease in profits, compared to the base year 1979 of 28.5%. For 1983 it shows a gain on this percentage up to 5.6% of the base year. Again, 1984 appears to be a bad year when costs went up to 80.28% of total sales. In 1985, however, profits are up 54% from base year and costs reduced to 72.63%, increasing profits to approximately ¢ 28,479,000 or US$ 11,391,600.

TEXTILES SAN ANDRES

Comparative Statement of Profits 1979-1985

Base year 1979-80 = 100%

1980-81	19.	% up from base year
1981-82	4.4	% " " " "
1982-83	- 28.5	% down from base year
1983-84	5.6	% " " " "
1984-85	- 32.	% up from base year

Comparative analysis of cost of sales

1979-80	66.88%
1980-81	65.23%
1981-82	64.90%
1982-83	75.84%
1983-84	74.89%
1984-85	80.28%
1985-86	72.63%

Cost of cotton during the period 1978-1985.

1979-80	176.55 qq
1980-81	182.15
1981-82	209.47
1982-83	162.20
1983-84	184.23
1984-85	197.50
1985-86	254.00

Comparative analysis of variation of the firm's assets between 1978-1985

1979-80	Base year.	
1980-81	1.30	% up from base year
1981-82	3.1	% " " " "
1982-83	6.19	% " " " "
1983-84	11.64	% " " " "
1984-85	13.13	% " " " "
1985-86	17.52	% " " " "

Looking at the table showing the variations of the firm's assets, the reader can see that there is a steady increase in the percentages as compared to the base years. Although no explanation was given, it is assumed that this is due to the inventory increase coming from the accumulation of raw material inventories and unsold finished products.

A process of moving the plant from its original site, in the old industrial sector of San Salvador to the new one on the road to Santa Ana began in 1979. However, due to the intense guerrilla activity of the next three years, this action was postponed and only in 1984 was the move finally accomplished. As a precautionary measure, company directors remained absent from the plant during the first two years of this action.

At the end of 1984, when the transfer of equipment was completed, 100% of the equipment was finally ready, but up until now a total utilization of the plant's capacity has not been obtained. Company officials are doubtful they can reach a 100% usage of the installed capacity of the plant in the immediate future.

The drastic reduction in cotton production in El Salvador is forcing the company to import for 1985-86 an amount equal to 40% of its cotton needs. This represents a reduction of production costs of approximately 7%. In addition to this, it is expected that 2% of the fibre can also be saved since imported fibre produces less waste.

Distribution costs are expected to increase due to freight charges estimated to be 113% higher to Guatemala; 133% higher to Costa Rica and 100% other destinations.

It is estimated that 16% of revenues have been lost during the seven-year period but company officials are reluctant to admit that this is a result of the war.

Company executives estimate, rather, that in terms of the demand from the Central American Market, a period of stagnation is preventing this company from achieving a full level of production and that it will take the company only one year of stability to reach its goals.

In the meantime, the company is looking at the future with reservation. No expansion plans are being considered until socioeconomic reforms are completed and confidence is restored.

Conclusion

The above case studies have a common theme. The various companies all believe that they have not fully exploited their respective markets; they believe that market opportunity exists. They recognize that there has been an economic stagnation in the Central American Common Market, their main potential outlet for increased production, but they all seem to feel that any increase in production would be easily absorbed by that or other markets. This is, of course, a rational attitude for a small country, small industry entrepreneur to take; his market share is small enough to be easily expanded. Market stagnation is sometimes used to explain lost sales in the past, but it does not seem to be considered a future constraint. The constraint is on the supply side, the limitations on expanding output. Virtually every businessman interviewed cited the same causes for limited output: lack of investor confidence and consequent failure to replace or expand the infrastructure and equipment base and difficulties in obtaining foreign exchange and hence imported raw materials.

In the matter of investor confidence, their own confidence and that of others, the entrepreneurs tended to lump together the effect of the Civil War and the uncertainties created by programs of social and economic reform. Regarding the difficulty in obtaining foreign exchange, they tended to blame the Central Bank's procedures and policies, not recognizing any real shortage. The perception of the business class, as indicated in this report, is that the present government is inimical to private enterprise, almost as much as the communist guerrillas. Given the rhetoric of the government during the period this report was being written, this is probably an accurate perception.

However, it makes the task required in the preparation of this report almost impossible. How does one separately calculate declines in manufacturing output caused by the war from those caused by general distrust and reluctance to maintain production and productive capacity.

In constant 1962 prices, manufacturing produced 657 million colones worth of goods in 1979. Each year since output has been less. The total accumulated difference is about 850 million colones of product at 1962 prices. This represents about twenty percent of potential manufacturing output over the war years and confirms the educated guesses of the individual entrepreneurs.

In the absence of war, production would not have grown much if at all; the political uncertainties and exogenous economic factors would have seen to that. But the twenty percent loss in output must be considered overwhelmingly war-related. Theoretically, we should convert constant colones into current colones and then convert them into current dollars. However, this would not change the basic conclusion. The manufacturing sector's losses due to civil violence were about 850,000,000 1962 colones or US $340,000,000 at the then prevailing rate of exchange.

C. Transport

Most of the transport of passengers in the country is carried out by bus cooperatives. For this case study, we have selected "ACOPATT," Asociacion Cooperativa de Transporte Terrestre (Cooperative Association of Land Transport) which is domiciled in San Salvador and operates an urban route. ACOPATT was formed in October 1973 when the stock of ELISA, S.A. a public corporation, was sold to its workers. One hundred and sixty (160) of the 200 employees are now owner-members of this cooperative.

A bus cooperative is normally managed by an administrative council formed by five members which appoints a manager. There is a vigilance committee of three members as well as a supplies committee of three members. These committees are appointed for three years by a general assembly and can be re-elected.

Only employees can participate in the cooperative. A minimum contribution of ¢ 25 is required which is also the value of one share. The maximum individual participation is 200 shares of ¢ 25.00 or ¢ 5,000. One has to be a citizen of legal age, without a police record, to be part of this cooperative.

Financial information for a ten-year period between 1975 and 1985 was obtained. An increase of 39% was experienced in the operating revenue between the years of 1975 and 1978, from ¢ 2,912,000 or US$ 1,164,997 to ¢ 4,799,818 or US$ 1,919,927. In the years between 1979 and 1981, in spite of a 25% fare increase from ¢ 0.15 to ¢ 0.20, there was a drop in revenues of 32%, mainly because the country was under a state of siege and martial law. A curfew was enforced, the population had to remain indoors and a reduction of passengers was the result of this action, plus the fact that the "micro buses" or vans and pick-ups appeared on the streets of San Salvador. Forty-nine percent (49%) of passenger traffic was lost by this cooperative to irregular means of transportation.

In 1978, the cooperative had 58 units in service. Since 1979 when the urban guerrilla began its action in San Salvador, six units were totally destroyed by fire and 12 sustained heavy damages. A replacement value for one unit, equipped with diesel engine and a 42-seat capacity, which is the standard model in this industry, was estimated at ¢ 155,000 or US$ 62,000. Total losses cost ¢ 930,000 or US$ 372,000.

Not all buses suffered the same extent of damages. However, the average estimated cost of repairs per bus was ¢ 47,500 (US$ 19,000) for a total of ¢ 570,000 (US$ 228,000). Total cost of direct damages caused by the incendiary attacks of the guerrilla to this cooperative amounts to ¢ 1,500,000 (US$ 600,000).

On the other hand, organizations such as the Chamber of Commerce and Industry of El Salvador, claim that a total of 725 units were destroyed and 560 partially damaged. The Chamber of Commerce figures represent 35% of the total fleet operating in the country. In other words, 1,285 out of 3,671 authorized units were totally or partially destroyed.

The lower of those figures, coming from the Ministry of Economics would be as follows: 286 units partially damaged at ¢ 47,500 (US$ 19,000) = ¢ 13,585,000 (US$ 5,434,000) and 574 units totally lost at a replacement value of ¢ 155,000 (US$ 62,000) would be a total of ¢ 88,970,000 or US$ 35,588,000. The total direct cost of the damage according to the Ministry of Economics would be ¢ 102,555,000 or the equivalent of US$ 41,022,000 at the rate of ¢2.50 x US$ 1.

On the other hand, the higher figures from the Chamber of Commerce which appear to be more reliable, would indicate the following: 725 units totally lost at ¢ 155,000 each, would be ¢ 112,375,000 or US$ 44,950,000 and 560 units partially damaged at ¢ 47,500 each would total ¢ 26,600,000 or US$ 10,640,000 for a grand total or ¢ 138,975,000 or US$ 55,590,000 (at the rate ¢ 2.50 x US$ 1).

Company officials claim that no serious action has been taken by the government to reactivate the bus transport industry in El Salvador.

ACOPATT, for example, has a line of credit for one million colones, for five years, (US$ 200,000 at the current rate of 5 to 1), but only half of this credit has been used, mainly because of the guaranties that are being required by the Bank. Under the terms of the credit, the loan is not only guaranteed by the bus itself but by a pledge on real estate property. A personal guarantor or co-signer is also mandatory. This is aggravated by the fact that no insurance is being issued on public transport vehicles of any kind. At this moment, all units owned by this cooperative are pledged to the bank granting the credit.

One can see that this company is not eligible for credit when looking at financial indicators such as:

Working Capital - Current assets less current liabilities.
Yield Indicator - Net profit (loss) by total assets.
Solvency Indicator - Current assets by current liabilities.
Soundness Indicator - Total liabilities by total assets.
Capital Indicator - Capital by total assets.

Financial and profit and loss statements indicate, for example, that there is a negative position in the debt to net worth ratio. There is only ¢ 0.50 available to pay for each colon owed.

The above economic conditions are prevailing within the industry as indicated not only by the management of this cooperative but by the Board of Directors of AEAS, "Asociacion de Empresarios de Autobuses Salvadorenos" (Salvadoran Association of Autobus Impresarios) which groups the majority of owners and operators of buses in El Salvador, whom we visited on various occasions.

AEAS members stated that in order to reactivate the transport industry in this country, firm and positive measures must be taken by the Central Government to assure that credit arrangements would be fully operative and that investors have easy access to those facilities. The demands for guaranties should be less rigorous. The system of daily debt payments should be abandoned and only monthly or bi-weekly payments should be made. The government should create an insurance system that can assume the risks that the insurance companies are not taking. The importation of spare parts and tires should be stimulated by the availability of the necessary foreign exchange. The quota for rationed fuel oil should be increased to cover kilometrage run at the subsidized price of ¢ 1.70 (US$ .34). The ordinary price without the rationing card is ¢ 5.25 (US$ 1.05).

