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11   Uruguay: Alternative Trade Strategies and Employment Implications

Alberto Bension and Jorge Caumont

Introduction

Among the countries covered in this volume Uruguay is unique in several regards. First, and most important in terms of the study, Uruguay is the country where the least prior research has been done and where data availability poses the severest constraint upon analysis. Second, Uruguay is by far the most affluent country in the study, with a per capita GDP of $1,190 in 1974 (World Bank 1976, p. 5). Many social indicators reflect this: 91 percent of the population over seven years old is literate, life expectancy at birth is sixty-eight years, and population growth since 1908 has been about 1.2 percent per annum (Banco Central del Uruguay 1976a).

However, from the mid-1950s until the early 1970s, Uruguay's economic growth performance was almost as dismal as her initial standard of living was favorable. Uruguay was a very rich agricultural exporter in the 1920s and shifted policies toward import substitution after the Great Depression and World War II. This shift resulted in an annual growth rate of real GDP of only 1.6 percent over the decade 1935–45, 4.8 percent over the next ten years, and 0.7 percent per annum from 1955 to 1974 (Banco Central del Uruguay 1976b, p. 22—hereafter cited as BCU). Thus, per capita income in 1974 was probably slightly below its level twenty years earlier and probably no higher than it was in the 1920s.

In this paper we will analyze the employment implications of Uruguay's trade strategies. Focus is upon the year 1968, in the midst of the period when Uruguayan policies were directed heavily toward import substitution. The reason for this choice is, of course, data availability. In 1972 Uruguay did begin altering her policies toward a more systematic effort at export promotion. However, not enough time has elapsed since the change in orientation for us to interpret the results, and, in any event, data are not available beyond 1975. Indeed, for purposes of analysis, the terminal date for this study is 1974. When evidence does exist for later years that either strongly supports or tends to contradict the results based on an earlier period, that is indicated in the text or in the notes, as seems appropriate. However, by and large, experience with the altered trade and payments regime is far too limited to permit many inferences from it at this stage.

11.1   Overview of the Uruguayan Economy

11.1.1   Growth

Like those of most Latin American countries, Uruguayan policies shifted heavily toward protection of the home market and the encouragement of new industries during the Great Depression. Although, as already noted, growth was very slow during the depression and war years, the initial decade after World War II saw more rapid growth, spurred by output increases in the nontraditional industries. The so-called protected industries—those sheltered behind stringent exchange control, high tariffs, and the usual range of other protective devices— had contributed only 28.5 percent of total industrial production in 1930; by 1955 their share had risen to 40.5 percent (Facultad de Ciencias Económicas 1969). Also by 1955, half of industrial production represented consumption goods, while imports were more heavily oriented toward capital goods, fuels, and raw materials (23, 16, and 42 percent of total imports, respectively) (BCU 1955).

From 1955 to 1974 growth was sufficiently slow so that one can discuss the structure of the economy without regard to a specific date. For example, agriculture's contribution to GDP was 16.6 percent in 1955 and 15.3 in 1974 (BCU 1976b, pp. 4, 5). Crops and cattle retained their relative importance within agriculture: cattle accounted for 62 percent of agricultural product in 1955 and averaged the same over 1970–74. There were fluctuations in that proportion in the intervening years, but they were attributable to relative price changes rather than to underlying production shifts. As will be seen below, agriculture's contribution is even greater to exports than to GDP.

The composition of Uruguay's GDP reflects one of the factors ac-
counting for slow growth: gross fixed capital formation fell from 15 or
16 percent of GDP in the early 1960s to an average of only 10 percent
in 1973–75 (BCU 1976*b*, p. 1). Government consumption expenditure
rose from about 10 to 13 percent of GDP over that period, while private
consumption expenditure remained fairly constant at about 75 percent.
Exports of goods and services have averaged about 14 percent of GDP
in recent years, a significant drop from the 21 percent level in 1949–52,
although these were the years of the Korean War. Part of the economic
difficulties experienced over the next two decades stemmed from the
need to curtail imports commensurately with the decline in export earn-
ings. From 20 percent of GDP in 1960, imports of goods and services
declined to an average of 14 percent in 1970–74.

That Uruguay's attempt at inner-oriented development did not suc-
ceed is reflected clearly in the behavior of industrial production and its
various sectoral components over 1955–74. These data are given in table
11.1. As can be seen, only two relatively small sectors (rubber products
and paper products) experienced growth rates over 5 percent, and the
growth of industrial production as a whole averaged only 1.1 percent
per annum over the two decades. Industrial output constituted about 23
percent of GDP during the 1960s, compared with about a 15 percent
contribution for agriculture. Both these numbers are relatively low be-

Table 11.1   Structure and Growth Rates of Uruguayan Industry, 1955–74

| | | Percentage of Industrial Production | | |
| | Average Annual Rate of Growth | | | |
Sector		1955	1965	1974
20 Food products	0.6	23.3	21.4	21.5
21 Beverages	2.3	7.7	8.2	9.6
22 Tobacco products	3.6	2.5	3.7	4.0
23 Textiles	−1.3	15.7	14.2	10.0
24 Clothing and footwear	0.0	4.8	6.3	3.9
27 Paper and paper products	7.1	0.9	2.2	2.8
28 Printing and publishing	1.2	2.6	2.8	2.7
30 Rubber products	5.5	1.0	1.6	2.2
31 Chemicals	3.2	5.3	5.8	7.8
32 Fuel and fuel derivatives	0.8	5.1	5.5	4.9
33 Nonmetallic mineral products	4.2	5.5	5.5	9.8
35 Metal products	−4.5	4.2	3.0	1.4
37 Electrical machinery	−1.5	3.6	4.0	2.1
All others	0.9	17.8	15.8	17.3
Total	1.1	100.0	100.0	100.0

Source: Banco Central del Uruguay (BCU) 1970–76*b* (March 1976), p. 38.

cause of the large share of the service sector in Uruguay: in 1955 and again in 1974 housing and services together accounted for over 61 percent of GDP.

11.1.2 International Trade and Payments

Table 11.2 gives data on Uruguay's balance of payments for selected years over the period 1953–74. In general, import licenses have been issued to restrain imports to the available foreign exchange. When export earnings fell after 1953, imports were drastically reduced. Thereafter, the value of licenses issued was based upon export earnings. Capital flows and nonmerchandise trade items have been relatively unimportant in Uruguay's balance of payments most of the time. In 1974, however, capital inflows were a sizable offset to the negative balance on goods and services.

