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Nature and Impact of Export Incentives and
Effective Export Subsidy
—
An Analysis of Commercial Policy in Pakistan

by

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During 1950's Pakistan maintained balance in her international payments in the face of an excess of demand over the supply of foreign exchange at the prevailing rate of exchange by the imposition of qualitative restrictions on imports which were imposed as early as 1952 with the onset of the post-Korean depression and which were continued throughout the 1950's and 1960's inspite of a devaluation of the exchange rate which took place in 1955. The favourable effects of devaluation were quickly offset by inflationary movements which were facilitated by deficit and accentuated by a food shortage, caused by a stagnant agriculture. The excess demand for foreign exchange was aggravated with the launching of the Second Five Year Plan in 1959-60, which required a considerable increase on the imports of raw materials and capital equipment so that import licensing was tightened in an attempt to increase the relative allocation of the scarce foreign exchange for the imports of raw materials and capital goods as well as to regulate its composition to suit the requirements or the priorities of the plan. At the same time during 1960's the tariff rates on imports were increased; however, the effects of the quantitative restrictions swamped the effects of tariffs. The implicit exchange rate for imports, including the effects of tariffs and quantitative restrictions on imports, as measured by the ratio of the domestic price index to CIF price of the imports was considerably higher than the official exchange.

By the end of 1950's and the beginning of 1960's, Pakistan adopted a number of new export incentive schemes and expanded and made effective some of the old ones. The most important measure was the Export Bonus Scheme, which was an extension, in terms of the rate of incentive, as well as of the coverage of exports, of the previous import entitlement scheme. This scheme

had the effect of increasing the effective implicit rate for the commodities
imported under the scheme. The import entitlements under the bonus scheme
carried a premium of 150% - 160% over their face value during the 1960's; in
addition, they paid import duties and carried scarcity margins in the domes-
tic market insofar as some of the bonus items, as under the import regulations
in 1965-66 and 1966-67, could be imported only up to a maximum ceiling.

The implicit rates of exchange for different categories of imports
for the different years are given in the following table. Since the data on
the actual scarcity margins are not available for the period 1955/56-1959/60,
those relating to 1964/65 have been used for the earlier period. Indirect
evidence regarding the implicit rate for the imports on a more aggregative
basis during the late fifties and early sixties seems to indicate that there
was not significant difference between the two periods.[1] The table indicates
that the implicit rate of exchange for imports was considerably higher during
the midsixties compared with the rates during the midfifties. Moreover, the
structure of import rates is the wide range of rates for the different commo-
dities. During 1963/64-1964/65, the implicit rate (R_2) ranged from Rs.7.78
per dollar to Rs.19.93 per dollar, and during the next period, they ranged
from Rs.9.12 to Rs.22.69 per dollar. The highest rate is about two and one
half times the lowest implicit rate. Thirdly, the implicit rate is consider-
ably higher than the official rate, ranging between the minimum of 60% and
the maximum of almost 500% above the official rate.

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1. S.R. Lewis and S.E. Guisinger, Chapter on Pakistan, in The Structure of
Protection in Developing Countries, Edited by Bela Balasa. I.B.R.D. unpub-
lished manuscript, p. 6-7.

For the bonus imports the implicit rate indicated by R_2 in the follow-
ing table is not strictly relevant excepting in the case where there is an
upper ceiling on the quantity of bonus imports.

TABLE I

Implicit Rates of Exchange for Imports in Pakistan
(Rupees per Dollar)

	1955/56 - 1959/60				1963/64	1964/65				1965/66	1966/67	1965/66		
	D	R1	R2	R3	D	S	R1	R2	R3	D	S	R1	R2	R3
A. Consumption Goods														
1. Normal Licensing														
a. Essentials	35	6.41	6.42	8.14	56		7.41	10.89	9.41	70		8.08	9.56	8.26
b. Semi luxuries	54	7.31	10.75	9.29	116	47.2	10.26	15.08	13.03	148	22.1	11.78	14.37	11.97
c. Luxuries	99	9.45	13.89	12.00	142		11.49	16.89	9.19	180		13.30	16.23	13.53
2. Bonus License														
a. Semi luxuries	54	14.97	18.47	15.48	116	7.0	17.40	18.61	17.40	148	11.3	18.92	21.00	17.20
b. Luxuries	99	17.11	21.55	18.13	142		18.63	19.93	18.63	180		20.44	22.69	18.59
B. Raw Materials for Consumption Goods														
1. Normal Licening														
a. Unprocessed	26	5.98	8.37	7.17	30		6.18	8.65	7.41	39		6.60	10.03	8.73
b. Processed	43	6.79	9.51	8.15	51	40.0	7.17	10.03	8.60	81	51.5	8.60	13.07	11.37
2. Bonus Licensing														
a. Unprocessed	26	13.64	–	–	30		13.32	–	–	39		13.74	17.17	14.47
b. Processed	43	14.45	–	–	51	n.a.	14.31	–	–	81	26.3	15.75	20.21	17.11
C. Raw Materials for Capital Goods														
1. Normal Licensing														
a. Unprocessed	23	5.84	8.18	7.01	31		6.22	8.70	7.46	40		6.65	10.11	8.81
b. Processed	38	6.55	9.17	7.86	42	40.0	6.74	9.43	8.08	69	51.5	8.03	12.21	10.61

	D	S	R_1	R_2	D	S	R_3	D	S	R_1 R_2 R_3
2. Bonus Licensing										
a. Unprocessed	23	13.55	–	31	13.36	–	40			13.79 17.31 14.57
b. Processed	38	14.21	–	42	13.88	n.a.	69	26.3		15.17 19.11 16.11
D. Capital Goods										
1. Normal Licensing										
a. Consumer Durables	81	8.60 12.04 10.32	89	40	8.98 12.57	114	10.78			10.16 14.53 12.53
b. Machinery and Equipment	41	6.70 4.38 3.04	17		5.56 7.78	34	6.67	43.4		6.37 9.12 7.82
2. Bonus Licensing										
a. Consumer Durables	81	16.26	–	89	n.a.	16.12	114	–		17.30 18.68 15.38
b. Machinery & Equip.	41	14.36	–	17	12.70	–	34	–		13.51 14.59 11.80

NOTES: The official exchange is Rs 4.76 per dollar. D is the percentage rate of import duty; S is scarcity margin on imported goods, measured by the percentage excess of the domestic price of imported goods over their landed costs, i.e., c if prices plus import duties and sales taxes. R_1 is the implicit or effective exchange rate for imports, with no allowance for scarcity margin, but including the premium on the bonus vouches in the case of bonus imports. R_2 is the effective rate, including duties and scarcity margin and R_3 includes duties and scarcity margin but excludes 20% of the landed cost as the normal trading margin. Scarcity margin of 1964/65 is used for both the periods 1955/56-1959/60 and 1963/64-1964/65. The implicit exchange rates for Bonus imports of Consumption goods carry a very small margin over the landed cost, i.e., about 7%. This is considerably less than the normal trading margin assumed in the other cases; one can expect that the importers earn considerably less trading profit (and earn no-scarcity margin) or these categories of bonus imports, which in any case constitute a very small portion of his business. In these cases 7% has been assumed as normal trading margin.