AEAS and ACOPATT executives also suggested that they participate in the selection of new buses to be imported by the government agency responsible. Recently, FIGAPE, "Fondo de Financiamiento y Garantia para la Pequena empresa," (Financing and Guarantee Fund for the Small Industry), imported from Argentine and Rumania, 400 buses with diesel engines. According to AEAS' statement, many of these buses, especially the Argentinian, came with badly rebuilt engines when they were under the impression that the buses would be brand new. In the case of the Rumanian buses, no spare parts are available and some of the engines are not original either. Therefore, executives of the above organizations feel that they participate in the selection of the buses they end up buying. FIGAPE by the way, is also the government agency that manages the existing credit facilities for the transport industry in El Salvador. Most of all, bus owners and operators would like to see again the days in which they could freely take the road and streets of El Salvador without the fear of the incendiary or machine gun attacks which have made the bus transport sector one of the most heavily damaged industries in the country by the guerrilla action.

Cargo transport is another affected area of this industry. Unfortunately, there are no reliable statistics that would allow us to prepare an accurate estimate of the damages caused to this part of the transport business. However, in an effort to obtain some information, a recently formed cooperative gathering the owners and operators of heavy trucks in the country, was visited. ACOSETCA is the name of this cooperative that was formed in 1986. It has 200 members and it is their intention to recruit at least 1,000 members from all over the country.

An estimate made by this cooperative indicates that 70% of the cargo originated in El Salvador, goi to the Central American area, is carried by local trucks, 25% by Guatemalan trucks and 5% goes by railroad. The same estimate indicates that the amount of metric tons that the Salvadoran trucks handle a year includes approximately:

100,000 MT of sugar
25,000 MT of cotton
75,000 MT of coffee.

Almost the entire production of the agricultural sector, sugar, coffee, cotton grains, etc., is transported by the national truck fleet. There were approximately 5,500 units operating in 1978. Indications are that approximately 1,500 trucks of all kinds have been destroyed by the guerrilla between the years of 1979 to 1985. There are probably 1,000 units lying idle in the country, for lack of spare parts, many of them immobilized by the guerrilla, thus leaving approximately 3,000 units in the market. The cargo fleet is commonly made of wagons, trailers, low boys, tankers and state trucks but there are no break down figures available. In addition, there are no cost figures available which could be used to estimate the amounts of damages sustained by the trucking industry, but a rough estimate made by ACOSETCA indicates that amounts to be ¢ 21,000,000 (US$ 8,400,000). 1981 was the year in which the greatest amount of units (500) were destroyed. A replacement cost of ¢ 140,000 or US$ 56,000 was estimated since there is no other reliable cost available.

The cargo industry in El Salvador, as stated by some members of ACOSETCA, is in a disadvantageous situation within the Central American area. Guatemalan trucks for example, after discharging overseas cargo from the Santo Tomas de

A G O P A T T   D E   R. L.

COMPARATIVE ANALYSIS OF PROFIT AND LOSS STATEMENT PERIOD 1978 - 1985 (IN SALVADOREAN COLONES)

	1978	1979	%	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
-GROSS SALES	4,891.139	3,811.860	(22)	3,239.561	(15)	3,288.532	2	4,370.402	33	4,751.994	9	4,107.112	14	4,229.233	3
-NET SALES	4,891.139	3,811.860	(22)	3,239.561	(15)	3,288.532	2	4,370.402	33	4,751.994	9	4,107.112	14	4,229.233	3
LESS:															
-ADMINISTRATIVE EXPENSES	139.016	155.940	12	195.906	26	190.399	(3)	220.852	16	275.712	25	245.394	11	314.285	28
-FINANCIAL EXPENSES	595.366	33.234	(94)	26.629	(20)	23.600	(11)	25.275	7	22.638	(10)	30.046	33	9.316	(69)
-MAINTENANCE EXPENSES	4,290.971	3,484.789	(19)	3,523.104	1	3,127.409	(11)	3,560.751	14	4,183.642	17	3,888.690	7	3,723.278	4
-OPERATION PROFIT AND LOSS	(134.214)	137.897	-	(506.078)	-	(52.876)	-	563.524	-	270.002	-	(57.018)	-	182.354	-
ADD:															
-OTHER INCOME	221.331	165.187	(25)	88.638	(46)	83.863	(5)	121.250	45	98.603	(19)	91.242	7	97.005	6
-OTHER EXPENSES	2.559	40.240	1.472	97.474	142	89.165	(9)	166.047	86	114.505	(31)	80,269	-	95.030	18
-TOTAL PROFIT AND LOSS BEFORE TAXES	84.558	262.844	211	(514.914)	-	(58.178)	(89)	518.727	-	254.100	-	(46.045)	-	184.329	-

	1978	1979	1980	1981	1982	1983	1984	1985
1) NET SALES / ACC. RECEIVABLES =	4,891.139 / 199.760 = 24.46	3,811.860 / 250.304 = 15.22	3,239.561 / 218.660 = 14.81	3,288.532 / 330.380 =9.95	4,370.402 / 450.297 =9.70	4,751.994 / 582.017 =8.16	4,107.112 / 370.875 =11.07	4,229.233 / 277.432 =15.24
2) NET SALES / FIXED ASSETS =	4,891.139 / 3,337.734 = 1.46	3,811.860 / 3,150.447 = 1.20	3,239.561 / 2,259.056 = 1.43	3,288.532 / 1,825.468 =1.80	4,370.402 / 1,449.883 =3.01	4,751.994 / 1,520.256 =3.13	4,107.112 / 1,555.208 =2.64	4,229.233 / 1,786.055 =2.37
3) NET INCOME / NET WORTH =	84.558 / (683.083) =(0.12)	268.844 / (536.582) =(0.48)	(514.914) / (545.149) = (0.94)	(58,178) / (163.628) =(0.35)	518.727 / 304.604 =1.70	254.100 / 62.626 =4.05	(46.045) / (136.575) =0.33	184.329 / (230.602) =(0.80)

A C O P A T T DE R. L.

COMPARATIVE ANALYSIS OF GENERAL BALANCES PERIOD 1978 - 1985 (IN SALVADOREAN COLONES)

	1978	1979	%	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
CURRENT ASSETS															
CASH AND BANKS	61,265	64,251	5	(7,478)	(76)	76,144	9	218,595	187	138,996	(36)	87,442	(37)	64,650	(26)
CURRENT ASSETS	199,760	250,304	25	218,660	(13)	330,380	51	450,297	36	582,017	29	370,875	(36)	277,432	(25)
FIXED ASSETS	3,337,734	3,150,447	(6)	2,259,056	(28)	1,825,468	(32)	1,449,883	(21)	1,520,256	5	1,555,208	2	1,786,055	15
TRANSITORIES	81,637	10,375	(87)	3,996	(61)	24,811	520	209,204	743	192,359	(8)	25,191	(87)	25,311	1
DEFERED	944	1,750	85	4,573	161	322,269	6947	302,556	(6)	231,933	(23)	152,695	34	42,798	(72)
TOTAL ASSETS	3,681,340	3,477,127		2,478,807		2,579,072		2,630,535		2,665,561		2,191,411		2,196,246	
LIABILITIES															
CURRENT LIABILITIES	944,108	851,137	(10)	756,331	(11)	570,152	(25)	364,288	(36)	658,387	81	594,892	(10)	572,684	(4)
FIXED LIABILITIES	1,813,639	1,751,147	(3)	1,196,069	(32)	1,123,770	(6)	885,854	(21)	673,729	(23)	565,093	(17)	397,791	(30)
TRANSITORIES	48,926	40,371	(16)	32,061	(21)	57,192	78	26,469	(54)	34,379	30	40,134	17	40,865	2
RESERVES & CAPITAL	874,667	834,472	(5)	494,347	(41)	827,957	6	1,354,303	64	1,294,066	(4)	991,292	(23)	1,184,906	20
TOTAL LIABILITIES	3,681,340	3,477,127		2,478,808		2,579,071		2,630,914		2,665,561		2,191,411		2,196,246	

	1978	1979	1980	1981	1982	1983	1984	1985
1 CURRENT ASSETS	261,025	314,555	211,182	406,524	668,892	721,013	458,317	342,082
=	.28:1	.36:1	.28:1	.71:1	1.83:1	1.09:1	0.78:1	0.60:1
CURRENT LIABILITIES	944,108	851,137	756,331	570,152	364,288	658,387	594,892	572,684
2 DEBT	2,757,747	2,602,284	1,952,400	1,693,922	1,250,142	1,337,116	1,159,985	970,475
=	(4.04)	(4.84)	(3.58)	(10.35)	4.10	21.35	(8.50)	(4.21)
NET WORTH	(683,083)	(536,582)	(545,149)	(163,628)	304,604	62,626	(136,575)	(230,602)
3 NET WORTH	(683,083)	(536,582)	(545,149)	(163,628)	304,604	62,626	(136,575)	(230,602)
=	(0.20)	(0.17)	(0.24)	(0.09)	0.21	0.04	(0.09)	(0.13)
FIXED ASSETS	3,337,734	3,150,447	2,259,056	1,825,468	1,449,883	1,520,256	1,555,208	1,786,055

Castilla Port in the Atlantic coast or from any other point of origin, can operate locally without restrictions. The same applies to trucks from Honduras and Costa Rica, while Salvadorans are forbidden to do the same in those countries. This unfair practice causes a loss of revenues to the local truckers who feel unprotected and discriminated against.

An ACOSETCA member concurred with colleagues from the bus organizations that the reactivation of the transport industry as a whole can only be accomplished through a common effort from the government and the owners, so substantial credit facilities can be used in an organized and intelligent fashion. Importation of replacement parts should be made without the pains caused by the scarcity of foreign exchange. But most of all, it is a common feeling that nothing can be accomplished until economic and political stability are achieved and until the roads and highways are relatively secure.

D. Construction

Not enough reliable data was obtained that would allow preparation of a thorough analysis of this sector. However, all indications are that this is an industry that has been suffering from a period of stagnation for the last seven years. In 1981, it reached its lowest point. In 1982, it showed a small recovery mainly in the residential areas. However, during that year industrial construction almost disappeared and no significant recovery has occurred since. This is consistent with the general attitute of no new industrial investments or no new development plans for the industrial sector until investor confidence is restored. During the last ten years, 60% of new construction expenditures in El Salvador have been made by the government and only 40% by the private sector.

Directors of the Construction Industry Association of El Salvador (Camara Salvadorena de la Costruccion) indicated during the course of an interview that there is a housing deficit in the country of more than 500.000 units and 200.000 in urban areas. They also indicated that the construction industry is suffering from a lack of credit and that there are no incentives from the Central Government that would attract new investors into construction.