Uruguay's imports, reflecting the high degree of protection of the domestic market for manufactured goods, have consisted predominantly of fuels and raw materials. Capital equipment imports constituted 18 percent of the total over 1955–59 and fell to 13 percent in 1970–74, influenced by the low level of capital formation.[1] Imports in the years 1965–69 averaged $165 million, c.i.f., compared with an average of $203 million, c.i.f., in 1955–59. As with most Latin American countries, the fraction of imports originating with the Latin American Free Trade Area (LAFTA) trading partners increased, going from 19 percent in 1955 to 34 percent in 1974. The United States share of Uru-

Table 11.2   Uruguay's Balance of Payments, Selected Years, 1953–74 (Millions of U.S. Dollars)

	1953	1958	1963	1968	1974
Exports, f.o.b.	269	155	166	179	381
Imports, f.o.b.	274[a]	124	152	135	433
Trade balance	— 5	31	15	43	— 52
Services	n.a.[b]	— 17	— 19	— 27	— 83
Goods and services balance	n.a.	14	— 4	16	—135
Transfers	n.a.	1	4	7	17
Capital	n.a.	10	— 5	24	112
Deposit money banks	n.a.	9	4	15	— 6
Monetary authorities	n.a.	12	3	— 37	80
Net errors and omissions	n.a.	— 22	— 2	— 25	— 68

Sources: 1974, BCU 1970–76 (October 1976); 1968, BCU 1970–76 (1970); 1963, 1958, and 1963, BCU, Departamento de Investigaciones Economicas, *Balance of Payments Series*, various issues, especially 1970.
[a]c.i.f.
[b]n.a. = not available.

guay's imports fell from 18 to 7 percent over that period, while the EEC share dropped from 32 to 17 percent (Oficina de Planeamiento y Presupuesto 1973). In the later part of the period, Uruguay's imports of oil increased, thus increasing the share of imports originating from the rest of the world.

Table 11.3 gives some detail on the composition of exports from 1950 to 1974. As can be seen, nonagricultural exports were negligible until the late 1960s. Among agricultural commodities, animal products constituted the major portion. Meat and by-products have increased in relative and absolute importance over the years, while export earnings from wool and wool products have decreased in both respects since the early 1950s. These shifts, however, reflect the behavior of international prices: export volumes fluctuated over the twenty-year period with no clear trend.

Historically, the EEC countries were Uruguay's largest customers, taking more than half her exports. In 1960 that figure reached 60 percent. Thereafter, however, the EEC share fell steadily, reaching 28 percent in 1974.[2] The United States was never a large customer, with a maximum share of 17 percent in 1965. That share also fell thereafter, as exports to LAFTA increased from 2 percent of the total in 1960 to 36 percent in 1974.[3]

11.1.3   Labor Market

Uruguay is unusual among the countries in the project in that her demographic characteristics are much more like those of developed countries than like those of other LDCs. Only 28 percent of the population was under fifteen years of age in 1975 (compared with 45 percent in Thailand, for example), and 12.7 percent were over sixty. In like vein, 80.8 percent of the population resided in urban areas, and 20.2 percent of the labor force was employed in the manufacturing sector in 1975, down from 23 percent in 1963. Population growth averaged 0.6 percent per annum during 1960–70 and is estimated to have been only 1.3 percent annually from 1908 to 1960. The potential labor force (defined as persons fourteen years of age and older) actually fell between the 1963 and 1975 censuses. Educational standards are also high, and 91 percent of the population over seven years of age is classified as literate.

Thus, the "employment problem" in Uruguay is not one of a rapidly growing labor force. It is rather the productive and efficient utilization of the labor force. Unemployment in Montevideo has been fairly steady, officially estimated at about 8 percent of the labor force from 1968 to 1974, although the rate has risen since then. Value added per employee is estimated to have been $2,023 in 1972 United States dollars in 1973;

Table 11.3 **Composition of Uruguay's Exports, 1950–74 (Millions of U.S. Dollars and Percentage of Total, Annual Average)**

Product	1950–54	1955–59	1960–64	1965–69	1970–72	1973–74
Wool and wool textiles	135.1 (55)	99.5 (62)	86.6 (54)	85.3 (47)	69.6 (32)	101.9 (29)
Meat and by-products	44.0 (18)	18.9 (12)	40.8 (26)	55.3 (30)	86.6 (40)	135.4 (38)
Hides	24.3 (10)	12.3 (8)	17.0 (11)	17.6 (10)	23.0 (11)	24.8 (8)
Other agricultural products	36.1 (15)	29.1 (18)	13.4 (8)	17.4 (9)	24.9 (11)	39.2 (11)
Other exports	4.0 (2)	.2 (—)	2.2 (1)	7.5 (4)	13.4 (6)	50.0 (14)
Total exports	243.5	160.0	160.0	183.1	217.5	351.9

Source: Oficina de Planeamiento y Presupuesto 1973.

in 1960 it was $1,958 (in 1972 United States dollars) (World Bank 1976). This level was exceptionally high in 1960 and still well above that of most other Latin American countries in 1973. But the startling part of those numbers is the lack of growth of labor productivity and the lack of growth of manufacturing employment. Stagnation of employment and productivity have been Uruguay's chief problems in her labor markets and throughout the economy.

Very few data are available to analyze the functioning of the labor market in Uruguay. Like most other high-inflation countries, Uruguay has had a negative real interest rate and an overvalued currency, both of which have tended to make capital goods artificially cheap and to encourage the use of capital-intensive techniques. Although the real price of capital goods began rising after about 1968 as the exchange rate became more realistic, high social security taxes and other taxes on the employment of labor, combined with the influence of unions, probably prevented any increase in the relative price of capital that might otherwise have occurred. Taxes on wages rose from 12 percent in 1955 to 28.5 percent in 1967. Thus, although the real wage received by industrial workers probably remained about constant, the wage paid by employers rose in real terms and was probably high to begin with.

11.1.4   Inflation

Inflationary pressures have been experienced by Uruguay throughout the postwar period. Inflation rates were already high in the early postwar years, averaging about 12 percent annually between 1950 and 1954. Thereafter inflation accelerated. For 1955–60 the annual rate was just over 20 percent. By the second half of the 1960s it was 71 percent, and it remained almost that high in the first half of the 1970s (see table 11.4 below).

It is not the purpose of this study to analyze the causes of Uruguayan inflation.[4] What is important for understanding the environment within which the trade and payments regime operated is that the Uruguayan authorities first attempted to reduce or eliminate inflation through controls over the exchange rate, the interest rate, and prices of a limited number of commodities considered necessities, and afterward (June 1968) through a general freeze on prices and wages. Thereafter, until 1975 it was illegal to increase prices for any commodity or service without seeking prior approval of the Ministry of Finance. In addition to the misallocations of resources that resulted from this policy, there also ensued considerable excess demand for foreign exchange, as the price controls served, at least to some extent, to keep prices below the level they would have reached had market forces been permitted to operate freely.

11.2   The Uruguayan Trade and Payments Regime about 1968

11.2.1   Emphasis on Import Restriction

Starting with the balance of payments difficulties that were encountered at the beginning of the Great Depression, the Uruguayan trade and payments regime evolved into a highly restrictive, import substitution oriented control system. Initially, the controls were imposed as a direct response to balance of payments deficits. For this purpose, import licensing was instituted, and controls were exercised over both the commodity composition and the country of origin of imports. Multiple exchange rates were also instituted at that time, and tariffs were raised on those commodities for which import licenses were issued. Controls extended to the outright prohibition of imports of some commodities.

Gradually, the system evolved from its original purpose of restricting the flow of imports into one designed to foster domestic industrial production. In this process, export earnings stagnated, and the system became highly restrictive. As excess demand for imports intensified, additional instruments of control were employed. Tariffs were imposed on imports, along with a variety of additional charges. Complex methods of valuation were devised for establishing the base upon which import duties were to be levied. Prior deposits, special levies, and other charges were also applied. The end result was a system that was highly detailed and specific, and few generalizations can withstand close scrutiny. An additional consequence is that it is very difficult to gather data that accurately capture the nature of the system.