SOURCES: P.S. Thomas, Import Licensing and Import Liberalisation in Pakistan, Pakistan Development Review, Winter 1966, no. 4, Vol. VI, p. 532.

M. Alamgir, op. cit.

A considerable increase in the implicit import rates encouraged and speeded up the process of import substitution in Pakistan during 1950's. A rise in the implicit import rate without a corresponding rise in the implicit export rate involves a discouragement to the expansion of exports. Firstly, it increases the relative returns from investment and production in the import substituting industries compared to that in the export promoting activities. Secondly, the costs of the inputs into the export industries, which are supplied by the import competing industries go up, as they replace the imported inputs by a greater use of the high cost domestically produced inputs. Thirdly, the cost of the imported inputs for use in the export industries or activities also goes up insofar as the restrictions and tariffs on the imports designed to encourage the import substitution raise their domestic price. Fourthly, the import substituting industries, earning high profits in the sheltered and protected domestic market bid up such factor prices as the level of urban wages, often considerably above the opportunity cost of labor, partly facilitated and reinforced by the pressure of trade unionism in the industry and the social welfare legislation of the government on the other. The export industries thus face the increasing cost of labor and an increase in total costs.

While, on the one hand, the implicit rates for imports have been on the increase during the 1950's as well as 1960's, the implicit rates for exports started to increase only during the sixties. The export rates for the primary commodities were below the official rate owing to the imposition of the export taxes throughout 1950's as well as 1960's. Insofar as the manufactured exports were concerned, not more than 1-2% of the exports of the manufactures prior to 1959 were affected by the various import

entitlement schemes in effect during the fifties. Even though the exemption

from the indirect taxes on the domestic intermediate inputs as well as the

imported inputs was introduced as early as 1956, the procedures for exemption

were not worked out satisfactorily and the administrative delays and complexi-

ties limited their usefulness. It was only during 1960's when the export

drive became one of the main components of commercial policy in Pakistan

that the implementation of the measures of tax exemption was pursued vigo-

rously. The exemption of exports from the domestic indirect taxes was, how-

ever, in force during the midfifties. The rabate of income tax on exports

was introduced only in 1963-64 and the export performance licensing which

is quantitatively the most important incentive, next to the export bonus

scheme, was introduced as late as 1962-63.

The export rates for the major primary commodities during mid-1950's

varied between 4.09 and 4.15 per dollar as against the official rate of

Rs. 4.76 per dollar whereas the official rate applied to the primary minor

exports with a few exceptions. A very few minor primary commodities were

eligible to a rate of exchange which was about Rs.5.12, since they were

entitled to the import entitlement schemes introduced during 1956-1958.

However, the implicit rates for exports improved during the 1960's; the rates

for the major primary commodities improved from Rs.4.38 to 4.62 per dollar

between 1960-61 and 1966-67 with a progressive reduction in the export

duties whereas those for minor primary commodities which were more entitled

to the export bonus scheme varied between Rs.4.78 and Rs.6.19, per dollar

depending upon (a) the varying rates of percentage of bonus and (b) premium

on the bonus voucher in different years. It was in respect of the manufactured

exports that a substantial improvement in the implicit export rate took

place. Considering the effect of the export bonus scheme only, the implicit

export rate for jute manufactures ranged between Rs. 5.96 and 5.94 per dollar during 1959/60-1966/67; during the same period, the export rate for cotton yarn ranged between Rs. 5.90 and Rs. 6.24 per dollar; for cotton cloth between Rs. 6.28 and Rs. 7.00 per dollar and for miscellaneous manufactures between Rs. 6.90 and Rs. 7.81 per dollar.

Under the export bonus scheme, the exporters receive a fixed percentage of their exports in terms of the entitlements to imports, which are transferable and can be freely bought and sold for the imports of a specified list of commodities. The scheme, therefore, provides a mechanism by which the high profits earned by the importers, in view of a great excess demand for scarce profits, are transferred to the exporters. The export bonus scheme, which was introduced in 1959 excluded the major primary commodities such as jute, cotton, tea, hides and skins, and wool which consitituted in the early sixties about 80% of Pakistan's total export earnings. The rest of the primary commodities which at the same time of the inception of the scheme in 1959 did not consti- tute more than 6% of the total exports, and all the manufactured exports were entitled to receive the import entitlements to the extent of 20% and 40% respectively of their export proceeds, with the exception of the jute manufacturing industries which were eligible for the same rate of import entitlement as the minor primary commodities, i.e., 20%. In additions, some invisible items as the earnings from shipping, ship and aircraft repairs, and salvage operations were entitled to a bonus at the rate of 20%. The hotel industry and private remittances from abroad were subsequently included in the scheme, both of these items being entitled to a 20% bonus rate. There are three distinct features which distinguished the scheme from the earlier import entitlement schemes. Firstly, the import entitle- ments became freely transferable in the open market as they could be used for imports of any items on an extended eligible list of imports. The

differences as between the different industries, in terms of the extent
of subsidy received by them, were not related to scarcity of the imported
inputs which were specific to the industry concerned but to the scarcity of
a much larger group of commodities common to a large number of industries
and users. Secondly, the coverage of the scheme was considerably wider than
the earlier schemes and all exports, both primary and manufactured, except-
ing the major exports such as tea, cotton, jute, wool, hides and skins
were entitled to the bonus scheme. With 20% export bonus for primary
commodities and 40% for manufactured goods, this scheme provided a higher
level of assistance for the majority of the export commodities as compared
to the previous incentive schemes. Thirdly, services such as shipping,
ship and aircraft repairs, and hotels were, for the first time, entitled
to the import entitlements.