Insurance protection against war risks, for example, was withdrawn in 1979 and only a few contracts financed by the BID are covered with insurance against vandalism or civil strife.

Vandalism and civil strife have caused a substantial amount of damage as demonstrated in the case study that follows, especially in road construction. Allied construction industries such as cement, steel, bathroom fixtures, etc., are all part of the same association. According to interviews conducted, the depression sufi ed in the Central American Common Market is the major cause of production losses in these supporting industries.

Case Study: Empresa Constructora Siman, S.A.

The only activity of this construction company, established more than 30 years ago, is the construction of secondary roads and main highways for the Ministry of Public Works (MOP) in El Salvador.

No financial statements were provided during our visit with the management team, so no comment is made on financial status. However, they shared their experiences during the continuous and systematic attacks they have been suffering since 1984. These attacks are in the form of dynamite, incendiary or machine gun attacks and more recently by sophisticated immobilization of equipment. This immobilization is performed by skilled mechanics who subtract sensitive parts of the machines, forcing them to be idle for long periods until replacement parts are found in the scarce local market or obtained abroad through a lengthy and expensive process.

The following is a chronicle of the attacks stated by the interviewees:

Date	Equipment Damaged	Attack	Estimated Damages
Apr. 20, 1984	2-D8 CAT - Tractors	Dynamite	US$ 62,000
Jul. 24, 1984	2-D8 CAT - Tractors	Dynamite	
	1 Fiat Allis 260 Road Leveler	Dynamite	
	1 CAT Road Leveler	Dynamite	
	1 Loader JCB 1750	Dynamite	193,000
Oct. 3, 1985	2 Keyland trucks, 10m3	Fire	
	1 JCB 423 Loader	Fire	45,000
Jan. 31, 1985	2 Aveling Barford Roto-vibrators	Fire	130,000
	Frequent highway robberies of small equipment and parts		10,000
	TOTAL COST OF EQUIPMENT DAMAGED		US$ 440,000
	Estimated indirect cost of these attacks such as salaries paid, administration expenses, etc.		US$ 172,000
	TOTAL COST OF THE ATTACKS		US$ 612,000

These continuous assaults cause delays in the work in progress which, in turn, prevents the company from undertaking new projects being offered or from bidding for new ones in the immediate future, until previous commitments are completed.

Some comments on the state of the Construction Industry in El Salvador, made by company officials, indicate that there is a tremendous lack of financing for this industry. Thus, a stronger contribution by the Central Bank's Development Fund would be needed to reactivate construction in the country. The industry feels unprotected by the Central Government and by the insurance companies who cancelled coverage to construction since 1979. Management is therefore

SUMMARY OF DAMAGES CAUSED TO SIMAN BY THE DESTRUCTION OF EQUIPMENT

Third grade road Santa Tecla-San Juan Los Planes.

Dynamite: 2 Tractors D8

- Direct Damages		$ 62,000.00
- Indirect Damages		8,000.00
	TOTAL	70,000.00

Third grade road Chalatenango-Concepcion-Quezaltepeque-Comalapa.

On July 24, 1984, five pieces of equipment were dynamited, some with total damages:

1 Fiat Allis 260 Road Leveler
2 DB-CAT Tractors
1 CAT Road Leveler
1 Loader JCB 1750

- Direct Damages	$193,000.00
- Indirect Damages	80,000.00

On October 3, 1985, were set on fire:

2 Leyland Trucks, 10m3
1 JCB 423 Loader (partially)

- Direct Damages	$145,000.00
- Indirect Damages	124,000.00

On January 31, 1986, were burned completely:

2 Aveling Barford roto vibrators

- Direct Damages	$130,000.00
- Indirect Damages	125,000.00

On different dates, frequent highway robberies of small equipment and parts

- Direct Damages		$ 10,000.00
- Indirect Damages		5,000.00
	TOTAL	$612,000.00

hesitant to accept new projects where there is risk and is carefully planning the activities for the immediate future, until conditions are improved.

The following summary illustrates the types of guerrilla activity affecting road repair and reconstruction and the direct and indirect costs to the company.

E. Insurance

The problem of insurance has been mentioned several times in this report in connection with industrial investment and transport equipment, trucks and buses. Salvadoran insurance companies stopped providing coverage for civil war related risks in 1980 when they were unable to get re-insurance from New York or London. In any case, they would not have covered buses and public transport trucks. Insurance has been available for truck cargos against risks of theft, fire and vandalism with a clause excluding claims arising from civil strife. As a matter of fact, claims have been paid in what apparently are cases of guerrilla attacks. The shipper could prove loss, the insurer could not prove civil strife, and the attackers might have been simple bandits. However, such losses have been minimal, and most cargos are not insured.

The insurance companies are now discussing with re-insurers the establishment of a war risk pool covering industrial investment. Assuming a maximum loss coverage per incident of ¢ 500,000 ($200,000 at the old exchange rate) five-year losses, 1981 to 1985, would have been only 2.5 million colones or one million dollars. Such losses would have been more than covered by premium income. Risks to agriculture, banks or government would not have been covered by the pool; even if they had been covered, the losses would not have been that great, about U.S. $500,000 per year. Of course, the risks covered would have included only direct damage and with the $200,000 per incident limit mentioned above. What could never have been covered was direct damage to the electric light and power system described in the assessment of damage to the public services sector.

Buses and trucks need a special kind of protection related to the method used to finance them. Financial agencies insist on additional collateral, not just the vehicle, partly because the vehicle may be destroyed. The owner fears buying a bus or truck on credit because he may lose his home, or be burdened with an unpayable debt if the vehicle is lost. At the time this report was being prepared, discussions were preceeding between USAID, the government of El Salvador and the insurance companies regarding a re-insurance fund of ¢ 220,000,000 ($44,000,000) that would protect investment in export-oriented businesses and industries and possibly in public transport. Given the great improvement in the military situation, this fund should be more than adequate.

V. REGIONAL ASSESSMENT

A. Impact of Civil War on the Eastern Region

The Eastern Region of El Salvador has suffered more from civil violence than the rest of the country. This has been recognized by the Government of El Salvador which has set up a special office, the Presidential Commissioner for the Eastern Region, to coordinate assistance and attention to the four departments, Usulutan, San Miguel, Morazan and La Union which comprise this region. These four departments contain about 27% of the country's population in about one-third of the national area. The region is separated from the rest of the country by the Rio Lempa which runs from the Honduran border to the sea. It is a predominantly agricultural area divided into two zones, a relatively flat coastal plan and a mountainous northern sector. The flatter lands are planted with mostly cotton, some sugar cane, rice and sorghum. The mountain areas are devoted to coffee or small subsistence farms growing corn, beans, garden vegetables and subsistence level poultry and pigs. The higher, more remote mountain areas near the Honduran border produce some timber, mostly pine. The principal towns are San Miguel (population about 150,000) and Usulutan (about 90,000). Usulutan is essentially a market town, heavily dependent on cotton. San Miguel, also a market town, has more small industry and commerce and is less dependent on cotton. It serves a more diversified hinterland with more coffee, cattle and basic grain production. La Union is the port city serving the Eastern Region (export of cotton and coffee). The other "urban" centers, including the capital of the department of Morazan, San Francisco Gotera, are small towns with a little commerce and serving as local administrative centers.

This region has suffered more public infrastructure damage per capita than any other part of the country. Nearly half the bridges destroyed have been in this area. Two rural electrification networks were completely destroyed and large areas have no service. Until a gas turbine generator was installed in San Miguel in 1984, cuts in electric power would last for days or weeks. Even now power is rationed and interruptions in service are frequent.

The rural areas were dominated by guerrilla forces during most of the period between 1980-1984. Coffee trees were destroyed by burning and chopping, cotton fields burned. Crops were destroyed before, during and after harvest: homes invaded, looted, destroyed; workers intimidated, land-owners threatened, kidnapped, murdered. During most of this period military forces were incapable of maintaining civil order. As military forces became stronger, fighting became more general. In the mountainous guerrilla stronghold areas the subsistence peasant was victimized by both sides. They abandoned their farms and fled to the cities. In 1977, 41% of El Salvador's cattle population was located in Region IV, the four eastern departments. By 1985, the regional herd had been reduced by nearly one-half and comprised only 28% of the national stock of cattle. The losses came from thefts, wholesale rustling, indiscriminate slaughter by guerrillas and soldiers alike and, probably most important, no investment in maintaining or re-building herds.

The description of rural violence in the Eastern Region is intended to explain this report's conclusion that the loss of agricultural production in the Eastern Region is primarily a result of civil violence and guerrilla intimidation.

Violence in urban areas followed the same pattern. The object was to disrupt or destroy economic activity. The targets were commercial establishments and their owners, urban transport, small industries. The period of maximum urban violence covered the five years of 1980, 1981, 1982, 1983 and to a lesser degree 1984. According to a number of persons interviewed, this period was characterized by military control of the town or city by day and guerrilla control by night.

Moreover, military garrisons were on the defensive and guerrilla forces dominated all but the main highways even by day. The result was an isolated urban community with little faith in their defenders. Moreover, there were two civil wars going on simultaneously and not easily distinguishable. One was the war between the forces of the government and the forces of revolution, the guerrillas. The other was a secret war of murders, kidnappings, assassinations and assaults between armed bands of left and right. The two wars overlapped and had somewhat different political aims but the results were identical, the economy was severely damaged and confidence in the future so undermined as to preclude real efforts at economic repair and recovery. One person interviewed was a local businessman (auto parts distributor) who had been a Justice of Peace during the most critical years. One of his duties was to take legal cognizance of homicides. He reported that in the years 1981 and 1982 he would be called on to view 10 to 30 murdered corpses per day. Of the 25 or 30 middle-class entrepreneurs or small business people interviewed a majority had been robbed at gun-point, two had been wounded in guerrilla ambushes, one had been in a vehicle fired upon by trigger-happy soldiers (his companions wounded), and one was widowed when her husband was kidnapped and murdered. This is a great deal of violence suffered among a small sample.

The persons interviewed pointed out that, because Usulutan and San Miguel are market towns, being cut off from their hinterlands plays an important part in their economic losses. This is particularly true of San Miguel which is also a distribution center. Much of the optimism (reported below) in San Miguel regarding a business recovery is based on the perception that areas previously dominated by the guerrilla are being opened up as a result of the Army's military initiative and success.

However, the urban areas of the Eastern Region suffer from another war-created problem. Nearly 10% of the population of the four departments consists of refugees from rural areas living under substandard conditions in and around town and urban areas. This does not include all the refugees from rural areas since many migrated to San Salvador and other Western or Central region cities. Integration of those displaced persons into already depressed economies has been impossible. This group represents a problem for the future recovery of the area. Many will ultimately return to their rural farms and homes, many will not, and reconstruction and redevelopment plans must include provision for employment of these people.