Nonetheless, it is against this background of more than thirty years of restrictive trade and payments practices that we must interpret the trade and payments regime of 1968, the year on which this analysis of the employment implications of alternative trade strategies focuses. At that time imports were regulated by various instruments applied by various public institutions. Quotas, in some cases prior guarantee deposits of long duration, and a complicated tariff system that included preferential margins for other LAFTA members served to restrict imports in general and imports of competing goods in particular. Export policy as of 1968 was simpler. Traditional natural resource based (NRB) exports —basically meat, wool, and hides—were taxed, while nontraditional exports were favored by a subsidy system that was started in the mid-1960s and gradually consolidated since then.

In this section, therefore, attention first turns to the behavior of the real exchange rate. Next, the surcharges and subsidies that distinguish the effective exchange from the nominal exchange rate are examined. We then briefly analyze the system of quantitative restrictions as it was in 1968. Thereafter, the effective rates of protection for a variety of goods are calculated. Finally, an assessment is made of the overall effect of the trade and payments regime on various categories of goods, and

the implications of those findings for interpretation of the estimates of employment are examined.

Real Exchange Rates

We have already noted that Uruguay experienced rapid inflation throughout the postwar period. By 1950 the exchange rate was probably already overvalued, though it is difficult to estimate by how much in light of the relatively high prices received in world markets for Uruguay's exports at that time. Table 11.4 gives basic data on the official

Table 11.4   **Inflation and the Real Nominal Exchange Rate, 1950–75**

Year	Official Exchange Rate[a]	Price Index[b] (1961 = 100)	PLD-NER[c]
1950	1.9	17	11.18
1951	1.9	21	9.05
1952	1.9	23	8.26
1953	1.9	25	7.60
1954	1.9	27	7.04
1955	2.1	30	7.00
1956	2.9	32	9.22
1957	3.6	37	9.81
1958	3.5	45	7.91
1959	3.5	67	5.25
1960	11.0	91	12.12
1961	10.9	100	10.98
1962	10.9	111	9.89
1963	16.4	160	10.25
1964	18.7	216	8.66
1965	59.9	407	14.72
1966	75.8	607	12.50
1967	200.0	1,433	13.96
1968	250.0	2,383	10.49
1969	250.0	2,729	9.16
1970	250.0	3,300	7.58
1971	370.0	4,477	8.26
1972	718.0	8,716	8.24
1973	937.0	15,472	6.06
1974	1,586.0	32,065	4.95
1975	2,660.0	53,497	4.97
1976	4,000.0	74,896	5.34

Source: Banco Central del Uruguay 1970–76*b*.
Note: [a]selling price of the United States dollar in the commercial market at the end of each year.
[b]cost of living—Dec./Dec.
[c]PLD-NER = Price level deflated nominal (i.e., official) exchange rate.

(or nominal) exchange rate and the price index for the years since 1950. As can be seen, the official exchange rate was increased by only 85 percent between 1950 and 1959, while the price level quadrupled. The result was a drastic decline in the deflated nominal exchange rate from 11.18 pesos per dollar in 1950 to 5.25 in 1959. After that year, the greater frequency of devaluations prevented the real exchange rate from again reaching that level until the mid-1970s, but there were none-theless large fluctuations in the real purchasing power of the peso. By 1968 the real purchasing power of the peso had almost reattained its 1950 level, although it is doubtful that the exchange rate played as much of a role in equilibrating supply and demand for pesos in 1968 as it did in 1950: it will be recalled that price controls resulted in some under-statement of the rate of price increase during the 1960s, and also that the Uruguayan economy had grown at a moderate rate between 1950 and 1968, without any increase in export earnings. Finally, table 11.5 shows the evolution of the effective exchange rate in nominal and real terms from 1967 to 1976.

Additional Charges on Imports

The most important of the measures designed to contain the demand for imports was a system of "exchange surcharges" levied at rates rang-ing, in 1968, as high as 225 percent, depending on the nature of the commodity involved. The chief purpose was to protect domestic indus-tries, and rates were generally highest when competing domestically produced goods were available. The exchange surcharge was generally levied on the c.i.f. value, but in some instances the authorities also set "minimum" prices for imports, and in these cases the surcharge was levied on either the c.i.f. value or the assessed "minimum" price, which-ever was higher.

In addition to the exchange surcharges in 1968, imports were subject to a complex system of tariffs. The first component of the tariff system was a general duty on imports at a rate of 18 percent of the c.i.f. value, from which there were many partial or total exemptions. Thus, some commodities were subjected to an 18 percent rate, some to 10.8 percent, some to 2.7 percent, and some to no duty at all. In addition to the gen-eral duty, there was a variable levy on imports. The rates of this second component of the tariff system varied between 20 and 110 percent of the c.i.f. value of the goods. As in the case of the exchange surcharges, some products were taxed according to an assessed value at domestic prices. In such cases, given the rapid rate of Uruguayan inflation, the importance of these variable duties diminished over time. Something similar happened with the last component of the tariff system, the spe-cific taxes that were applied in domestic currency on imports of particu-lar commodities.

Table 11.5   **Inflation and the Effective Exchange Rate, 1967–76**

Official Exchange Rate (Ur.$/U.S.$) (1)	Imports			Traditional Exports			Nontraditional Exports		
	Taxes % (2)	EER (Ur.$/U.S.$) (3)	PLD-EER (1967 Ur.$) (4)	Taxes % (5)	EER (Ur.$/U.S.$) (6)	PLD-EER (1967 Ur.$) (7)	Subsidies % (8)	EER (Ur.$/U.S.$) (9)	PLD-EER (1967 Ur.$) (10)
200	18	236	236	22	156	156	1	202	202
250	17	293	175	38	155	93	2	255	152
250	18	295	155	25	188	99	7	268	141
250	21	302	131	21	198	86	9	273	188
370ᵃ	21	448	145	11	329	106	10	407	132
718	15	826	135	22	560	92	4	747	122
937	14	1,068	99	49	478	44	15	1,078	100
1,586	10	1,745	78	30	1,100	50	27	2,014	90
2,660	08	2,873	77	4	2,554	68	35	3,591	96
4,000	12	4,480	86	2	3,520	68	59	6,360	122

Sources: Col. 1: BCU 1970–76*b*; col. 2: Import duty collections divided by value of imports, c.i.f., from BCU 1970–76*a*. Pesos were converted into dollars using the annual average of the commercial rate of exchange. Columns 5 and 8 are from table 11.6.

ᵃIn 1971 a short-term surcharge of Ur. $120 on the selling price of foreign currency was imposed.

EER = Effective exchange rate.

PLD-EER = Price-level-deflated effective exchange rate.

The EERs in cols. 3 and 4 pertain to commodities that were actually imported. Tariffs were prohibitive for some items, and premiums accrued on import licenses. These are not included. See text.

In addition to the exchange surcharges and the tariff system, port fees also acted as a tax on imports. The fees considerably exceeded any cost that could reasonably have been incurred by the port authorities, as they ranged from 13 to 19 percent of c.i.f. value.

Finally, in 1968 "consular fees" were paid at about 12 percent of the f.o.b. value of the goods. Although there were numerous exemptions (basic consumer goods, raw materials, agricultural inputs, and machinery and equipment), this tax was included as a part of the legal basis on which other taxes were collected.