Even though Dr. W. Voek, a German economist whose recommendation
played a vital role behind the introduction of the scheme, suggested a uni-
form percentage of bonus for all exports i.e., 20% and no restriction on
imports for the use of import entitlements, excepting by means of heavy
duties on non-essential items, the scheme which was eventually introduced,
as described above, contained a restricted import list and the differentiated
rates of bonus were introduced. A uniform rate of bonus without any restric-
tion for the use of import entitlements would have amounted to a uniform
depreciation of the export rate of exchange and indeed a floating export
rate varying in response to variations in the total export earnings, on the
one hand, and in the excess demand for imports, beyond the licensed amounts,
on the other. There would have been only one effective export rate and two
effective import rates - one under licensing and the other for the items
imported under bonus scheme. The export rate would have still continued to

be below the import rate facing the users of imported goods because insofar as

import restrictions coexisted with the bonus import, bonus import will be made

only if the premium is not more than the level of excess profits generated

by quantitative restrictions on imports. Export rate would be higher than the

official. rate to the extent of PR where P is the percentage of bonus and is

less than one and where R is the premium on the bonus vouchers, whereas the

import rate facing the final users of imported goods and the competing domestic

producers would be higher than the official rate by R.

Since 1962-63, an additional measure of export promotion in the form

of export performance licensing has been in existence under which different

exports, as under the export bonus scheme, are entitled to receive import en-

titlements at varying percentages of their exports but unlike in the bonus

scheme they are not freely transferable but can only be used for the imports

of raw materials, spare parts, and machinery required by the industry concerned.

The subsidy element in the export performance licensing arises from the fact

that there is an excess demand and a consequent scarcity for most of the im-

ported raw materials in the domestic market, specially in view of the widespread

prevalence of excess capacity in the manufacturing industries. In the presence

of a continuing pressure of a strong pull of domestic demand, exports involve

a surrender of sales in the highly profitable domestic market, which are sought

to be compensated under this scheme by granting to the exporters additional

import licenses or permits to import raw materials and spare parts. The latter

may be used either for a larger domestic production destined for the domestic

market or for outright sales at high profits to others similarly situated and

suffering from excess capacity. Moreover, a greater utilization of capacity

reduces unit costs and thus increases profits per unit of sale.

The additional import entitlement or export performance license re-
ceived by the export industries in the initial years was substantially in ex-
cess of the import component of exports, specially since the import entitle-
ments were at 100 per cent of the f.o.b. value of export. Until 1964 only
43 industries were eligible for the additional import entitlement, and the
import entitlements were at a uniform rate of exports. While in the subsequent
years the number of industries receiving additional licensing has been con-
siderably expanded to about 250 industries in 1965-66, the percentage of
import entitlements has also been reduced.[1] Moreover, the import entitlements
of each industry are to be fixed separately in the light of its own import
component, but in no case is it to exceed 50 per cent of the f.o.b. value of
exports. Thus, the degree of differentiation between commodities has consider-
ably increased and so also the rates of subsidy accruing to the different
industries widely differ.

Apart from bonus the imports under the bonus scheme which constitute
barely 10%-11% of private commodity imports and 5% of the total imports, the
implicit rate of exchange for the commodity imports ranged between Rs. 8 and
Rs. 12 per dollar in 1965/66. It is to be noted, however, that the implicit
rate for one category of the commodity imports, i.e., food grains, is the of-
ficial rate since they are not only imported at the official exchange rate

1.   Government of Pakistan, Chief Controller of Exports and Imports, Gazette
of Pakistan, Extraordinary, for various shipping periods, 1963-64, 1964-65,
1965-66 and 1966-67.

W.E. Hecox, "The Use Of Import Privileges As Incentives to Exporters in
Pakistan". Research Report No. 30, Pakistan Institute of Development Economics,
Karachi.

under the government auspices but also are imported duty free. In addition

such invisibles as debt service remittances, defence purchases by the govern-

ment and the imports of the traveller's baggage into Pakistan duty free at

the official rate of exchange. The imports of food grains and invisible pay-

ments constituted 33% of the total (visible and invisible) foreign exchange

payments in 1966-67.[1] Of the commodity imports, capital goods constituted

about 47% to 50% during the years 1965-66 and the implicit rate applicable to

them was about Rs. 8 per dollar in 1965-66, whereas the raw materials for con-

sumer goods which constituted about 15% of the total commodity imports was eli

gible to an import rate varying between Rs. 9 and Rs.1150 per dollar and the

rate applicable to the raw materials for capital goods which constituted be-

tween 14% to 11% of the total commodity imports varied between Rs.9 and 11 per

dollar.[2] The consumer goods which constituted about 25% of the total commodity

imports were eligible for an implicit rate, which was the highest i.e., between

Rs. 8.26 and Rs.13.50 per dollar. Thus the maximum rate for about 75% of the

commodity imports was between Rs.8 and Rs.11 per dollar in 1965-66. For about

63% of the imports it would be about Rs.9 per dollar, if we assume that 50% of

the imports of intermediate goods and raw materials are unprocessed materials.

The relative exchange rates for the different categories of exports and imports

in 1965-66 are shown below. The export rates include the effects of the various

other export incentive schemes, in addition to the export bonus scheme.

1. Phillip Thomas, "A Note on Effective Import Exchange Rate,"September 26,
1947 Kalamazoo College, Kalamazoo, U.S.A.

2. The figures for imports are taken from N. Islam, "Imports of Pakistan:
Growth and Structure, A Statistical Study," PIDE 1967, p. 27-29.

Implicit Exchange Rate for Commodity Exports and Imports
(Rupees per dollar, 1965-66)

Licensed Imports	Approximate Percentage Distribution	Exchange Rate	Exports	Approximate Percentage Distribution
(1) Capital goods	49	Rs. 8	Major Primary a) Exports b) 45%	4.56 -4.63 4.76
(2) Raw materials	26	Rs. 9-11	Major Primary Exports 12%	6.78 -6.90
(3) Consumer goods	25	Rs. 9-14	Jute and Cotton Manufactures 29%	5.90 -7.47
Bonus imports			Other manufactures 14%	6.47 -9.52
Capital goods	11.80			
Raw materials	14.50-17.11		3 manufactures	
Consumer goods	15.38-18.60		of very little significance in exports	
				11.04 -12.11

The imports considered above are mainly or overwhelmingly manufactured

goods whereas 43% of the exports consist of the manufactured goods. Thus if we

confine ourselves to the manufactured goods only, it appears that while about

29% of the total exports and 66% of the manufactured exports earn between

Rs 5.90 and 7.50 per dollar, which is below the lowest rate to which the

manufactured imports are eligible i.e., Rs. 8 per dollar, at which 50% of the

non bonus imports are allowed. Only about one third of the total manufactured

exports earn somewhere between Rs.6.47 and Rs.9.52 per dollar, which are

lower than the rates at which the rest of the non-bonus imports (another 50%)

(a) Major exports like jute, cotton and tea which were subject to export taxes.