B. Cases of Specific Damage from the Civil Violence

There follow three examples of various kinds of businesses, including a cooperatively-run public service that illustrate the impact of violence and resultant uncertainty on economic decisions and activity.

Hotel Trópico Inn

The Tropico Inn is located on the main highway just outside of San Miguel, the Eastern Region's largest city. It is a comfortable, modern establishment with rooms, a garden terrace, swimming pool, bar, restaurant, several meeting rooms and pleasant public spaces. The San Miguel Rotary Club meets there every Monday. Inside and out it looks like anyone of thousands of small, moderately priced motels in the United States. It is the only such establishment in San Miguel; the several motels in competition are considerably lower in convenience and quality.

The hotel was built in 1976-1977 at a cost of 3.4 million colones, then US$ 1,360,000. It operated with moderate success until May 9, 1980. In 1980, the hotel was fire bombed several times but the damage was not very serious and easily repaired. However, the guerrillas maintained a constant barrage of threats of greater damage and finally succeeded in burning down the nearby residence of the hotel manager. Business fell off to nearly zero and, as noted, the hotel was closed on May 9, 1980. The original stockholders tried to keep the hotel ready for re-opening and spent approximately 250,000 colones (US$ 100,000) per year for the next three years in maintenance. But the company's resources were exhausted and on May 1, 1983, the bank took over the closed hotel. Over the next two years the bank spent an additional 150,000 colones per year (US$ 60,000) for maintenance. In 1985 a new company (Turismo del Oriente) was formed in San Miguel to take over the hotel. The company has 20 stockholders, 400,000 colones (US$ 160,000) suscribed capital and a loan from the bank for 3.6 million colones (US$ 1,440,000) for the purchase price of the hotel. The bank is also a stockholder. If the civil violence in the San Miguel area is brought under control and the economy recovers, the hotel will greatly prosper; the bank will have unloaded its white elephant and will still share in its recovery, it will even get its old financing paid off. The local stockholders, mostly small businessmen, are acquiring a million dollar plus property for a relatively small cash investment. But given the history of all expense and no income, the uncertainties of the future, the need to attract competent management, and the lack of alternate investor confidence, some rather generous financial terms seemed called for.

The hotel re-opened on October 18, 1985. As of May 1986 it has worked up to an average occupancy rate of about 25%, had hired an experienced assistant general manager and a bar-restaurant service manager. According to the assistant general manager it is now covering direct costs of operations. However, it is an accepted rule of thumb that a hotel must have about a 55% occupancy rate to cover all costs: operating costs, depreciation, ongoing maintenance, administrative costs and return on investment. At the moment the re-opening of the hotel appears to be an optimistic investment that can and should pay off but it will depend on the redevelopment of the San Miguel area and the investment needed to finance that redevelopment.

Asociacion Cooperativa de Trabajadores Transportistas Miguelenos (ACOTRAMS)

This was once the city bus company of San Miguel. It was formed as a workers' cooperative in 1973 when the employees of the private bus company bought out the owners, using credit from the Fondo de Financiamiento y Garantia para la Pequena Empresa (Small Business Finance and Guaranty Fund), FIGAPE, a governmental financial institution. At the start of the violence the cooperative was running 48 buses in San Miguel over a number of routes. They own a large piece of property for a bus park, shops and offices on the outskirts of town. Five of the buses were newly acquired in 1979 on long-term credit. Not counting the new buses, the original investment was 700,000 colones for equipment, real estate and route concessions, i.e., about US$ 280,000 of 1973.

In 1980, the bus company received a telephone call from self-identified guerrillas ordering the company to pull its buses off the street. The company obeyed but was then ordered by the local military commandant to restore service. That night three buses were destroyed by violence. Nine were lost in 1982 at one time when guerrillas broke into the parking yard and burned them. Other buses have succumbed to wear and tear. At the moment the cooperative has seven, sometimes eight, buses running. Since the company cannot meet its route obligations, other small companies have been given temporary route concessions, an obvious threat to the cooperative's future. The following summarizes two years of operation after the years of peak violence.

LOSS FROM OPERATIONS

	1984	1985
Operations Income	556.0	376.4
Operations Costs	575.6	438.8
Administrative Costs	32.0	30.0
Financial Costs	9.2	8.4
LOSS	60.8	101.8

Despite this unfortunate record the cooperative is trying to recover from the war. They have pending a loan application with FIGAPE calling for over one million colones to refinance outstanding debt, nearly 800,000 colones for working capital, mostly to repair 11 deadlined buses now sitting in the yard, and an identified amount (but at least 3,000,000 colones) to buy 20 new buses. From a banking standpoint it is hard to justify a refinancing of $ 900,000 (4,500,000 colones) for a cooperative that lost over $ 100,000 last year and has accumulated losses of over a million colones ($ 200,000). But in light of a more equitable sharing of the burdens of civil war the investment might be justified. The real estate owned is valuable, about a million and a half colones ($ 300,000), the route concessions could again be profitable and San Miguel would be a growing city in a peace time environment. The bus cooperative in San Miguel appears to present a good argument for the establishment of disaster area preferential financing in the departments of Usulutan, San Miguel, La Union and Morazan.

Embotelladora Migueleña (EMBOMISA)

This soft drink bottling plant was established in 1971 with an initial investment of about 3.5 million colones, US$ 1.4 million at the then official exchange rate of 2.5 colones to the dollar. The designed capacity was 2 million cases of soft drinks per year. By 1978, the plant was working at full capacity producing soft drinks under a U.S. license and label and under its own labels. Sales were not confined to the Eastern Region. Products were also distributed in the Central and Western Regions using seven, 1,000 case trailer trucks for over the road transport and smaller trucks for local distribution. The plant was first attacked and bombed in 1980 but damage to the plant itself was not very serious. Damage to transport has been most important. Five of the seven large trailers have been destroyed. Twenty smaller trucks have been destroyed and the plant no longer maintains distribution services in the larger Central and Western cities. In the Eastern Region the plant is unable to maintain deliveries to the smaller towns and villages that make up its natural market. As a result, annual sales have dropped by 70% from an immediate pre-war average of a million cases and are now running at only 300,000 cases per year. At full capacity, the company owner states, the plant was very profitable and paying off its long-term debt. Since 1980, the plant has been losing money or barely holding its own, although financial statements were not made available, the owner did state that the plant is heavily in debt and survives at the mercy of its bankers who carry its debt and continue to provide financial services. The following table lists major direct and indirect losses sustained. The original information was in Salvadoran colones which are converted into U.S. dollars at the then current rate of 2.5:1.

LOSSES SUSTAINED

Direct Losses	
Transport Vehicles	$ 800,000
Indirect Losses	
Lost Sales	200,000
Operation of Stand-by Generator	18,360
Additional Labor Costs	42,080
Total Estimated Loss	$ 1,060,440

The company has actually underestimated its losses. Lost sales reflects only those resulting from interruptions in transport, not those resulting from generally depressed economic conditions (one can't sell ginger ale to a closed hotel). Only fuel costs are included for the stand-by generator, no depreciation, spare parts, financial cost, etc. Similarly, labor costs ignores severance pay for laid off workers and the plant has had to reduce employment from 250 to 58 workers. All in all, a careful cost accounting would probably show that the conflict has cost the company as much as or more than its original over $1 million cost. As the San Miguel area recovers further, this company will need considerable financial assistance to rebuild output and revive employment. At least a million dollars would be needed to re-build the transport fleet.

Some rehabilitation costs could be deferred and financed from earnings but even that would require patience on the part of the firm's bankers. They would have to accept the decision to re-invest earnings rather than use them to retire old debt.

C. Losses in Agricultural Income - Eastern Region

There follow a number of tables designed to show the damage from the war to agricultural production in the Eastern Region. The first table shows grains and beans. Production during the worst years is compared with average production for the four-years preceding the onset of the violence. Area planted is also shown.

The tables on corn and beans are particularly interesting since these have traditionally been regionally surplus crops shipped to other regions. They probably understate production, especially pre-war production, because they are small-holding, small plot, family subsistence crops that do not always show up in the statistical series. The drop in production is dramatic: the 1984 corn crop is down over 34% from the pre-war average. Area planted is only down about 20%. This decline in yield presumably results from less intensive cultivation and/or application of fertilizers. The behavior is exactly what should be expected under conditions of rural civil war.

During the first year of truly destructive violence, bean production was up a bit as yields were high but the next three years show drops in both acreage, production and, of course, income.

Rice production in Region IV shows an interesting development that was apparently frustrated by the war. In the early days of the violence, for various reasons but mostly related to declining cotton earnings and good price prospects for rice, there was a marked increase in the planting of rice.

TABLE V-1

AGRICULTURAL PRODUCTION AND INCOME LOSSES
REGION IV

CORN

CROP YEAR	AREA	OUTPUT	PRE-WAR AVERAGE	DIFFERENCE	PRICE	GAIN OR LOSS
1980/81	132,420	2,366,845	2,701,358	(334,513)	17.52	(5,860,668)
1981/82	117,440	2,374,619	2,701,358	(326,739)	17.64	(5,763,676)
1982/83	102,650	1,966,450	2,701,358	(734,908)	17.68	(12,993,173)
1983/84	109,850	1,776,030	2,701,358	(925,328)	28.17	(26,066,489)
						(50,684,006)

BEANS

CROP YEAR	AREA	OUTPUT	PRE-WAR AVERAGE	DIFFERENCE	PRICE	GAIN OR LOSS
1980/81	10,927	132,764	124,218	8,546	61.82	528,314
1981/82	10,345	102,451	124,218	(21,767)	85.59	(1,863,038)
1982/83	8,900	96,327	124,218	(27,891)	73.74	(2,056,682)
1983/84	9,090	70,900	124,218	(53,318)	66.46	(3,543,514)
						(6,934,920)

RICE

CROP YEAR	AREA	OUTPUT	PRE-WAR AVERAGE	DIFFERENCE	PRICE	GAIN OR LOSS
1980/81	12,372	661,902	298,944	362,958	48.37	17,556,278
1981/82	9,658	516,670	298,944	217,726	40.20	8,752,585
1982/83	6,529	298,092	298,944	(852)	34.95	(29,777)
1983/84	4,330	170,800	298,944	(128,144)	66.79	(8,558,738)
						17,730,348

SORGHUM

CROP YEAR	AREA	OUTPUT	PRE-WAR AVERAGE	DIFFERENCE	PRICE	GAIN OR LOSS
1980/81	86,546	1,417,059	1,674,628	(257,569)	17.15	(4,417,308)
1981/82	79,741	1,333,614	1,674,628	(341,014)	20.75	(7,076,041)
1982/83	79,195	1,290,927	1,674,628	(383,701)	19.75	(7,578,095)
1983/84	58,210	704,200	1,674,628	(970,428)	24.29	(23,571,696)
						(42,643,140)

COTTON

CROP YEAR	AREA	OUTPUT	PRE-WAR AVERAGE	DIFFERENCE DIFFERENCE	PRICE	GAIN OR LOSS
1980/81	51,293	1,578,618	2,629,616	(1,050,998)	63.88	(67,137,752)
1981/82	46,432	1,522,500	2,629,616	(1,107,116)	73.98	(81,904,442)
1982/83	44,716	1,482,084	2,629,616	(1,147,532)		(68,312,580)
1983/84	30,600	961,600	2,629,616	(1,668,016)	74.08	(123,566,625)
						(340,921,399)

Area in manzanas

Output in quintales (100 lbs.)