As we have already mentioned, there were numerous exemptions and special treatments for particular categories of commodities. Notable among these was the preferential treatment accorded to goods traded within LAFTA. With all the special categories, exemptions, and regulations, the administration of the import regime was often chaotic. Tariff policy was applied by such different means for different commodities, and in such an incoherent manner, that many unintended outcomes resulted. For example, many final products ended up subject to import duties at rates lower than those imposed on the raw materials used in their production. Because of the reliance upon assessed values, which lost meaning as inflation continued, and the flexibility of the exchange surcharge system, the latter increased in importance over time. Whereas this tax accounted for 35 percent of total foreign trade taxes collected in 1955, by 1963 it accounted for 80 percent.

Quantitative Controls on Imports

As we have already mentioned, in 1968 there were physical controls along with surcharges and levies. In general, each importer was assigned a quota according to the amount he had imported in prior years. Imports were not permitted without a quota, and there was little flexibility in the assignment of quotas. Indeed, prior deposit requirements for import applications without licenses were in practice so high as to be prohibitive. The only exception to the rigid licensing system arose in instances where particular firms could demonstrate that they could not continue to produce, and that employment would thereby be harmed, if they did not receive larger imports. This practice provided some flexibility, especially for large firms that were better able to avail themselves of these provisions.

Export Taxes and Subsidies

The export regime as applied in 1968 distinguished in effect between two categories of exports: traditional commodities (chiefly meat and unprocessed wool and hides) and nontraditional exports. Taxes on traditional exports do not require any particular explanation: they amounted

to between 12 and 26 percent of export receipts and were an important source of revenue for the government.

Nontraditional exports were increasingly encouraged by the government. The subsidy system applied to them started in the mid-1960s and was increased in scope and importance thereafter. It was set as a percentage of the f.o.b. value of exports, and the rates were determined for individual export industries. Table 11.6 gives data on the relative importance of taxes on traditional exports and subsidies on nontraditional ones. As can be seen, after 1970 and except for 1972 subsidies ranged from 16 to 20 percent of the value of nontraditional exports.

In addition to the subsidies established for nontraditional exports, exporters were accorded the right to import needed intermediate goods duty free, and also capital goods employed in exporting industries. Because the commodities exported received the higher effective exchange rate resulting from the export subsidy, these duty-free imports constituted yet another incentive for exports of nontraditional items.

Effective Rates of Protection

The foregoing discussion gives some idea of the levels of protection (or discrimination) but provides little idea of the variation among industries. To that end, we calculated weighted average rates of effective protection facing each two-digit industrial sector, according to whether the output was exported or sold in the internal market. The results are

Table 11.6   **Tax Collections and Subsidy Payments on Exports, 1967–76 (Millions of U.S. Dollars)**

	Traditional Exports			Nontraditional Exports		
	Value (1)	Taxes (2)	(2)/(1)	Value (3)	Subsidies (4)	(4)/(3)
1967	132	22	.17	27	1	.04
1968	147	38	.26	32	2	.05
1969	149	25	.17	51	7	.13
1970	174	21	.12	58	9	.16
1971	147	11	.07	58	10	.17
1972	163	22	.13	51	4	.08
1973	236	49	.21	86	15	.17
1974	238	30	.13	144	27	.19
1975	194	4	.02	190	35	.18
1976	251	2	.01	296	59	.20

Sources: Cols. 1 and 3: Dirección General de Comercio Exterior, 1975–76.
Col. 2: BCU (1970–76a). Pesos were converted to dollars at the annual average of the commercial rate of exchange.
Col. 4: Revista Búsqueda (1976), p. 51, converting pesos to dollars as in col. 2.

given in table 11.7.[5] In some instances the legal rates proved to be re-
dundant, because domestic demand was satisfied by domestic production
and few, if any, imports resulted. Indeed, the entire system of protection
was designed to induce this result: once domestic production capability
was established, the tariffs, other charges, and quotas imposed on im-
ports were designed to protect domestic production and discourage
imports completely. For export industries, the NRPs and ERPs were
calculated using the actual subsidy rates, and there is every reason to
believe that the rates reflect fairly accurately the actual rates of protec-
tion for exporters.

In many sectors the legal ERPs for the domestic market shown in
table 11.7 at the two-digit level strikingly exceed those for export.
Where the information was available for the component industries, an
export subsidy rate was used to estimate effective protection for the
internal market in order to calculate international value added (see the
model in section 11.3.4). The spread between NRPs for domestic and
export sales was taken as evidence of redundancy in the tariff for the
protection of the internal market. Recent studies based upon direct price
comparisons have confirmed that there is water in the nominal tariff
structure despite high levels of effective protection.

Using the export rates as indicators of the true protection of the inter-
nal market, we find two types of industry for which ERPs are low:
those with an important NRB content that produce for both the internal
and external markets—numbers 23 (textiles), and 29 (leather and
leather products)—and two capital goods sectors—numbers 36 (machin-
ery) and 37 (electrical machinery). These rates, combined with high
rates on other commodities and wide differences among industries in
value added/output ratios, have resulted in a large coefficient of varia-
tion—74—in the ERP rates. In the case of export industries, the rela-
tive dispersion was not as large, the coefficient of variation being 58.

A final observation on the structure of ERPs pertains to their height.
Given that they are all high when domestic production takes place,
there seems to be no clear bias in resource allocation to a particular
industry within the nontraditional sector. A priori, one might expect
that, under an all-out import substitution regime, protection would be
as high as necessary to stimulate domestic production. In Uruguay this
would imply that ERPs and capital/labor ratios should be in a direct
and strong relationship. However, correlation analysis showed a nonsig-
nificant statistical result, suggesting that other factors were involved.

The data in table 11.7 show strikingly high levels of nominal and
effective protection for the industries the government was trying to en-
courage. To test the hypothesis that these protective rates were prohibi-
tive, we took a sample of 324 goods produced in the country in 1968.
This represents about 75 percent of the value of manufacturing produc-

tion in that year. The results obtained from the sample are given in table
11.8. The first column gives the value of production in the sample of
commodities relative to the entire output of the sector in question. The
second column gives the value of production. The third column indicates
the number of different products in the sample, and the fourth shows

Table 11.7   Nominal and Effective Protection Rates, 1968

Industry	Production for Domestic Market		Production for Export	
	NRP	ERP	NRP	ERP
20 Food products	314%	150%	1%	25%
21 Beverages	370	1,014	20	92
22 Tobacco products	73	188	n.e.	n.e.
23 Textiles	341	303	10	61
24 Footwear	394	892	25	67
25 Wood and cork products	n.a.	n.a.	n.e.	n.e.
26 Furniture	n.a.	n.a.	n.e.	n.e.
27 Paper and paper products	467	535	n.e.	n.e.
28 Printing and publishing	13	17	n.e.	n.e.
29 Leather and leather products	10	20	1	24
30 Rubber products	257	602	25	62
31 Chemicals and chemical products	114	182	8	43
32 Petroleum and coal products	63	164	n.e.	n.e.
33 Nonmetallic mineral products	301	548	n.e.	n.e.
34 Primary metals	n.a.	n.a.	17	156
35 Metal products	167	463	30	37
36 Nonelectrical machinery	60	55	30	55
37 Electrical machinery	239	591	22	45
38 Transportation equipment	299	689	n.e.	n.e.
39 Miscellaneous manufacturing	263	568	20	99
Total	264	384	4	37