(b) Such major exports as wool and hides and skins which by 1965-66 were
exempt from export taxes.

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are allowed i.e., between Rs. 9 and Rs. 12 per dollar. The bonus imports which

constitute 10% of the total imports earn between Rs. 12 and Rs.19 per dollar,

whereas only three manufactured exports which are of minimum importance in

the exports of Pakistan like Coal and Petroleum products, tobacco products,

alcoholic beverages and cosmetics earn about Rs. 11-12 per dollar.[1]

The foregoing analysis indicates that the implicit import rates are high-

er in general than the implicit exchange rates. A comparison between the import

and export rates for broad aggregates of commodities creates the presumption

but does not quantify in terms of individual industries or groups of industries

how the structure of incentives, resulting from tariffs and import controls,

on the one hand, and multiple export incentives, on the other, favour import

substitution as against export expansion or vice versa. It is necessary for

this purpose not only to estimate the nominal export subsidy and protection

industry wise but also to estimate the effective rate of export subsidy which

can then be compared with the effective rate of protection against imports.

This is the better comparison which will indicate how far the various export

incentive schemes have been successful in offsetting the attraction of produc-

tion for the domestic market in specific activities in substitution of imports

and how the degree of impact of the export promotion measures differs as bet-

ween the different industries in terms of effective subsidy. The first task

in this exercise is to estimate the total impact of the various incentive

schemes in terms of a percentage subsidy per unit of industrial exports.

Just as in the case of the domestic production for import substitution

the total effect of import restrictions and tariffs is measured by the rate of

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1. The distribution of the bonus imports into three categories of imports
is roughly the same as the distribution of the non-bonus imports.

effective protection, similarly in the case of export promotion, the total impact of the export subsidy on the allocation of resources between the import substituting, export promoting or domestic (non-trade) activities, is to be measured by the effective rate of export subsidy. It is the net subsidy to the "value added" in a particular economic activity or industry when it is engaged in exporting abroad which decides the relative attractiveness or profitability of production for selling abroad as against production for selling at home, either in import competing activities or in activities which are purely domestic and output of which does not enter into foreign trade. Just as the protective effect of tariffs and quantitative restrictions is qualified or detracted by the imposition of tariffs and restrictions which raise the prices of inputs, so also the impact of the export subsidy is reduced to the extent that the domestic prices of the imported inputs used in the export industry or the inputs supplied by the domestic industry fetch higher prices than their corresponding international prices. The magnitude of subsidy to the export industry should thus be considered in terms of effective subsidy, i.e., subsidy received by the "value added" in the export industry or exporting activity.

An attempt is made in the following (a) to measure the extent of the total nominal export subsidy originating from the multiple export promotion measures, as a percentage of the f.o.b. export of the individual categories of the manufactured exports; (b) to estimate the effective rates of export subsidy, as defined above, for the various manufacturing industry; (c) to compare them with the effective rates of protection provided to various industries Measuring Effective Subsidy; and (d) to examine the implications of the past and present pattern of the effective subsidy for the growth of exports and the export policy in Pakistan.

The relationship between the nominal subsidy and the effective export subsidy is analogous to the relationship between the nominal and the effective protection as seen below.

Let V_x be defined as "value added" in export prices, i.e., when sold in the export market after taking into account total export subsidies extended to the sales in the export market. Vd is the "value added" in domestic prices, and Vw is the "value added" in world or international prices. Under these circumstances, the rate of effective protection is measured by $\frac{Vd - Vw}{Vd}$ whereas the effective subsidy is measured by $\frac{Vx - Vw}{Vx}$. If Vx, which is inclusive of export subsidies, equals Vd, which includes the effects of the import restrictions and tariff protection, the effective subsidy is the same as the effective protection. This would be the case if the receipts per unit of exports (including subsidies) equal the receipts per unit of domestic sales, i.e., if Dp ↔ Xp (1+S) where Dp is the domestic price per unit of output, Xp is the f.o.b. export price and S is the export subsidy as a percentage of the f.o.b. export. Under these circumstances Vd is different from Vx only insofar as the receipts per unit of sale in the domestic market are different from the receipts per unit of sale (including export subsidies) in the export market, since the value of intermediate inputs in both cases is the same. The available data on the differential between the international and domestic prices suggest that the receipts per unit of sale in the export market are in many cases, including export subsidies, less than what is obtained by selling at home. In these cases, exports would not be as prefitable as domestic sales.

The total impact of the various export incentive schemes which have been described earlier can be expressed in terms of a total amount of subsidy per unit of export or as percentage of the f.o.b. value of exports. If D is the domestic market price of a unit of output and if the amount of export subsidy is S then the price at which the exporter can sell abroad if he is to equalize the returns per unit of sale in both the markets is given by $X = \frac{D}{(1+S)}$ where S is expressed per unit of X. The components of S are 1) the indirect taxes on output, 2) exemption from the indirect taxes on the domestic inputs from the other sectors or industries, 3) exemption from the taxes on the imported inputs, 4) export bonus scheme and 5) export performance licensing. Thus the export price which the export subsidy enables the exporter to quote in the exports market is as follows:

$$X = \frac{D(1 - t_m \cdot m - t_d \cdot d - t)}{1 + bP + EP'}$$

By definition X is the export price which the exporter can quote, without earning lower profit per unit of sale abroad than at home; in practice he may not be able to sell abroad at that price, since the world price which governs the actual export price (f.o.b. export price) may be less than X so that $X >$ f.o.b. export price. To put the same thing in another way: the f.o.b. price is known and is taken to be X, then total receipts per unit of export sale $= X(1 + bP + EP') + D(t_m \cdot m) + D(td \cdot d) = Dt$ $\underline{/}$ where D is the domestic market price $\underline{/}$ may or may not be equal to D. In the above formulation tm is the rate of import duty on the import component of the output (in domestic market price), m is the import component of the output (domestic market price), td is the rate of indirect taxes on the domestic inputs, d is the domestic inputs per unit of output, and t is the indirect tax on output: P is the premium on the bonus vouchers, b is the percentage of export bonus, E is