Prices, gains, losses in Salvadoran colones

Losses are shown in parentheses

In 1980-81 (see chart) there was a shift of planted areas from cotton, and to a lesser extent from cane, into rice. Yields were not as good as Region III to the westward but they were close, just below the national average. However, prices dropped over the next two years and guerrilla violence was high and acreage planted to rice dropped below pre-war levels. The most important lesson to be learned here is that rice should be considered as one of several crops that could substitute for cotton in a post-civil war setting.

Finally, when looking at the table in sorghum, it should be noted that Region IV has traditionally been the sorghum producing area of the country. In fact more sorghum was produced in the Eastern Region in pre-war years that in the rest of the country combined. By 1984, that situation had changed as both yields and area planted were down and total production was only 42% of the pre-war average.

The last column in each table sets forth the monetary losses to the Eastern Region's agricultural economy resulting from loss production of grains and beans. This is entirely attributed to the war. This is justified for two reasons: (1) these were the worst years of violence, and (2) there were no important outside economic forces working during this period to reduce production. There was actually a gain in income from rice, but that is attributable to the only two good years. The loss on earning from these basic crops has been high, it totals for these four years ¢ 82,531,718 or US$ 33,012,687.

The second table shows the drop in production and planting of cotton in Region IV. Also shown is the income loss for the years 1980-81 to 1983-84, the most violent period, although there was also some violence directed specifically at cotton in the 1984-85 and 1985-86 crop years. Interviews were conducted with cotton growers in San Salvador, Usulutan and San Miguel. The cotton gins in the Eastern Region were visited and the results of guerrilla attacks and arson viewed first-hand. Several discussions were held with leaders of the Salvadoran Cotton Cooperative, which includes all cotton growers and producers in the country. All persons ascribed a major part of the drop in output in the Eastern Region to guerrilla violence. However, on further investigation, it would appear that other economic factors have been more important. The real causes seem to be high production costs, especially seed, fertilizer and pesticides, plus low world prices and accumulated debt from past years that have made the national banking system reluctant to extend more credit to a losing proposition. The drops in area planted and production of cotton were almost as marked in the other regions as they were in Region IV. But the other regions did not suffer nearly the same level of violence. The declines were clearly economically inspired. Consequently, in this report only 20% on the decline in cotton income is attributed to the guerrilla war. Total income loss was about 341 million colones, 20% of that would be about 68.2 million colones or 27,280,000 US dollars over the four-year period. Since this is almost as high as all the loss of income from production drops in subsistence and feed crops, the importance of cotton to the Eastern Region is clear.

This report is an assessment of war damage, not a treatise on national management of agricultural resources. Comments on cotton production will thus be limited to noting that cotton in the Eastern Region is an important source of employment and income during the months of harvest and ginning. There is considerable investment in infrastructure and cotton is a raw material of importance for the country's export-oriented textile industry.

At current cost-price relationships, cotton is not an economically viable use of resources even if land, labor and infrastructure are assigned opportunity costs of zero. However, a change in the cost-price relationship, especially on the cost side through reduction in fertilizer and pesticide use and prices could again make cotton a positive contributor to the well-being of the Eastern Region. This would require investment in diversification of production and modern pest management control.

The following table shows areas devoted to coffee in the four regions according to the Agricultural Census of 1971 and for crop years 1982/83, 1984/84, 1984/85; 1986/86.

AREA PLANTED TO COFFEE
(Manzana - One Manzana = 1.7 acres).

Crop Year	Region I	Region II	Region III	Region IV
1971	95,827	57,568	12,272	44,599
1983	117,712	69,783	14,587	51,656
1984	115,404	68,595	14,114	50,087
1985	113,211	67,466	13,664	49,596
1986	109,428	64,543	12,698	47,544

Traditionally, the Eastern Region has produced 16.6 percent of the coffee in El Salvador. The decline in coffee production during the war years is established at 3.432.000 quintales. In the Eastern Region eighty percent of the loss is ascribed to violence. This results in a war related loss of 455.800 quintales (3432 x .166 x .80). At an average price of $122 per quintal the Eastern Region share of the loss was $55.608.000. But this is the loss to the nation. The direct loss to the economy of the region was only about one-half that, the producer share of the export price. This gives a loss in coffee earnings due to the war of $27.804.000.

The cattle population of El Salvador, broken down by regions as well as total official slaughter, was shown earlier in Table IV-6. Unfortunately, regional breakdowns were only available for selected years.

A most interesting statistic is the percent of the national cattle population in the Eastern zone in 1977 and in the three most recent years. In 1977, forty one percent of the cattle were in Region IV. In the years 1983 to 1985, the center of cattle population has shifted westward to the less conflictive zones and the cattle population share of the Eastern Region has fallen to twenty seven percent. As the national herd has dropped slaughter has increased as a percent of herd, thus stimulating a further drop. The shift of the cattle population westward can reflect only one important variable, civil violence, since that is the only explanation for the growth in the West and decline in the East other than a statistical difficulty in counting dispersed animals. But that is also a guerrilla war result. Consequently, the drop of the Eastern Region's share of the herd from 41% to 27% should be considered war damage. This implies a similar drop in market share of animals slaughtered. Assuming a decline in herd size in the east of 270,000 head and pre-war slaughter levels of 15% of herd, the loss to the East was about 15 percent of 270,000 times 700 pounds per head times ¢1.50 per pound on the hoof or:

Animals slaughtered 0.15 x 270,000	40,500
Average animal weight, pound	400
Pounds slaughtered	28,350,000
Colones value of slaughter	42,525,000
US Dollar value	$17,010,000

This provides us with a conservative, but admittedly rough, estimate of US$ 17,000,000 loss per year for four years of $68,000,000.

The following sums up losses in agricultural production, and income, suffered by the Eastern Region from the guerrilla war and its associated violence:

Food and feed grains, beans	$US 33 million
Cotton	27 million
Coffee	28 million
Cattle	68 million
Loss of income to the East	$US 156 million

D. Losses to Business and Industry - Eastern Region

Because statistical breakdowns of industrial output or commercial activity for the Eastern Region are not available, this part of the report is confined to a few case studies and some descriptive material. We do know that industry and commerce are concentrated in the San Salvador region. We also know that industry and commerce dropped in real terms far more than agriculture during the recent war years. Region IV is heavily agricultural with its commercial prosperity dependent on agricultural output. Putting all these factors into the intuitive calculator this report suggests that the losses to small industry and commerce in the Eastern Region were about equal to agricultural sector losses.

Informal discussions with several owners of small commercial enterprises developed insights that can supplement the cases reported more fully above. The woman whose husband was murdered runs a store that sells, at retail and on credit, household goods and appliances, mostly electric, including fans, sewing machines, small stoves, refrigerators and sound systems. Prior to the violence, this store employed a sales force that visited small towns and villages selling these items through local outlets. Refrigerators were sold to small village grocery stores. The store owner estimates that this was over half of the firm's business and very welcome business since the more rural customers were good credit risks who paid promptly. A relatively small inventory was maintained; distributors in San Salvador could deliver quickly from stock, by truck or rail. Installment paper could be discounted at local banks. As a result of the violence, sales dropped, whole areas were cut off, deliveries from distributors became less reliable and required more cash, banks stopped discounting paper and while the business has survived it has done so with lower sales and higher cash. Oddly enough, the frequent breaks in electric power supply have had only an indirect effect on sales. The shop is only open during daylight hours. But indirectly it has been very important, in households or shops, loss of electric current means spoiled food and refrigerators become useless.

The situation has been similar in the cases of construction materials and vehicle spare parts except that the problem of a smaller sales area has been complicated by supply problems. The auto parts shop does not import for its own account, but the distributor imports for its own account, and the distributor's import or foreign exchange problems result in supply shortages at the local level. The building supply business has almost disappeared on both supply and demand sides. There has been almost no new construction as well as no supplies to sell. The data on registered businesses in San Miguel shows an increase of 26% in commercial establishments between 1982 and 1986. This may be a bit deceptive. The Eastern Region Commissioner's Office reports that many of these are tiny establishments selling artisan products of refugees. In any case, damage to local commerce has been extensive, we have no reliable statistics but the fifty percent drop in sales reported by the local business persons is probably accurate and recovery will surely require a substantial infusion of working capital.

E. Recovery of the Eastern Region

In describing above the nature of rural and urban violence in the Eastern Region, mention was made of a spirit of optimism in the San Miguel area. This was the rather surprising impression received during a visit to the region and from a number of interviews, in groups and with individuals, which were held. The optimism probably results from the perception, a quite accurate perception, that military successes against guerrilla force are resulting in a gradual return to order and security. A drafter of this report was told in a group meeting that two or three years ago bands of guerrilla forces, two thousand strong, moved about the countryside, from sea to mountains, with impunity. The armed gangs which invaded coffee fincas and cotton plantations would be made up of two hundred or more persons, including a number of women. Travel, even by day, was hazardous at any time, even on main highways, and mortally dangerous during guerrilla declared travel stoppages (paros). Lesser towns were invaded by guerrilla forces and occupied for periods of a few hours up to nearly a week. Government authorities were terrorized or murdered and in a large expanse of territory government authority did not exist.

Conditions in much of the region as of May 1986 were hardly models of law, order and security. Guerrilla forces can still stop traffic on secondary roads, two large rural electrification nets remain on the ground: electric transmission line towers are still being blown up regularly. As recently as March of this year five large warehouse sheds full of unginned cotton were burnt to the ground ten minutes out of Usulutan on the main highway.

In June of this year guerrilla forces carried out a surprise night attack on the San Miguel barracks using mortars and machine guns and inflicting substantial casualties, over fifty killed, before fleeing into the night.

On the other hand, to the people of the Eastern Region things are greatly improved. The security situation is greatly improved, the military forces generally hold the initiative and roving guerrilla forces move by night and number two hundred, not two thousand. Even the gangs that invade cotton plantations and coffee fincas are down to twenty or thirty and are almost entirely men.