Note: n.e. = no exports; n.a. = not available; NRP = nominal rate of protection.
    NRP coefficients were calculated from tariff schedules and the following taxes:
exchange surcharges and other tariffs for internal market industries, and subsidies
for export industries. The NRPs at the two-digit level and the aggregate NRP for
the industrial sector as a whole are weighted averages of the NRPs for the goods
included in a sample (see table 11.8) used by the Banco Central to estimate peri-
odically the level of industrial activity in the country (weights being the share of
each good in the value of industrial output). To estimate the components of the
ERP, a study was conducted of the input-output structure of the goods included
in the sample. Cost declarations for these goods submitted to the Ministry of Fi-
nance in 1968 and to the Ministry of Industry in 1975 were the sources for the
ERP estimates. The input structure was classified according to the origin of the
inputs. For inputs reported to have been imported, only the c.i.f. values were
taken; tariffs and other taxes were excluded. The value of internal inputs was di-
vided into (1) domestic, (2) imported but purchased locally, and (3) nontradables.
Domestic taxes were excluded.

Table 11.8   Principal Manufactures Produced in 1968 and Competing Imports

Industry	VP_S/VP_T % (1)	M/VP_S % (2)	Number of Products in Sample (3)	Number of Products in Sample also Imported (4)	Ratio of (4) to (3) % (5)
20 Food products	80.6	2.4	61	5	8.2
21 Beverages	70.1	0	15	0	0
22 Tobacco products	95.4	0	3	1	33.3
23 Textiles	94.4	0	27	6	22.2
24 Footwear	60.4	0	39	1	2.6
27 Paper and paper products	90.6	8.3	22	2	9.1
30 Rubber products	96.0	0	5	0	0
31 Chemicals and chemical products	46.1	0.6	36	2	5.6
32 Petroleum and coal products	95.1	8.6	5	4	80.0
33 Nonmetallic mineral products	83.5	0.2	24	2	8.3
35 Metal products	73.4	12.3	51	14	27.5
37 Electrical machinery	54.2	0.5	14	5	35.7
38 Transportation equipment	15.0	0	5	0	0
39 Miscellaneous manufacturing	43.1	0.5	17	4	23.5
Total	75.1	2.1	324	46	14.2

Source: The table was constructed by considering the components of the industrial sample of the Banco Central del Uruguay and their relative importance in manufacturing in 1968 and using import series for that year—classified by product—published by the Banco de la Republica.

Note: (1) VP_S = Value of production of the industrial products that compose the sample that the Banco Central del Uruguay uses to estimate the level of industrial activity every three months; VP_T = Value of production of the industrial sector. (2) M = Value of imports of goods similar to the ones domestically produced and included in the sample cited above.

the number of those products of which there were imports of a similar type. For each commodity listed we examined the import list to determine whether there was import competition for the particular good in question. As can be seen, only for forty-six of them were any similar imports found. The values of imports that competed at all with domestic production represented only 2.1 percent of domestic production. Even then, they may not have been strict substitutes. Although sample data can never be entirely convincing, it seems evident that imports were virtually ruled out when domestic production was available.

It thus seems clear that rates of protection were so high that whatever was domestically produced was not imported. Conversely, what was imported was not domestically produced. Imports consisted mainly of intermediate inputs, crude oil, and capital goods. They all had relatively low tariffs, which explains why import duty collections as a percentage of value of imports shown in table 11.5 were so small contrasted with the high nominal tariff rates shown in table 11.7.

11.2.2   Resource Allocation Resulting from the Trade Regime

Although one cannot pinpoint the precise pulls of resources within the modern manufacturing sector in Uruguay, it does seem possible to categorize Uruguayan industries into several meaningful groups. First, as exemplified by meat and leather, there are some traditional manufacturing activities that are based on domestic natural resources and enjoy costs of production sufficiently low to enable them to sell abroad even if they are not highly efficient. Second, there are some industries, such as textiles, clothing, and cement, that, though using outputs based on domestic natural resources, could not export, at prevailing official exchange rates, were it not for the subsidies they receive. Finally, a third group utilizes imported raw materials and parts behind high levels of protection. It is this group, producing only for the domestic market behind excessively high tariff walls, that is subject to the largest comparative disadvantage and is the chief beneficiary of the protection system.

It is the protection of this third group that prevents the emergence of either of the first two groups as exporters on a significant scale. The import barriers erected to protect the high-cost industries also permit maintenance of an overvalued currency that acts as an implicit tax on the exportation of the output of the other industries and diminishes the incentive to expand the production of exportables. The subsidies to nontraditional industrial exports compensate this second group of industries in part for the overvaluation of the currency. However, those subsidies, as we have already seen, constitute only about 15–20 percent of the nominal exchange rate, whose variation in real terms over the years has considerably exceeded that amount. Moreover, the subsidies to nontraditional exports, while offsetting to some extent the discrimination against them, enable still further discrimination against the traditional exporting activities in which comparative advantage is very large. This is because exports of nontraditional commodities are higher because of the subsidy than they would otherwise be, and so the pressure on the Uruguayan government to adjust the exchange rate is less than it would be in the absence of those exports.

There can be little doubt that the Uruguayan trade and payments regime has transferred income from consumers, importers, and tradi-

tional exporters to import substituting producers. In addition there is a net real cost of the system, since the social cost of domestic production of import substitutes is considerably higher than that abroad, and the marginal rate of transformation domestically exceeds considerably that on world markets. The precise outcome of the system for the producers of nontraditional exports is less clear, and it is not evident whether that group on balance benefits or loses from the protective system as contrasted with an efficient allocation of resources.

It is against this background of complex controls and a pattern of production vastly different from that which would obtain under optimal resource allocation that the data for 1968 must be viewed when examining the employment implications of alternative trade strategies.

11.3   Labor Intensity of Industries

11.3.1   Industry Classification

Our analysis of the labor intensity of Uruguayan trade is based on the 1968 industrial census and data available at the three-digit level of the International Standard Industrial Classification for a sample of 350 goods. Those goods represent more than 80 percent of total industrial output. These data were combined with cost data described in the notes to table 11.7. Data from the costs declarations lodged before COPRIN (the prices and wages controller) in 1974 and 1975 were used to obtain producer prices and a breakdown of costs, including the value of imported inputs, domestic inputs, and taxes. For exportable goods, we obtained additional data on sales prices abroad. Despite the difficulty of developing accurate and comparable data against the background of high rates of inflation and the inherent problems associated in melding 1968 and 1974–75 data, the sample is believed to be representative of the input-output cost structure of the Uruguayan industrial sector.

Commodity classifications among the three-digit industries were as follows. All agricultural and mining activities were classified as NRB, as were seven manufacturing branches: meat (201), alcoholic beverages (213), wool-washing (230), wool tops (231), other textiles (239), tanned hides (291), and the edible oil industry (312). All these sectors had exports primarily to the developed countries, except alcoholic beverages, which exports primarily to other developing countries.

All the remaining manufacturing sectors were classified as HOS industries, except for furniture (26), printing (281), and oil refining (321), which were judged to be home goods, as were all energy, transportation, and financial activities.