the percentage of export performance licensing and P' is the premium on export performance licensing. The amount of export subsidy as a percentage of f.o.b. export is therefore, $(\frac{R}{X} - 1)$. R is the total receipts, including subsidy, per unit of export sale. This is equal to

$$X \left[\frac{(1 + Pb + EP') + D(tm \cdot m) + D(td \cdot d) + tD}{X}\right] - 1$$

$$= \quad Pb + EP' + D(tm \cdot m) + D(td \cdot d) + tD$$

$$= \quad PD + EP + D(tm \cdot m) + D(td \cdot d) + tD$$

The total amount of the indirect tax on output is considered a subsidy in the above formulation on the assumption that the total tax is shifted on to the consumer when the output is sold in the domestic market and that when it is exported the exporter would be obliged to bear the incidence to the full if there was no exemption. The f.o.b. export price for each industry group is derived on the basis of the price differential between the domestic wholesale price and world price.[1] In the above derivation of the amount of export subsidy, the rebate on income tax on profits or income from exports is not included. The percentage of rebate on income tax is related in a progressive manner to the percentage of output exported, i.e., a higher percentage of rebate is allowed with a higher proportion of export to the output. During 1963-67, the industries which exported between 10% and 20% of its output were entitled to a rebate of 10% on the income tax payable on profits or income from exports; the rebate was increased to 15% in 1967. Those exporting above 30% of output received the maxium rebate of 20% which was raised to 25% in 1967. Assuming profits on the

1.   S.R. Lewis and S. Guisinger, "Measuring Production in a Developing Country: The case of Pakistan." Journal of Political Economy, July, 1968.

2.   N. Islam and I.O. Malik, "Comparative Costs of the Manufacturing Industry in Pakistan - A Statistical Study." Research Report No. 58, PIDE, Karachi, June 1967.

export sales to the extent of 25% of the sales price, and income tax at an average rate of 30%, the subsidy works out between 0.7% and 1.5% of the f.o.b. value of export during 1963-67, which increased to a value of 1.0% and 1.8% in 1967.

The estimates of the quantum of the nominal export subsidy due to tax exemptions of various kinds are based on the input - output table of 1963-64 in respect of the various industrial classifications contained therein. The data on the import duties on the intermediate imported inputs and on the in-direct taxes are derived from this table. With the help of the data on the indirect tax on the output of the supplying industry, and on the basis of the inter-industry - flow coefficients the total tax paid by each industry on the inputs purchased from the other sectors is estimated. The estimation of the amount of subsidy due to the export performance licensing raises a special problem, since the industrial classification as contained in the input-output table is conceived in terms of the broad industry groups whereas the manufac-tured export items which are entitled to the export performance licensing are much more narrowly defined. The relate to the specific products or particular branches of an industry. In order to solve this problem in the case of an industry a specific branch or product of which is eligible for the export performance licensing, two rates of subsidy are estimated; one in the absence of export performance license and the other on the assumption that the export performance license applies to the entire industry. This is tantamount to the assumption that the particular branch or product of the industry to which the export performance license applies has the same price differential as well as the same inter-industry flow coefficients as those of the entire industry. Furthermore it involves the assumption that the average rates of import duties

on the imported inputs and of indirect taxes on the outputs of the industry as a whole, apply to the individual products or branches of the industry as well. The average premium assumed for the export performance licensing is 50%. This is confirmed by the available evidence on the magnitude of the scarcity margin on the imported capital and intermediate goods[1]. The scarcity margin on the landed cost of imported equipment and materials varies between 50% and 40%. The landed cost of imports includes taxes on imports and if the scarcity margin is expressed as a percentage of the CIF price, on the assumption of the lowest scarcity margin of 40% over the landed cost and of the lowest rates of existing structure of duties in imports i.e., about 17% tariff and 6% sales tax, the scarcity price for foreign exchange for the import of goods in these two categories comes to about 54% , exclusive of the effects of taxes and duties. Hence the assumption of the premium of about 50% accruing to the export performance license is a reasonable one.

The effective export subsidy, once the nominal export subsidy is given, is derived in the following way.

O_D = Value of gross output in domestic prices (market price).

O_W = Value of gross output in world prices.

$$O_W = \frac{O_D}{P_W(1+.05)}$$

P_W is the ratio of the domestic wholesale price (including indirect taxes) to world price which is in most of the cases based on the CIF prices of competing imports. The f.o.b. export price is assumed to be 5 percent less than the CIF price.

$V_W = O_W - I_W$, where I_W is the value of the intermediate inputs in world

1. cM. Alamgir, "The Domestic Prices of Imported Commodities in Pakistan; A Further Study", Pakistan Development Review, Spring, 1968, p. 44.

2. S.R. Lewis and S.E. Guisinger, Chapter on Pakistan, etc., op. cit.

prices.

V_d = value added in domestic prices (factor cost).

O_X = value of gross output when exported (including subsidies).

$O_X = O_W$ (I+S) where S is the export subsidy (excluding the effect of

remission of indirect taxes on output) as a percentage

of the f.o.b. value of exports.

V_X = value added in the export market.

$V_X = O_X - I_d$, where I_d is the value of the intermediate inputs (Domestic and

foreign) for exporters. This is the same as the value of

intermediate inputs in domestic prices, since the export

subsidies which are given in the form of remissions and exemp-

tions of taxes on the inputs (domestic and foreign) used in

the export industry are already converted in terms of the

total subsidy to the gross output as indicated earlier and

are included in S and therefore, not treated again in order

to avoid double counting.

Thus the effective Rate of Protection = $\dfrac{V_d - V_W}{V_d}$ whereas the effective Rate

of Export Subsidy = $\dfrac{V_X - V_W}{V_X}$. In this paper V_W has been derived indirectly

from $\dfrac{V_d - V_W}{V_d}$ which is known and V_d is given in the Tirus - Stern input-output

table of 1963-64.

If V_X and V_W are always positive, then a positive E defined as $\dfrac{V_X - V_W}{V_X}$

always implies an effective export subsidy and a negative E implies export tax-

ation. However, V_X and V_W are in some instances negative and in such cases the

interpretation of E with regard to its sign is no longer simple. If V_X is nega-

tive, a positive E implies and export taxation rather than export subsidy, where-

as with a negative V_X, a negative E implies an export subsidy rather than ex-

port taxation. However, with a positive V_X, a positive E implies subsidy and

negative E implies taxation of exports.