The change may explain the great optimism expressed by the people of San Miguel in interviews. The widow mentioned above plans to re-establish her merchandising system in the small towns of the department. The furniture maker expects to double output. The coffee growers plan to replace burned trees. The cattle people want to rebuild herds. Even the cotton planters in San Miguel want to try more diversified production.

The optimism of the urban community of San Miguel is supported statistically. In 1982 there were 634 registered business in the town, industrial, commercial and service. Now, in mid-1986, there are 794, a 25% increase. The following table shows this development:

Sector	1982	1986	Difference %
Industrial	75	98	30.7
Commercial	358	453	26.5
Service	201	243	25.2
Total	634	794	25.2

All local businessmen and authorities reported that the major constraint to a continuation of recovery is the lack of financing. Financing is often available only theoretically because the prospective borrower cannot meet the demands for collateral, especially if as a result of the conflict, the firm's assets are already committed to previous financing. The answer to this problem would seem to be a special Disaster Relief Loan and Guaranty Fund designed on the following principles:

- Financing should be available for various operations including working capital, inventory expansion, construction, factory equipment, transport equipment, agricultural inputs, livestock, technical services and the like.

- Financing should be at reasonable interest rates but not so subsidized as to distort investment decisions.

- The project itself should provide the collateral, no additional mortgages, pledges or supporting guarantees should be required. The direct lender should be protected by the Guarantee fund itself.

- Approval of financing involving import of goods or services should automatically include approval of the associated foreign exchange transaction.

- The fund should be regional in character, available only in the Eastern region and managed in the Eastern region.

- Priority should be given to projects that will incorporate displaced persons into local and regional economies.

- Such a fund should be established soonest and should not await a complete end to the security threat. In fact the fund should be considered not just a recovery measure but an economic weapon against the continuation of civil violence and guerrilla terror.

Finally, some mention should be made of the difference in attitude between the towns of San Miguel and Usulutan. The people interviewed in San Miguel want to get on with rebuilding, renewal and growth. The people interviewed in Usulutan are happy with the improvement in security but not yet ready to invest in the future. There seems but one explanation for the difference. The people of Usulutan feel extremely dependent on cotton as the source of well-being and while they have little hope for a great resurgence of cotton production and income they see few alternatives. The Miguelenos are busy seeking alternatives. In San Miguel financing is needed; in Usulutan, only fifty kilometers away, financing must be accompanied, or even preceeded, by a special effort to attract attention to alternate opportunities in agriculture, small industry and commerce.

In conclusion, the Eastern Region has suffered more in both the public and private sectors than the rest of El Salvador. The people of the region seem prepared to start the rebuilding process as rapidly as improving conditions permit. Moreover, they will need substantial financial assistance specifically tailored to their needs and recognizing the difficulties which they have lived through.

APPENDIX:

MACROECONOMIC ASSESSMENT: ESTIMATION OF THE MODEL

The Republic of El Salvador is the smallest mainland nation in the Western Hemisphere. In relation to its size, the country has an unusual amount of fertile land: some 40% of the country's 3.85 million acres were under cultivation in 1974. This high rate of land use is explained by the fertility of the countryside and a very high population density which prompts cultivation of even marginal land. However there are no more arable tracts of land available to accommodate a population growing at a rate of 2.9% a year. Consequently, exports of food are growing.

The suitability of El Salvador for agriculture can be contrasted with its great poverty in other natural resources such as oil, minerals, etc., which has led to a great specialization in agricultural products for export purposes. In the last two decades, the country has succeeded in developing its exports of manufactured products. However, the inputs for these exports have to be imported for the most part.

El Salvador, as in many less developed countries, is a labor surplus economy. Before the internal armed conflict started, combined rates of unemployment and underemployment stood at over 50%.

The constraints on the country's growth do not lie on the supply side but on the demand side of the economy. For the purpose of estimating the impact of the war on the economy, a model of the Salvadoran economy has been estimated. This model recognizes the major role played by the foreign sector and the demand-determined nature of the economy.

The assumption of a small economy seemed particularly appropriate. The economic size of the country is such that its supply of exports and its demand for imports do not affect world prices. Consequently all external prices are assumed given. This assumption includes the price of coffee: although a significant coffee producer at the world-level despite its small size, El Salvador does not affect world coffee prices.

1. Real Imports

A standard import demand function for a country includes as explanatory variables the real income of the country and the relative terms of trade (i.e., the unit value of imports divided by the domestic price level).

Such a function has been estimated for El Salvador, the real income of the country, RGDP (as measured by the Gross Domestic Product divided by the corresponding Price Deflator) was found to be a significant explicative to variable for the real level of imports.

However, neither the relative price of imports nor import prices per se have been found to be good explicative variables. Different specifications of the equation, such as using a logarithmic transformation of the variables, yielded similar results.

Imports in El Salvador have apparently a very low price-elasticity. In other terms, the imports of food and necessary inputs are not very responsive to price changes.

Another specification was attempted. The capacity for imports of a country depends partially on the availability of foreign exchange. The level of income, RGDP, determines the desired level of imports and the availability of foreign exchange determines how much of this desired quantity will actually be imported. The availability of foreign exchange has been measured by the stock of net foreign assets in U.S. dollars, NFAUS.

A standard estimation procedure on this specification yielded very satisfactory results. Since the equation is part of a system of simultaneous equations, a more refined estimation technique was used to obtain true coefficients.

Data for the period 1968-1983 were used. The data for imports, import price under -- for computing the inflation free figures -- and Real Gross Domestic

EQUATION #1: REAL IMPORTS

SMPL [illegible] - [illegible]
15 Observations
TSLS // Dependent Variable is RIM
Instrument list: C RGASG RGDP(-1) PRCAF KGCAF GIMI

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
DUM1	-229.53968	217.93299	-1.0532581
DUM2	-280.41486	275.16983	-1.0190611
NFAUS(-1)	0.9627203	0.2852876	3.3745609
RGDP	0.2866056	0.0773184	3.7068735

R-squared	0.942981	Mean of dependent var	724.4173
Adjusted R-squared	0.927431	S.D. of dependent var	231.3235
S.E. of regression	62.31555	Sum of squared resid	42715.51
Durbin-Watson stat	2.192114	F-statistic	60.63960
Log likelihood	-80.94108		

critical values t=1.796
DW=1.97

EQUATION #2: VALUE OF TRADITIONAL EXPORTS

SMPL 1969 - 1982
14 Observations
LS // Dependent Variable is TRADEX

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
PRCAF	164.30644	17.658845	9.3044837
KGCAF	8.2867757	1.8013104	4.6004152
WAR	-0.3184611	0.1576301	-2.0203059
C	-935.15641	249.78513	-3.7438434

R-squared	0.937313	Mean of dependent var	1095.743
Adjusted R-squared	0.918508	S.D. of dependent var	621.4595
S.E. of regression	177.4073	Sum of squared resid	314733.6
Durbin-Watson stat	2.689127	F-statistic	49.84132
Log likelihood	-90.00811		

critical values t=1.812

DW=1.97

Product were obtained from the Central Reserve Bank of El Salvador. The level of net foreign assets was obtained from the International Monetary Fund's International Financial Statistics.

The period 1968-1983 was split in two subperiods: 1968-1978 and 1979-1983. Each period has its own intercept: DUM1 which takes the value 1 (one) in the pre-war years and 0 (zero) in the war years while DUM2 takes the value 0 (zero) from 1968 to 1978 and 1 (one) in the second subperiod.

The results are displayed as equation 1 along with the critical values for the coefficient statistics.

2. Real Exports

Attempts to estimate a general export demand function have failed repeatedly. El Salvador exports two types of products: light manufactures generally called non-traditional exports, and agricultural products -- mainly coffee, cotton, sugar and shrimp -- labelled traditional exports. Estimations on these two types of exports have been conducted.

a. Traditional Exports

Before the war these exports represented over 65% of total export revenues. No composite price or volume exists for these exports. Coffee exports, which make up 80% of these exports, were used as a proxy variable for total traditional exports.

Data on the period 1957-1978 were available and were used for the estimation. Volume of coffee exports were found unresponsive to price -- even lagged several periods -- as well as measures of real income in industrialized countries. In retrospect these findings should not be surprising. Coffee is an orchard crop which has no yield for several years after planting. Its price may vary substantially from one year to the next. The decision to invest in coffee plants does not depend on the price of a particular year. Three and five-year moving averages of prices did not yield any significant results either. This more surprising result may be due to inherently random factors in the amounts harvested, such as types of weather at particular times of the year. Coffee in industrialized countries is a relatively cheap commodity. The changes in levels of real income in these countries does not affect the demand for the product in any significant way.

This finding is consistent with the conclusions drawn by the IMF Institute in the case of Colombia.

> "The world demand for coffee barely reacts to variations of price or income. The coffee market is characterized by short periods of scarce supply and very high prices followed by often prolonged periods of high supply and low prices." (IMF Institute: Applied Financial Programming: Colombia, p. 235).

Another attempt to estimate an equation allowing forecasting of coffee exports was conducted using a measure of the real exchange rate. This variable, lagged one period appeared to explain a substantial share of the variations in coffee exports in volume. However, the projection of this equation over the period 1979-1985 proved it to be a poor predictor of coffee exports -- particularly in the years 1979, 1980, 1981, which were grossly underestimated.

It has then been decided to estimate total traditional export revenues, TRADEX, in terms of coffee prices, PRCAF, and volume of coffee, KGAF. Since coffee is such an important crop and is ubiquitous in the country, it might have been severely affected by the conflict. A variable WAR, the number of attacks against public utilities and transport companies, has been included as a measure of the intensity of the guerrilla warfare.

All variables have been found significant. It is clear from the results of the estimation, displayed as equation 2, that the war had significant negative effects on export revenues from traditional exports.

b. Non-traditional Exports

Real non-traditional exports, RNEOEX, were estimated using the standard specification of relative price and real income of trading partners as explicative variables with very unsatisfactory results.

Non-traditional exports depend in a substantial way on imported inputs. A specification of an equation relating exports of non-traditional products, adjusted for price changes, to the level of real imports yielded very satisfactory results. As this equation is part of a simultaneous equation system, a more refined technique to achieve unbiased coefficient was used.

The direct effect of the war on these exports can be seen in the value of the coefficient of the dummy variable DUM2 compared to DUM1 (equation 3).

3. Real Private Investment

A standard formulation for investment demand makes investment plans dependent on a real rate of interest, RRATE, and the real level of income, RGDP, in the country.