Among the HOS industries, six—dairy products (202), wool spinning and weaving (234), footwear (241), clothing (243), textiles (244),

and leather products (292)—were classified as HOS exportables to developed countries, and five—fish-preserving (204), parquets (254), tires (301), glass products (332), and cement (334)—as HOS exportables to developing countries. Twenty three-digit sectors were classified as HOS importables: grain products (205), sugar (207), tobacco products (220), cordage (233), sawmilling (251), paper (270), paper products (274), other paper industries (279), molded rubber products (302), industrial chemicals (311), secondary chemical products (313), household chemical products (315), pharmaceuticals (316), cement products (335), nonmetallic mineral products (339), iron and steel (241), nonferrous metals (342), machinery and repair (362), motor vehicles (383), and bicycles (385). The same classification was applied to three entire two-digit sectors: metal products (35), electrical machinery (37), and miscellaneous manufacturing (39). Finally, several industries were classified as production not competing with imports. These included industries within the metal manufacturing, machinery, electrical appliances, and transportation equipment sectors.

The criterion for classification based on the T_i statistic defined in the introductory chapter (i.e., ratio of net imports to consumption in industry i) was as follows:

exportable if T_i less than 0;

import-competing if $0 < T_i < 0.7$;

noncompeting import if $0.7 < T_i$.

Table 11.9 indicates the relative importance in trade of the various categories. As can be seen, NRB exports were 93 percent of total exports in 1968, the greater part being destined for developed countries.

Table 11.9   Composition and Direction of Uruguay's Trade in 1968 (Millions of U.S. Dollars)

	Developing Countries	Developed Countries	Total
Exports			
NRB goods	21.1	146.2	167.3
HOS goods	7.2	4.7	11.3
Total	28.3	150.9	179.2
Imports			
NRB goods	30.5	11.0	41.5
Import-competing HOS goods	17.6	13.6	31.2
Noncompeting HOS imports	18.4	51.1	69.5
Total[a]	66.5	75.7	142.2

Source: Bension and Caumont (1977).

[a]Excluding 15.2 million of unclassified imports.

Since the reforms in the mid-1970s, of course, this concentration in NRB goods has diminished somewhat. On the import side, noncompeting imports and NRB goods predominated in trade, reflecting the degree of protection given to domestic import substitution industries. In 1977 petroleum, intermediate goods, and capital goods imports accounted for 93 percent of total Uruguayan imports.

Tables 11.10 and 11.11 give trade and factor intensities (discussed in section 11.3.3) of major HOS exportables and importable production. Note, as observed above, that most exportables are concentrated in NRB processing activities and importables are concentrated in foodstuffs and consumer goods.

11.3.2   Variables Indicating Factor Intensity

Three separate variables are used here to measure labor coefficients: total wage bill, number of workers, and hours worked. In addition, two separate indicators of skills are available, one being a classification of white-collar and blue-collar workers and the other a classification of skilled and unskilled workers. Both of these measures were deemed superior to attempting to use average wages per worker or per hour worked as an indicator of skills. This was primarily because, in the Uruguayan context, inflation is sufficiently rapid that the average wage variable may be a better indicator of the month in the year when wage-increases were granted than it is of the skill composition of the labor force: for the year under review, inflation was 60 percent.

In addition to measures of skill and labor intensity, there is available a measure of kilowatt consumption of various industries. As is well known, this measure is not entirely satisfactory because of the availability of other energy sources and because some forms of capital are not as intensive in energy use as others. Nonetheless, we deem it worthwhile to examine the "electricity coefficient" as at least a partial proxy for the capital intensity of various industries.

11.3.3   Factor Utilization in Uruguayan Industry

Tables 11.10 and 11.11 give factor intensities in major HOS exportables and importables, while table 11.12 gives estimates of direct factor utilization per unit of DVA by commodity category and, for wages only, also provides estimates of direct plus home goods indirect requirements. Weights used in the calculations were the domestic value added of production. The table distinguishes between NRB and HOS exports, as classified above, but even for those included in the HOS group other than tires the availability of domestically produced raw materials was of some influence in the location of production. It is nevertheless interesting that NRB and HOS exports seem to have fairly similar factor proportions on the average. Indeed, the more systematic distinctions

Table 11.10   Characteristics of HOS Exportable Industries, 1968

	Exports (Thousands of U.S. Dollars)			Factor Intensities		
	Developed Countries	Developing Countries	Total	Labor[a]	Capital[b]	Skill[c]
202 Dairy products	853	32	885	679	2,914	413
204 Fish-preserving	—	440	440	676	469	472
234 Wool-spinning and weaving	2,316	963	3,279	1,615	897	164
241 Footwear	94	—	94	570	437	247
243 Clothing	57	—	57	436	250	203
244 Textiles	7	1	8	489	279	276
254 Parquets	8	23	31	481	849	253
292 Leather products	659	—	659	530	563	251
301 Tires	—	289	289	218	1,133	15
332 Glass products	—	382	382	297	1,449	155
334 Cement	—	3,579	3,579	211	5,498	101
Total	3,994	5,709	9,703	366	1,483	163

Source: Bension and Caumont (1977).

[a]Number of persons employed per million dollars of DVA.
[b]Thousands of kilowatt-hours per million dollars of DVA.
[c]Number of unskilled workers per million dollars of DVA.

Table 11.11   Characteristics of Major Importable Industries

	1968 Imports (Thousands of U.S. Dollars)	Factor Intensities[a]		
Sector		Labor	Capital	Skill
205 Grain products	3,036	171	1,200	109
207 Sugar products	3,110	252	1,038	166
220 Tobacco products	2,567	34	86	19
302 Molded rubber products	172	265	1,245	52
311 Industrial chemicals	12,858	234	5,150	100
315 Household chemical products	351	287	571	121
316 Pharmaceuticals	9,389	187	224	78
35 Metal produtcs	1,816	373	1,303	176
37 Electrical machinery	5,973	336	1,032	166
39 Various	4,229	329	1,094	172
Total	43,501	238	1,163	116

Source: Bension and Caumont (1977).

[a]See table 11.10 for definitions of factor intensities.

appear to be (1) that exportables, both NRB and HOS, use more labor, particularly more unskilled labor, than import-competing goods, and (2) that exports to developed countries use more labor, particularly more unskilled labor, than exports to developing countries.[6] These observations are in line with what one would expect on theoretical grounds. It must be borne in mind, however, that import-competing goods are preponderantly produced at home rather than imported. Hence one could not conclude that Uruguay's pattern of production has not been seriously distorted.

A part of the explanation for the relatively low labor intensity of Uruguay's imports of HOS goods and of her exports of such goods to LDCs compared with those to DCs lies in the pattern of her trade with LAFTA and especially with her neighbors Argentina and Brazil. Because of preferential tariff systems, there are several domestic industries that import parts or semifinished unassembled goods from those countries and assemble the final product. That is the case, for example, with the automobile and household electric appliance industries. Since the factor endowments of Argentina, Brazil, and Uruguay are fairly similar, it is evident that the non-NRB trade between them owes its origins more to special factors such as tariff preferences than to any natural comparative advantage.