Nominal Export Subsidy

The nominal export subsidy in terms of its detailed components as well as in terms of individual industries is indicated in the appendix. However, the frequency distribution of the manufacturing industries in terms of the rates of nominal subsidy is seen as follows:

Table I

Range of Nominal Subsidies

Rates of Subsidy (as % of f.o.b. exports)	Number of Industries 1964/65	Number of Industries 1965/66	Percentage Distribution of industries 63-64	Percentage Distribution of industries 65-66
25 - 50	2	6	3.77	10.34
51 - 75	17	32	32.08	55.17
76 -100	13	13	24.53	22.41
101 -125	11	4	20.75	6.90
126 -150	6	1	11.32	1.72
151 -200	4	2	7.55	3.45
	53	58	100.00	99.99

The two most important components of the nominal subsidy are the export bonus and the export performance licensing. The tax exemptions of various kinds on the outputs and the domestic and imported inputs - all amount to a magnitude of subsidy which is considerably less than the effect of the two major incentive schemes. The percentage distribution of industries in terms of three minor components of subsidy is shown below:

Table 2

Tax exemptions
1963-64/1965-66

Subsidy as % of f.o.b. Exports	Imported inputs	(Percentage Distribution of Industries) Domestic inputs	Output
0.00 - 1.99	33-42	73-70	10-10
2.00 - 4.99	28-45	11-16	10-17
5.00 -10.00	17-17	13-11	25-28
Above 10	22-16	3-3	55-45

In about 80% of the cases, the subsidy originating from the tax exemption on the domestic imported inputs does not amount to more than 5% of the FOB value of exports. In about 75% of the cases the magnitude of subsidy originating from exemption from the domestic indirect taxes is about the same. As seen from table 2 about 61% of the cases examined in 1963-64 receive the total nominal subsidies varying between 25% and 100% of the FOB value of exports. About 40% of the cases receive the total nominal subsidies exceeding 100% of the FOB value of exports. By 1965-66, there is a decline in the magnitude of nominal subsidy as is evident from the fact that about 88% of the cases receive nominal subsidy ranging between 25% and 100% of the FOB value of exports whereas only 12% of the cases receive subsidies ranging above 100% of the FOB value of exports [1]/ The export products receiving subsidies exceeding 125% of the FOB value of exports are very few; they are about 19% of the total in 1963/64 and 5% of the total in 1965/66.

1/ The number of cases in the two years differs because a larger number of individual products or branches of industry were given export performance licensing in 1965-66 and products of branches of industry with export performance licensing have been treated as separate industries or observations for the purpose of this analysis.

It is interesting to compare the differential between the world

and domestic price, on the one hand, and the amount of nominal export

subsidy, on the other, of the specific industries. The implicit rates

of exchange mentioned earlier and derived directly from the tariffs

and the scarcity margins measure the degree of protection provided by

the tariffs and quantitative restrictions whereas the price differentials

record the actual prices of the particular product at home and abroad.

(Appendix.) They may conceivably differ under certain circumstances.

To the extent that an industry is over protected or protection is

redundant, its actual price differential is less than what is warranted

on the basis of the tariffs and the scarcity margins. The domestic

price of the imported products may also be higher than the prices of

the competing domestically produced substitutes because of the consumer's

preference for the well known foreign products. Moreover, the tariffs

and scarcity margins used for estimating the range of implicit exchange

rates are the averages of the very broad classes of commodities such as

consumer goods, intermediate goods, and capital goods, whereas the price

differentials discussed here as refer to the individual industries.

The implicit rates of exchange suggested by the actual price differentials

may thus be considered a sample from the wide range of rates indicated by

the implicit rates given earlier and are, therefore, consistent with each

other.

Continued from pre page:
_/ Counting industries with two rates of subsidy as two industries; since export performance licensing applies only to a branch or a product of an industry, that branch or product is being treated as a separate industry for the purpose of the classification.

The implicit rates for the imports indicated by the actual industry-wise price differentials are higher than the implicit rates of export indicated by the export subsidy in most cases, if we exclude those branches or products of the manufacturing industries which do not receive export performance licensing.[1] The cases where the price differentials are greater than the export subsidy are sugar, edible fats and oils, alcoholic beverages, cotton textiles, jute textiles, silk and artificial silk, wearing apparel, rubber, paints and varnishes, chemical products n.e.s., non-matallic products, metal products, some brands of machinery, some brands of electrical machinery, transport equipment, plastic goods and pens and pencils. In the above cases, one may, therefore, suggest that nominal protection as indicated by the price differentials is greater than the nominal export subsidy. In the following cases the nominal export subsidies are higher; canning of fruits and vegetables, manufacture and repair of footwear, articles of paper and paper board, printing and publishing, tanning and leather finishing, fertilizers, soaps and cosmetics, matches, coal and petroleum products; in four other cases, i.e., sports goods, photographic and optical goods, thread and threadball and basic metals industry, the price differentials are almost equal to the export subsidy.

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[1] The implicit rate for imports is the counterpart of nominal protection (afforded by tariffs and controls), excepting that the latter does not include the indirect taxes on output. The price differentials include the effects of domestic indirect taxes and the export subsidy equally includes the effects of exemption of indirect taxes on exports. Thus the return from export sales on the basis of export subsidy include the effects of remission of indirect taxes in order to compare with the price differentials which include indirect taxes.

If we consider those specific products or branches of the different

manufacturing industries which are eligible for the export performance

licensing, the total subsidy, including the effect of the performance licensing,

exceeds the average price differential in most of the cases. The comparison

may not be strictly tenable, since the price ratio for a particular industry

is often based on an average of the various products of an industry and is

thus not exhaustive in the sense of including all its products. In some cases

the price differential relates to one or two products and is taken as repre-

sentative of the whole industry. In a few cases independent observations of

the price ratios relating to the different branches of an industry are

available which yield the range of the price differentials for purpose of

comparison with the range of the export subsidies. In 1963-64 in only

seven cases more than one price differentials are available; out of these[1]

cases in only three the upper limit of the range of price differentials

exceeds the export subsidy and in the rest, the reverse is true. An alter-

native way of dealing with the problem is to compare the average price

differential per industry with the simple average of the two different

estimates of the export subsidy per industry. In such a comparison in six

out of the sixteen cases in 1963-64 the price differential exceeds the

export subsidy.