It has been assumed that entrepreneurs make their decision at the beginning of the period using information available from the last period. It has also been decided to include a measure of the cost of imports, GIMI, since most machinery and inputs have to be imported. Entrepreneurs do not only react to objective economic and social stability. Economic variables provide for the entrepreneurs a measure of profitability which is then subjectively corrected for risk. Thus, the variable "WAR" has been included in the equation.

The results of the estimation are presented as equation 4. War has turned out to be a very significant variable. The positive sign on the index for the price of imports came as a surprise. Various other specifications for the equation using this index as a independent variable yielded similar results. This could mean either that national investors accelerate their investments when the imports price rises so as to avoid the deterioration of the purchasing power of their savings or of future loans, or that investments are made in import substitution industries.

EQUATION #3: REAL NON-TRADITIONAL EX. RTS

SMPL 1969 - 1983
15 Observations
TSLS // Dependent Variable is RNEGEX
Instrument list: C PRCAF KGCAF GIMI RGDP(-1) RGPSB

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
DUM1	81.568049	16.393062	4.9757665
DUM2	59.064759	15.843298	3.7280595
RIM	0.1950848	0.0205041	9.5144457

R-squared	0.904341	Mean of dependent var	215.3898
Adjusted R-squared	0.886397	S.D. of dependent var	51.16256
S.E. of regression	17.09186	Sum of squared resid	3505.586
Durbin-Watson stat	2.274162	F-statistic	56.72247
Log likelihood	-62.18955		

critical values t=1.812
DW=1.97

EQUATION #4: REAL GROSS PRIVATE INVESTMENT

SMPL 1969 - 1983
15 Observations
LS // Dependent Variable is RIKPR

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
RRATE(-1)	-485.12712	278.71320	-1.7405961
GIMI(-1)	96.283790	46.087611	2.0891469
RGDP(-1)	0.0836818	0.0459645	1.8205749
WAR	-0.4897617	0.0978482	-5.0053202
C	25.121196	131.64955	0.1908187

R-squared	0.872998	Mean of dependent var	346.3920
Adjusted R-squared	0.822197	S.D. of dependent var	138.2324
S.E. of regression	58.28796	Sum of squared resid	33974.86
Durbin-Watson stat	2.544143	F-statistic	17.18475
Log likelihood	-79.22402		

critical values t=1.812

DW=2.21

EQUATION #5: REAL PRIVATE CONSUMPTION

SMPL [illegible]965 - [illegible]968
[illegible] observations
TSLS // Dependent variable is RCONSP
Instrument list: C RGASG GIMI PRCAF RGCAF

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
RGDP	0.2326712	0.1353757	1.7201347
RIM	0.7220462	0.2521226	2.[illegible]
DUM1	1006.2006	249.69721	4.0376929
DUM2	899.63450	311.47409	2.8883126

R-squared	0.952213	Mean of dependent var	[illegible]
Adjusted R-squared	0.939180	S.D. of dependent var	276.[illegible]
S.E. of regression	68.06927	Sum of squared resid	50967.68
Durbin-Watson stat	2.048267	F-statistic	73.06257
Log likelihood	-82.25580		

critical values t=1.796
DW=1.97

4. Real Private Consumption

A standard specification of a consumption function relates real private consumption, RCONSP, to the level of disposable income, i.e., income once income taxes have been taken out. In El Salvador, income taxes are a very small fraction of total government revenues. It appeared unnecessary to specify the equation in this form: the gain in explicative power would have been minimal or insignificant. Real Gross Domestic Income has been used an an explanatory variable.

Salvadorans consume not only domestically produced goods but also imported goods. The country is far from producing the variety of goods consumed. Real imports have also been included as independent variables.

Since this equation is also part of a system of simultaneous equations, the technique of two stage least square has been used for the estimation. The results are displayed in equation 5. Here also the impact of the war can be seen in the change between the coefficients of the dummy variables.

5. Supply of Money

Various specifications have been used for the estimation of the supply of money. The variable for money, M2, is defined in the standard way: currency in circulation, checking account deposits and time deposits. The independent variable first used was the deficit of the government, i.e., the difference between total government revenues and total government spending. The existence of "extraordinary funds" for special projects which are not included in regular government account reports was brought to our attention. But it appears that these special projects are fully funded by external grants or loans.

The government deficit as an explanatory variable had a significant coefficient but it was considered that it did not constitute a satisfactory predictor.

Government revenues and government expenditures also had significant coefficients and the expected respective signs. But in this case also, it was considered that their predictive power was weak.

Equation #6:Money Supply (definition:M2)

SMPL 1969 - 1983
15 Observations
LS // Dependent Variable is M2

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
GASG	1.8976329	0.0692685	27.395338
C	136.67890	71.443810	1.9130965

R-squared	0.982973	Mean of dependent var	1835.313
Adjusted R-squared	0.981664	S.D. of dependent var	1015.112
S.E. of regression	137.4587	Sum of squared resid	245633.5
Durbin-Watson stat	1.745524	F-statistic	750.5046
Log likelihood	-94.06067		

critical values t=1.771

DW=1.36

Equation #7:Price Deflator

SMPL 1969 - 1983
15 Observations
LS // Dependent Variable is INDEF

	COEFFICIENT	STANDARD ERROR	T-STATISTIC
M2(-1)	0.0005447	6.924D-05	7.8669132
GIMI(-1)	0.2026919	0.0716094	2.8305192
DUM1	0.4508082	0.0523605	8.6096936
DUM2	0.6014061	0.1022781	5.8801055

R-squared	0.994989	Mean of dependent var	1.783640
Adjusted R-squared	0.993622	S.D. of dependent var	0.775078
S.E. of regression	0.061899	Sum of squared resid	0.042146
Durbin-Watson stat	2.477135	F-statistic	728.0345
Log likelihood	22.77592		

critical values t=1.796

DW=1.97

In the end, the specification which give the best results included only total government expenditures, GASG, on the right-hand side. The results on the estimation is presented on a facing page.

The Salvadoran government deficit is financed by external loans and by loans from the Central Bank. Since it probably takes some time during a given period before external loans are approved, it appears that the government finances the gap between revenues and expenditures through some short-term financing at the Central Bank. This financing of the cash flow makes government expenditure a better predictor than the deficit properly speaking which is partially financed from outside.

6. Price Level

Using the GDP price deflator as a measure of inflation, a cursory check on the behavior of this index over the period 1968-1983 showed substantial price increases in 1974 and 1978. These years correspond to major increases in price of oil. Therefore, it has been decided to include an index of the price of imports, GIMI, in the estimation of the price level as well as the stock of money, M2.

An estimation using all the same period data yielded poor results. The results were best when one-period lags were used. The effect of increases in the money supply and in the price of imports are felt only in the next period. Given the largely rural character of the Salvadoran economy, such results were to be expected.

ANNEX I. INTERVIEWS AND CONTACTS

ASSOCIATIONS

FUNDACION SALVADOREÑA PARA EL DESARROLLO ECONOMICO Y SOCIAL (FUSADES)

Edif. La Centro Americana
Alameda Roosevelt, 6º piso
P. O. Box 01-278
Tel.: 24-5636 - 24-3975

Centro de Estudios Económicos y Sociales:
Lic. Mauricio Gonzâlez
Lic. Rafael Rodriguez Lourcel
Lic. Juan Hector Vidal
Ing. Margarita Béneke

ASOCIACION SALVADOREÑA DE INDUSTRIALES (ASI)

Calles Roma y Liverpool, Colonia Roma
Tel: 23-7788
Lic. Roberto Ortíz Avalos
Lic. Rigoberto García Velado

ASOCIACION NACIONAL DE EMPRESA PRIVADA (ANEP)

Alameda Roosevelt Nº 2827, 2º piso
Tel: 23-3893
Sr. Johnny Maldonado

CAMARA DE COMERCIO E INDUSTRIA DE EL SALVADOR

9a. Avenida Norte y 5a. Calle Poniente
Tel: 71-2055
Dr. Antonio Rodríguez Porth, President
Sr. Ricardo F. Simán, Vice President

CAMARA AMERICANA DE COMERCIO DE EL SALVADOR (AMERICAN CHAMBER OF COMMERCE)

65a. Avenida Sur Nº 159,
Tel/: 23-2419 - 23-9604
Sr. Donald Drysdale

SOCIEDAD DE COMERCIANTES E INDUSTRIALES SALVADOREÑOS (SCIS)

Avenida Olímpica, Edif. HMH Nº 3008
Tel. 23-7269 - 23-7252
Sr. José Ayala Pacheco, President
Lic. Freddy Quintanilla Morales, Vice President
Lic. Sergio Núñez, General Manager

ASOCIACION DE BENEFICIADORES Y EXPORTADORES DE CAFE (ABECAFE)

87a. Avenida Norte Nº 720, Apt. "A",
Colonia Escalón
Tels: 23-3292 - 24-3646

Miguel Angel Salaverría
Lic. José Roberto Schönenberg, Gerente

ASOCIACION CAFETALERA DE EL SALVADOR

Edificio INCAFE, 2a. Calle Oriente.
Tel: 21-3580 - 24-2829 - 23-6549

Sr. Orlando De Sola

COOPERATIVA ALGODONERA SALVADOREÑA (COPAL)

7a. Avenida Norte Nº 418, 3º piso
Tel: 220399
Lic. Luis Méndez Novoa, President

Sr. Ernesto Muyshondt (diaryman) (NETO, S.A. - TEL: 71-3835)

ASOCIACION PRODUCTORES DE CAÑA DE AZUCAR DE EL SALVADOR (PROCAÑA)

Apartado Nº 85, San Salvador

Sr. Winnall A. Dalton - Tel: 28-1815 - 23-6084
Sr. Joaquin Alfaro Brizuela, President (Tel: home: 23-3214)

CAMARA SALVADOREÑA DE LA INDUSTRIA DE LA CONSTRUCCION

Paseo Escalón Nº 4834
Tel: 23-4009 - 24-0645 - 24-1678
Sr. Carlos Ernesto Pineda, President

ASOCIACION SALVADOREÑA DE EMPRESAS DE SEGUROS

67a. Ave. Sur. Nº164
Tel. 23-0501
Sr. Rodolfo Schildknecht - Gerente ASESUIZA Tel: 23-2111

ASOCIACION AZUCARERA DE EL SALVADOR

Apartado Postal Nº 521, San Salvador
Tel: 23-6688, 242626
Dr. Francisco Armando Arias Rivera, Executive Secretary

ASOCIACION DE EMPRESARIOS DE AUTOBUSES SALVADOREÑOS (AEAS)

Calle Gerardo Barrios Nº 1509
Tel: 22-5853 - 22-8469
Lic. José Rubén Guerrero, Member of the Board of Directors
Sr. Ramón Gutierrez Alfaro, Treasurer