Note that table 11.12 (and also table 11.13) does not distinguish between DCs and LDCs in showing factor coefficients for import-competing goods, unlike the breakdown shown for exports. It is questionable

Table 11.12   Direct Factor Utilization per Million Dollars of DVA, 1968

| | Wage Bill (Thousands of Dollars)[a] | Number of Workers | | | | Hours Worked (Thousands) | Kilowatt-Hours (Thousands) |
		Total	White-Collar	Blue-Collar	Unskilled Workers		
NRB exports							
Developed countries	664 (599)	365	45	320	252	551	1,339
Developing countries	438 (519)	179	2	177	128	370	1,731
Total	642 (571)	346	40	306	240	533	1,378
HOS exports							
Developed countries	771 (631)	441	48	393	215	932	915
Developing countries	506 (537)	239	43	196	76	352	2,573
Total	673 (586)	366	46	320	163	712	1,483
Import-competing HOS goods							
Total	453 (520)	238	49	189	116	344	1,163

Source: Bension and Caumont (1977).

Note: Conversions of value added and wage bill are made at official rate of exchange.

[a]Figures in parentheses are direct plus home goods indirect wages per million dollars at direct plus home goods indirect value added.

how meaningful such a distinction would be for Uruguay's imports. This is because, to repeat, Uruguayan protection of domestic production is so great that, once a good is domestically produced, imports are generally not permitted, and the only observed imports in the relevant sectors are presumably those of inputs for the domestic industry. It is probable, however, that most of these industries produce what would otherwise be imported from developed countries.

To estimate factor coefficients for noncompeting imports, the ratio of wages to value added in the industrial sectors was calculated both for the United States and for Uruguay at the three-digit level. For this category—including industries within the metal-manufacturing, machinery, electrical appliances, and transportation equipment sectors—the ratio of the wages share to that in other industries was calculated for the United States, and that ratio was then applied to the Uruguayan wage share in other industries. The resulting estimate, 534,000 dollars per million dollars of DVA, can be compared with the data in the first column of table 11.10. To the extent that the wage share is an accurate reflection of labor intensity (though it reflects human capital in the form of skills as well as the number of workers per unit of value added), it appears that the wage share in the noncompeting import categories, if these products were domestically produced, would lie somewhere between that for import-competing goods and that for exportables. Uruguayan exportables therefore appear to be labor-intensive relative to both import-competing and noncompeting imports.

Home goods indirect inputs can be brought into the calculations only for wages, the results (in terms of aggregate wages per million dollars of DVA) being shown in parentheses in the wages column of table 11.10. On this basis, Uruguayan exports still use more labor than import-competing goods, though the difference is smaller than for direct inputs only. The reason for this change is that, per unit of DVA, indirect labor incorporated in home goods is less than the direct labor in export production but greater than that in import-competing production. Similarly, the previously observed excess of labor requirements in HOS exports to developed countries compared with that in HOS exports to developing countries is narrowed, but not eliminated, when indirect inputs are included.

11.3.4   Factor Proportions and International Value Added

Two alternative courses are possible when passing from domestic to international value added in the case of industries that produce for the foreign as well as for the domestic market. The first is to work with the effective rate of protection as computed from tariffs and other charges on imports. The other is to consider the ERP that results from the subsidy to exports of the same commodity. In Uruguay, we will argue, the

ERP implicitly given by the nominal rate of the subsidy to exports is a more accurate way of handling the problem and gives a more meaningful result.

Starting with the competitive market case and making the small-country assumption, if a tariff is imposed on imports of a certain commodity, domestic market equilibrium without exports is achieved when Q_1 units of the commodity are produced and sold at a price P_D. In figure 11.1, D, S, P_w, t, and s are, respectively, domestic demand, domestic supply, the world price, the nominal rate of the tariff, and the nominal rate of the subsidy.

In this case, part of the tariff is redundant because P_D, which is below P_w $(1 + t)$, clears the domestic market. At the price P_w $(1 + t)$, the excess supply $(Q_3 - Q_2)$ would not be absorbed and the price would fall.

In order for exports to take place (and ignoring the c.i.f.–f.o.b. margin), domestic producers need a subsidy whose rate should be high enough to make P_D less than P_w $(1 + s)$. At that new price, producers are able to sell Q_5 units, Q_4 of which are sold to the domestic market and $(Q_5 - Q_4)$ to the rest of the world.
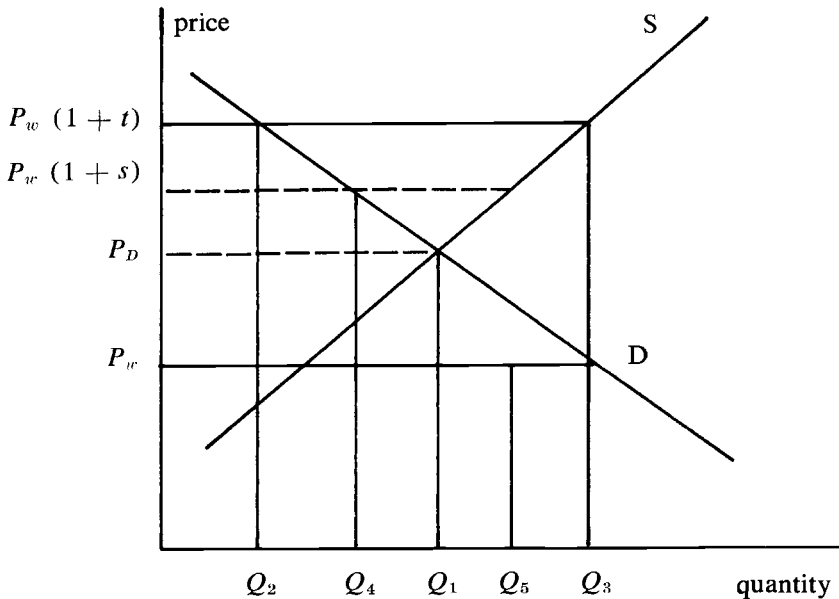

Fig. 1

The situation depicted above shows that, if the ERP given by the tariff is used in adjusting DVA to IVA, effective protection will be over-estimated and IVA calculated from it will be underestimated. In contrast to that procedure, figure 11.1 indicates that a more accurate description of the real world is achieved when P_w $(1 + s)$ is considered as the do-mestic price and the price seen by domestic producers. Hence, the ERP given by the nominal rate s should be the one chosen to pass from DVA to IVA.

For the monopolistic case the situation is different. In figure 11.2, MC and MR are, respectively, marginal cost and marginal revenue. The profit-maximizing solution for the monopolist producing only for the domestic market is a scale of production of Q_1 units with a price of P_D. According to figure 11.2, the tariff is excessively high and therefore implies an overestimate of effective protection.