By 1965/66, there is a reduction in the amount of export subsidy

owing to a reduction in the bonus rates in 1964-65; the export per-

formance licensing has also been reduced in the next few years. The

change in the magnitude of export subsidy took place within a short

span of two years, during which the price differentials of the

1/ The specific branches or products of the following industries such as
canning of fruits and vegetables, cotton textiles, thread and threadball,
footwear, wearing apparel, cork and wood, rubber, paints and varnishes,
soaps, chemical products nes, non-metallic minerals, metal products,
machinery electrical machinery, photographical and optical goods and pens
and pencils are entitled to export performance licensing.

manufacturing industries could not possibly have declined and most

probably have increased. Excluding the effects of the export performance

licensing, in twenty-five out of thirty-three cases in 1965/66 the

price differential exceeds the export subsidy; if only the cases which

are entitled to export performance licensing are considered, in fifteen

out of twenty-one cases the price differential exceeds the export

subsidy. Including the effects of export performance licensing, the

export subsidies exceed the price differentials in 1965/66 only part

in respect of some specific products in the following industries:

canning of fruit and vegetables, bakery products and confectionary,

cotton textiles, threadball, footwear, and cosmetics and soap; in

seven cases out of eight where more than one price differential is

available, the range of the price differentials is above the range

of the export subsidies. Taking the average of the price differentials

and the export subsidies, only in four cases the subsidies exceed

price differentials, in one case they are equal and in three other

cases, the price differentials are higher than the subsidies. Thus

in 1963/64 the price differential or trade of nominal protection is

exceeded by export subsidy in the majority or at least half of the

cases which are entitled to the export performance licensing. By

1965/66 the relative position has been reversed with the price

differentials exceeding export subsidies in the majority of the cases.

Effective Export Subsidy

As has been explained earlier, whereas the nominal subsidy relates to the difference between D and R, where D is the domestic market price of a unit of output and R is the total receipts per unit of output, when sold in the export market, the effective subsidy relates the value added in the domestic market (Vd) to the corresponding value added in the export market (Vx) and this measures the relative attraction of the export market via a vis the domestic market. The effective rates of subsidy have been estimated for the year 1963/64 and 1965/66, between which there are important changes in the two components of the export subsidy scheme i.e., the export bonus and the export performance licensing. The distribution of the individual industries in terms of the various rates of subsidy is given below:

Table 3

Range of Effective Subsidies

Percentage of Subsidy	Number of Industries 1963/64	1965/66	Percentage of Distribution of Industries 1963/64	1965/66
5 - 25	0	2	0	4.44
26 - 50	6	15	13.64	33.33
51 - 75	17	17	38.64	37.78
76 - 100	12	5	27.27	11.11
101 - 125	3	2	6.82	4.44
126 - 150	2	1	4.54	2.22
151 - 200	1	1	2.27	2.22
200 and above	3	2	6.82	4.44
	44	45	100.00	99.98

Percentage of taxation		Percentage of taxation	
1 - 5	1	20 - 50	1
60 - 80	2	50 - 75	4
324	1	75 -100	1
	48		54

About 80% of the cases in 1963/64 and 87% of the cases on 1965/66
receive effective subsidy between 5% and 100% of the FOB value of exports.
The range of distribution of the effective subsidy is much wider than
that of the nominal subsidy. While there is no industry receiving
nominal subsidy below 25% either in 1963/64 or in 1965/66, about 5% of
the cases in 1965/66 have effective subsidy lower than 25%. Similarly,
the rate of nominal subsidy in no case exceeds 200%, whereas the rate
of effective subsidy is above 200% in about 7% of the cases in 1963/64
and in about 5% of the cases in 1965/66. The range of export subsidy
varies from negative subsidy to as high as 444% positive subsidy, as
for example, on the export of certain varieties of wearing apparel in
1963/64. Some striking examples of a high export subsidy in 1963/64
are edible oils and fats (225%) with negative value added in export
market, rubber manufactures (123% - 219%), matches (157%), fertilizers
(130%), metal products (125%), some pieces of electrical machinery
(121%). The range of effective subsidy declines by 1965 but in a few
cases the subsidies remain very high and they accrue to the following
industries: edible oils and fats (107%), rubber manufactures (842%-219%),
fertilizer (161%), and metal products (124%-139%).

There is no systematic tendency for the effective subsidy to be
greater or less than the nominal subsidy. In 1963/64 in thirty-four
out of forty seven cases the effective subsidy is less than the nominal
subsidy, and in twelve cases it is higher. Moreover, in five instances
a positive nominal subsidy is associated with a negative effective
subsidy, in other words, a number of exports such as plastic products,
some branches of electrical machinery, some branches of wood and cork
products, some types of wearing apparel and of silk fabrics are taxed

rather than subsidized. These were the cases in some of which such as
silk fabrics, wearing apparel, in some branches of electrical machinery
both Vx (value added in export market) and Vw (value added in world
prices) are negative but in some others, such as wood and cork and plastic
products the value added in the export and world markets is very small
but not negative. But not in all the industries with a negative value
added in world prices (i.e., with a rate of effective production greater
than one) are the exports taxed, as for example, sugar, edible oils
and fats, rubber manufactures and some varieties of metal products,
electrical machinery and transport equipment. That the value added in
the export market is negative implies that in spite of the export subsidies
the receipts from the exports do not cover the value of the total domestic
and imported inputs. In 1965/66 the nominal subsidy in six cases is
associated with effective taxation; an additional variety of wearing
apparel is taxes in 1965/66 as compared with 1963/64. In eighteen cases
the effective subsidy is higher than the nominal subsidy and in the rest
twenty-seven cases the effective subsidy is less than nominal subsidy.
Thus in the majority of the cases the effective subsidy is below the
nominal subsidy but also the ranking of the industries by effective
and nominal rates of subsidy is unrelated in both the years 1963/64 and
1965/66. The rank correlation is not only low but also insignificant.

An important aspect of commercial policy in Pakistan is the
difference in the bias of policy towards import substitution, on the
one hand, and export expansion on the other. Moreover, it is important
to see how the relative bias has changed, if at all, between the years.
An industry-wise comparison between the effective rates of subsidy and
the effective rate of protection provides a test of this hypothesis.

Since many industry groups have more than one effective subsidy rate,

owing to the way export performance licensing has been treated in the

calculation of the export subsidy, the comparison between the effective

subsidy and protection is made in terms of the average subsidy for each

industry, the average subsidy being defined as an arithmetic average of

the two subsidy rate. The alternative way is to treat separately those

branches of industry or products which receive export performance licensing

and to compare the two sets of subsidies for each industry with one set

of the effective rates of protection which relate to the whole industry.

Since the estimation of the effective subsidy is based on one price

differential for the whole industry, (in the absence of the separate

price differentials for these branches or products to which the export

performance licensing applies) the comparison of the effective protection

with the average effective subsidy has probably a greater justification.