UNION DE COOPERATIVAS DE CAFETALEROS DE EL SALVADOR (UCAFES)

Calle El Progreso, Edif. Cáceres Avellis, 2º piso
Tel: 24-4275
Sr. Rubén Ernesto Pineda, President

INSTITUTO SALVADOREÑO DE INVESTIGACIONES DEL CAFE (ISIC)

Final 1a. Ave. Norte, Nueva San Salvador
Tel: 28-0339 - 28-0669
Ing. Carlos Ernesto Romero Ayala, Deputy Director

FEDERACION NACIONAL DE ASOCIACIONES COOPERATIVAS DE LA INDUSTRIA DEL TRANSPORTE DE EL SALVADOR, DE R.L. (FENACITES)

5a. Ave. Norte Nº 240, 2º piso
Tel: 22-6341
Sr. José Antonio Moreira, President

UNION DE INDUSTRIAS TEXTILES (UNITEX)

Edificio A S I, Col. y Calles Roma y Liverpool
Tel: 22-0907 - 23-7788
Lic. Miguel Ernesto Daura M., Manager

PRIVATE COMPANIES

SUGAR

Refinería Salvadoreña de Azúcar, S.A.		Km. 9½ carretera Troncal del Norte Tel: 31-0030 - 31-0040 - 31-0198 Cable: REFINADA Apdo. Postal (06) 260
	Product:	Refined Sugar
	President:	Dr. Francisco Armando Arias Rivera
Industrias Convertidoras de Azúcar (INCOA)		Km. 5-½, Blvd. Del Ejército Nacional Tel: 27-4000 y 27-4555 Telex: 20660 Apdo. Postal Nº 990
	Product:	Raw Sugar
	President:	José Alberto Díaz

FOOD

La Indiana, S.A. de C.V.		Km. 11-½ Carretera Troncal del Norte Tel: 31-0171 - 31-0374
	Product:	Sausage, bacon
	President:	Sr. Alejandro Mayer h.
Empresas Lácteas Centroamericanas		Blvd. Venezuela Nº 2754 Tel: 23-9144 Telex: 20782 FOREMOST Apdo. Postal Nº 01-3
	Product:	Milk products
	President:	Sr. Carlos Enrique Merazzo Pinto

BEVERAGES

La Constancia, S.A.		Paseo Independencia Nº 526 Tel: 71-0733 Apdo. Postal 101
	Product:	Beer and Ice Cubes
	President:	Lic. Roberto H. Murray Meza

PHARMACEUTICAL PRODUCTS

Corporacion Bonima, S.A.	Carretera Panamericana, Km. 11, Ilopango Tel: 27-2011 Telex: 20091 Apdo. Postal 1092
Product:	Pharmaceutical Products
President & General Manager:	Sr. Raul Carrera Samayoa

ELECTRIC PRODUCTS

Conductores Eléctricos de C. A.	Carretera Panamericana, Km. 11, Ilopango Tel: 27-1688
Admin. Manager:	Sr. Joaquín Chávez

TOBACCO

Cigarrería Morazán	Blvd. del Ejército Nacional, Km. 7-1/2 Tel: 27-0444
General Manager:	Sr. Edmundo Rodríguez

PAPER PRODUCTS

Kimberly-Clark de C. A., S.A.	7º. Ave. Norte y Pje. Istmania Nº 406 Colonia Escalón Tel: 28-2400 (Sitio del Niño, Depto. La Libertad - Factory)
Product:	Tissues and Sanitary Napkins
General Manager:	Sr. JOrge Leal Bernal

TEXTILES

Textiles San Andrés, S.A.	Carretera a Santa Ana, Km. 32 Tel: 28-2077
Product:	Towels, Bed Spreads
General Manager:	Sr. Luis Ramón Portillo
Minerva (Molins y Cia.)	Apdo. Postal 2309 Tel: 25-6022 - 26-3346 - 26-1802
Product:	Textiles
General Manager:	Sr. José Adolfo Rubio

Industrias Unidas, S.A. (IUSA)	Km. 11-1/2, Carretera Panamericana Seccion Oriente Ilopango Tel: 27-2322
Products:	Yarns and fabrics
General Manager:	Sr. Osamu Oshimo

ELECTRODOMESTIC

Industrias de C. A., S.A.:	Blvd. del Ejercito Nacional Km. 9, Tel: 27-0999
Products:	Refrigerators
General Manager:	Sr. Koen Steendijk
Aliansa-Alimentos de Animales, S.A.	Urbanizacion Industrial La Laguna Tel: 24-1177 y 24-1899 - 24-1588
General Manager:	Sr. Luis Lopez Lindo

CONDIMENTS AND SPICES

McCormick de C.A., S.A. de C.V.	Av. Las Palmeras y C. Antig. Cuscatlan Tel: 24-2721 Col. La Sultana
General Manager:	Sr. Mauricio Barrientos
El Dorado, S.A. de C.V.	Final Avenida Peralta San Salvador Tel: 71-2950
Products:	Vegetable Oils and Fats
General Management:	Sr. Christopher Hobart

COFFEE

Productos de Cafe		75a. Av., Nte. y 7a. Calle Pte. No. 3876 Col Escalon Tel: 24-6545 y 24-6407
	Products:	Instant Coffee, Extracts
	General Managers:	Sr. Roberto Abrego ---Lic. Edgar Mejia
Cooperativa de Cafe Lenca de R.L.		Blvd. El Hipodromo # 309 Col San Benito San Salvador Tel: 24-0117
	Products:	Coffee beans
	President:	Ing. Eduardo Recinos A.
Cooperativa de Cafeteleros de San Jose la Majada de R.L.		Juayua, Sonsonale El Salvador Tel: 52-2047
	Products:	Coffee beans
	President:	Mario Enrique Olivares C.

PRODUCTOS DERIVADOS DEL PETROLEO

Esso Standard Oil, S.A. Ltda.		Blvd. del Ejercito Nac., Km. 6-1/2 Tel: 27-1022
	Products:	Fuels and Lubricants
	Manager:	Sr. Freddy Cruz

ASSEMBLY AND REEXPORT INDUSTRY

Pineda Hermanos, S.A. de C.V.	Calle a El Matazano, Soyapango Tel: 27-3111
Products:	Women's Clothes
President:	Sr. Roberto Pineda Letona

STEEL

Corporacion Industrial Centro Americana, .S.A.

CORINCA	Av. Olimpica y Pje. 3 Edificio Su Casa, 2do Piso Aptdo. Postal 1142 San Salvador Tel: 23-9626, 23-2054
Products:	Steel products
President:	Dr. Giannetto Paggi
Executive Director:	Arq. Felix Osegueda Jimenez

INSURANCE

Seguros Desarrollo S.A.	Calle Loma Linda # 265 Col San Benito San Salvador, El Salvador Tel: 24-3800
Products:	Insurance Services
President:	Ismael Warleta Fernandez

Union de Seguros S.A.	73 Av. Sur # 135 Col Escalon San Salvador Tel: 23-4825, 23--4829
Product:	Insurance Services
Managing Director:	Pierre Cahen

PLASTICS

Salvaplastic, S.A. de C.V.	Plan de la Laguna Antiguo Cuscatlan La Libertad, El Salvador Apartado Postal 889 Tel: 24-3100
Products:	Plastic containers
Manager:	Arturo Tona
Termoencogibles, S.A. de C.V.	C.L. 3 Poligono D Lotes 1 y 2 Zona Industrial Ciudad Merliot Nueva San Salvador Tel: 78-0029, 78-1134
Products:	Plastic bags and wrappings
President:	Hugo A. Tona

COMMERCE

Almacenes Siman		P.O. Box (06) 800
		San Salvador
		El Salvador
		Tel: 71-4000, 71-3000
	Department Store:	
	President:	Ricardo Feliz Siman

CONSUMER PRODUCTS

Compania Distribuidora S.A. (CODISA)		
Industrials Anisola, S.A.		
El Dorado, S.A. de C.V.		Apartado Postal 1282
		Salvador
		Tel: 71-22924, 71-2950
	Products:	Soaps, Toothpastes, Vegetable Oils
	General Manager:	Christopher B. Hobart

SAN MIGUEL

Private Businesses

Luis Alfonso Parada	Asociacion Cooperativa de Ahorro y Credito Miguelena, de R.L. Tel: 61-1011
Miguel Angel Silva	Cielos El Angel Tel: 61-0553
Niguel Tusell Paseual	Hotel Tropico La Casa del Repuesto Tel: 61-1168
Doris Esmeralda de Zelaya	Comercial Zelaya Tel: 61-1058 - 651-1526
Ramon Roberto Guardado	Presidente S.I.C.S. 3a. Av. Sur 811 Tel: 61-1875
Ing. Rodolfo Aquino	Vice Presidente de SCIS Filial Gerente de DETERGENTES Y DERIVADOS, S.A. de C.V. (Fabrica de jabon) Pasaje Bou No. 1-06 Colonia Los Pinos Tel: 61-1367 (casa) 61-2953 (ofic.)

Pablo Villacorta Garcia	Miembro de la sociedad de Comerciantes e Industriales de S. Miguel Fabricante de muebles de madera 2a. Av. Sur No. 205 Tel:
Felix Ismael Delgado Giron	Directiva de la Soc. de C.I.S. 1a. Av. Sur y 3a. Calle Pte. No. 117 Comercial Fuentes Tel: 61-1504
Blanca Adela C. de Benavides	(Small Shop) No credit sales 5 Av. Norte No. 902 BIS Tel: 61-1329 - 61-1667
Ing. Jose Roberto Castillo	Ingeniero Agronomo Zootecnista 3a. Av. Norte No. 402 (Milk Plant) Tel: 61-1937
Carlos Mario Soriano Flores	Av. Los Angeles No. 3-11 Colonia Los Pinos Tel: 61-2756 Ganadero
Martin Francisco Zaldivar	Ganadero (no cotton) Calle Hnos. Maristas No. 635
Luis Enrique Arevalo	1a. Calle Poniente No. 301 Farmacia La Merced Tel: 61-1475
Sonia Claribel Escobar de Velazques	Ingeniero Industrial Pasaje Bou No. 1-02 Colonia Los Pinos

Salvador Villacorta	Hotel Tropico Inn Avenida Roosevelt Sur No. 303 Tel: 61-1800 - 61-1288
Miguel Angel Ruiz	Propietario Farmacia Central USULUTAN Tel: 62-0358

GOVERNMENT

Miguel Charlaix	Comisionado Presidencial para la Reactivacion Economica de la Zona Oriental Tel: 61-2868

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ANNEX II.

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B. <u>Government of El Salvador</u>

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C. <u>Private Organizations</u>

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J. Johnston

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Lic. Sarbelio Armando Girón

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