For exports to take place, the monopolist needs a subsidy whose rate should be higher than the one (i) that makes $MC = MR$ for Q_1 units.
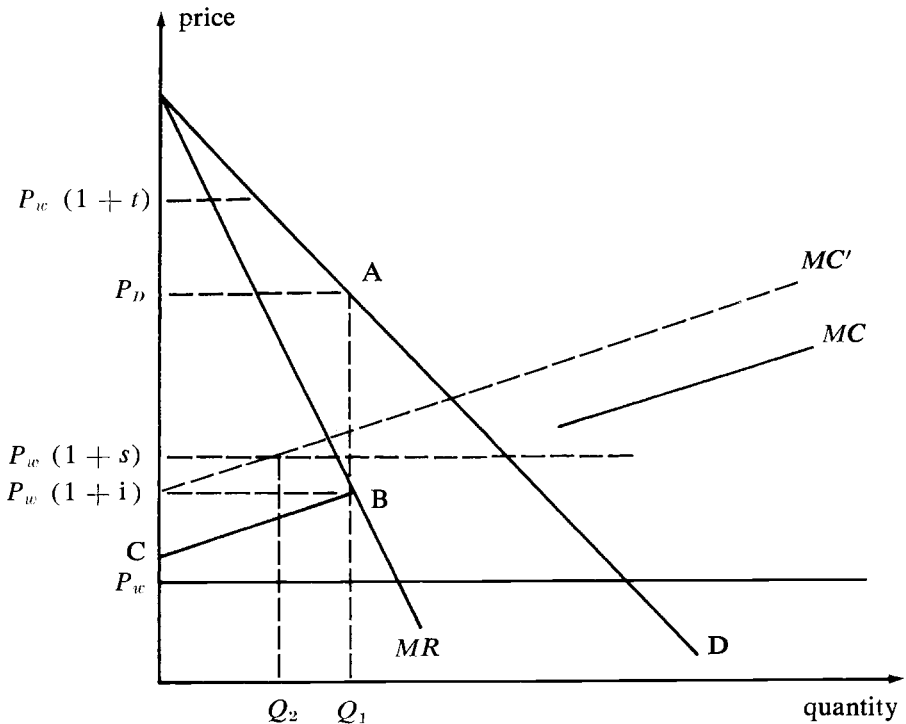

Fig. 2

However, s could be such that P_w $(1 + s)$ is less than P_D. With that rate of subsidy the monopolist is able to produce Q_2 units in addition to the Q_1 units he produces for the domestic market. MC' is the excess domestic supply.

For this case one would be tempted to pass from domestic to international value added using just an average of the effective rate given by the tariff and the one given by the subsidy weighted by the monopolist's sales to domestic and foreign markets. However, that is not quite right. In this special case the shaded area P_D ABC represents monopoly profits accruing to the monopolist when he produces for the domestic market. Even though these monopoly profits exist because of the tariff, they would disappear if the monopolist's rights were canceled or the franchise withdrawn.

Domestic value added including monopoly profits is not the appropriate measure because the franchise, and not the tariff, gives that implicit protection. The DVA that should be considered should not include extraordinary profits.

If the monopoly is exporting because of the subsidy, then the ERP resulting from that rate should be taken as the one pointing to a more accurate description of the industry protection. No franchise effect is present in this case that should count for some of the protection the industry receives.

Once the IVA is obtained, it is assumed that no variations exist either in the number of employed persons, in the hours worked, or in the wage bill, with respect to the figures considered for the case of the domestic value added.

The results are given in table 11.13. Direct capital and labor employment in terms of IVA shows that capital and labor requirements in import-competing industries are both larger than in the HOS export industries, and the same conclusion is reached whatever the index considered. This is clear evidence of the inefficiency of the import-competing industrial sector.

11.4   Conclusions

Uruguayan import-competing industries grew from the end of World War II until the end of the 1950s, after which a period of stagnation ensued. Protected by very high tariffs and other charges and by import prohibitions, these industries appear, on the basis of estimates for 1968, to have used much less labor per unit of DVA than did either HOS or NRB exportable industries. Expressed per unit of IVA, however, import-competing industries used both more labor and more capital, attesting to the overall inefficiency engendered by the import substitution policy. As Uruguayan policies have shifted toward encouraging exports in the

Table 11.13   Direct Factor Utilization per Million Dollars of IVA

	Wages (Thousands of Dollars)	Number of Workers				Hours Worked (Thousands)	Kilowatt-Hours (Thousands)
		Total	White-Collar	Blue-Collar	Unskilled Workers		
NRB exports							
Developed countries	832	456	56	400	316	690	1,677
Developing countries	840	345	4	341	245	710	3,324
Total	832	449	52	397	311	690	1,786
HOS exports							
Developed countries	1,238	707	77	630	344	1,495	1,468
Developing countries	946	446	81	365	141	629	4,595
Total	1,140	620	78	542	277	1,206	2,511
Import-competing HOS goods							
Total	1,780	934	192	742	456	1,352	4,576

Source: Bension and Caumont (1977).

Note: Calculated as described in the text, using data in table 11.12.

1970s, it is quite possible that the demands for various categories of skilled and unskilled labor will grow in the future quite differently from their historical trends.

In that regard, it is important to note that one of the chief findings of this analysis is the very large and significant difference between factor proportions in HOS exportables to developed and to developing countries, the former being considerably more labor-intensive than the latter. Certainly the available data strongly indicate that the nature of Uruguay's trade with her neighbors in LAFTA is quite different from the nature of her trade with developed countries, even when attention focuses on HOS goods.

This study really represents a first step in the analysis of Uruguay's trade and payments regime and of her domestic factor markets, and there is considerable scope for future work. While the commodity market distortions inherent in the trade regime were quantified to some-extent in our estimates of effective rates of protection, we have not reported any results with respect to distortions in Uruguayan factor markets. Although a few pieces of data are available, it will require considerable further study before any conclusions can be reached about the extent to which Uruguayan factor markets and factor prices reflect underlying market forces. We did, for this study, attempt to analyze the wage structure as it existed in 1968, but data difficulties proved overwhelming: not only were data on skill and experience variables inadequate, but the 60 percent inflation that occurred in that year undoubtedly distorted the reported nominal wages, depending on the timing of wage adjustments as much as anything else. There are also significant differences in the observed labor intensity of large and small firms, with small firms employing fewer than ten workers in each two-digit industry having a higher share of wages in value added than the firms with a larger number of employees, and also that much remains to be done in analyzing the determinants of factor utilization in Uruguayan industries as well as in estimating the way they interact with the trade and payments regime and the observed commodity composition of trade. The available evidence, however, is all consistent with the hypothesis that the switch to a more export-oriented strategy should result in greater demand for labor.

Notes

1. Because of the balance of payments difficulties during that period, capital goods imports were subject to prior government authorization.

2. The share increased again in 1974–75, even though imports of meat by the EEC were drastically reduced, since nontraditional exports more than offset the drop.

3. The trend changed in 1975–76 as nontraditional exports to the United States rose sharply. In 1976 the share was 11 percent.

4. For a discussion of the nature of Uruguayan inflation, see Harberger (1974).

5. For the NRB industries, the ERPs are based on a rough estimate of the input-output relationship and are not strictly speaking consistent with the others. For machinery (36), no firm data giving an average nominal rate of protection were available, and we assumed that the nominal rate of protection was 60 percent.

6. Rather surprisingly at first sight, the amount of electricity used per unit of DVA appears to be substantially higher in export industries than in import-competing industries, seeming to suggest that the first are more capital-intensive than the second insofar as energy consumption reflects capital utilization. The explanation lies, however, in the exceptionally high energy requirements of cement manufactures exported to developing countries. If that industry were excluded from the computation—and it is, in any event, arguable whether cement should be classified as HOS or NRB—the total kilowatt-hours consumed per unit of DVA in HOS exports would be about 14 percent lower than that in import-competing production. Other factor coefficients for exports shown in table 11.10 are not greatly affected by the inclusion or exclusion of cement.

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