However, both kinds of comparison are made below. To take the comparison

with the average effective subsidies first, in the great majority of the

cases, the effective protection is roughly equal to or exceeds effective

subsidy in 1963-64. In cases where they are equal, the import substitution

and the export expansion are equally favored by the commercial policy.

In fourteen out of thirty-one cases, the effective protection and effective

subsidy differ from each other by not more than 10% and these cases are

cotton textiles, threadball, paper and paperboard, tanning and leather

finishing, paints and varnishes, manufactures of wood and cork, soaps

and cosmetics, chemicals n.e.s., basic metals, metal products, both groups

of non-electrical machinery, sports goods, and fertilizer. In seven cases,

such as edible oils and fats, silk and artificial silk, jute textiles,

printing and publishing, one group of non-metallic minerals, two groups

of electrical machinery, pens and pencils and transport equipment, the effective protection exceeds effective subsidy whereas the reverse is true in only seven cases such as footwear, wearing apparel, rubber products, matches, coal and petroleum products, one variety of non-metallic minerals and plastic goods.

By 1965/66 the relative magnitude of effective subsidy declines vis a vis effective protection so that the attraction of production for the export market diminishes. The two rates are within 10% of each other only in the case of cotton textiles, manufactures of wood and cork, basic metals and one group of non-electrical machinery, and in only seven cases the effective subsidy exceeds the effective protection i.e., rubber manufactures, fertilizers, matches, coal and petroleum, metal products and one group of electrical machinery. Therefore in the vast majority of the cases, the effective protection exceeds effective subsidy by a wide margin. It is interesting to note that in some of the most important export industries such as jute textiles, tanning and finishing of leather and footwear and sports goods, the effective protection in 1965/66 exceeds the effective subsidy whereas in 1963/64 they are roughly equal in respect of textiles, leather tanning and sports goods but in the case of the footwear and jute textiles industry the effective protection exceed subsidy.

An interesting question to explore is whether a commodity is exported if the rate of effective protection exceeds effective subsidy implying that value of output in export prices (including subsidies) is less than the value of output in domestic prices. It is conceivable that under certain circumstances the manufacturing exporter does not equalize his net returns and profits per unit of sale in both the domestic

and export markets and exports take place even when the effective pro-

tection exceeds the effective subsidy for a number of reasons[1] Firstly,

there is the possibility of price discrimination between the home and

foreign markets[2] In view of the effective separation of the home and

foreign markets, caused by the quantitative restrictions on trade, and

in view of the imperfections of competition in the domestic market and

of a small share in the world market resulting in different elasticities

of demand in the two markets, price discrimination appears both possible

and profitable in many cases. Secondly, the manufacturers may not

maximize profits, and may operate on the basis of conventional profits

margin so that if the conventional profit margin is earned in the export

market, even though the domestic market is more profitable, they are

willing to export. Moreover, the shortrun maximization of profits may

not also be always aggressively pursued in view of a policy of persuasion,

exhortation and pressure, which is pursued by the government to encourage

the manufacturers to enter the export market. Entry into export market

is one of the most effective ways of winning the favor of the government,

who exercise considerable control and regulations and command substantial

patronage in respect of the operation of the private industrial enter-

prises in Pakistan. The export policy of the government has in recent

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1/ If the receipts per unit of sale including export subsidies are equal
in both the markets, then value added in the domestic market would be the
same as the value added in the export market, since the value of inter-
mediate inputs is the same irrespective of the market in which sales takes
place. This would imply that the effective subsidy would be the same as
the effective protection. When the effective protection exceeds the effective
subsidy, the value added in domestic price exceeds value added in export
market and consequently, under the assumptions made in this essay, the
value of output in export price is less than the value of output in domestic
prices.

2/ M. Gilbert, Temporary National Committee, Monograph No. 6, p.70. Par 1,
Government Printing Office, Washington, D.C., 1940.
    C. Kindleberger - International Economies 1968.

years been buttressed by the compulsory fixation of export quotas, non-fulfillment of which involves displeasure of the government. Lastly, there is an additional reason which is closely related to the foregoing argument. This is the existence of considerable differences in efficiency between the individual firms in an industry so that for the more efficient intra marginal firms, though not for marginal firm, the difference between the world price and its cost of production is more than met by the magnitude of the export subsidy. One may argue, however, that if there is no product differentiation and the output of the more efficient firm sells at the same price as that of the least efficient firm, there is no reason why the more efficient firm should surrender the excess profits which it may earn because of its higher efficiency and low cost, by selling in the domestic market rather than abroad. However, given the desire not to pursue aggressively the goal of maximum profits partly due to the practice of charging conventional mark-up over cost and partly owing to the possibility of winning the approbium or patronage of the government for a successful export performance, its willingness and ability to surrender to maximum gains is enhanced considerably by its ability to earn higher profits in the domestic market because of greater efficiency. It is usually the more efficient and the larger firms who engage in the export trade more than their less efficient counterparts.

The above estimates of the effectiv3 subsidy and its comparison with the effective protection are based on the use of undeflated non-traded inputs. In other words, the domestic value of the non-traded inputs i.e., the inputs from construction, gas, electricity and all other services as recorded in the Pakistan input-output table of 1963/64

has been assumed to be equal to their value in world prices. The use
of undeflated non-traded inputs tends to raise the rate of effective
subsidy since the value added in world prices is lower than otherwise
it would be if the opportunity cost of the non-traded inputs is found
to be below their domestic market value. M. Corden suggests that the
non-traded inputs should be included in the value added for the purpose
of estimating the effective protection on the ground that they measure,
along with value added, in a sense the contribution of the economy to
the value of the product and hence may be said to represent the domestic
resource cost of the activity engaged in import substitution or in
export expansion.[1] Accordingly in the following the effective subsidy
is recomputed, including the non-traded inputs in the value added.
The effective protection on this basis has already been calculated in
a separate study.[2]

The general level of the effective subsidy computed on the new
basis is lower than that of the earlier estimate. The frequency distri-
bution of the industries in terms of the magnitude of the effective
subsidy is seen below.[3]

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[1] W.M. Corden. "The Structure of A Tariff System and the Effective Pro-
tective Rate," Journal of Political Economy, June, 1966.

[2] The appropriate treatment of the non-traded inputs in any attempt to
measure the value added in world prices of any economic activity is, how-
ever, not universally agreed upon. One measure of the social opportunity
cost of the non-traded inputs would be to break down the components of the
gross output into (a) intermediate inputs from the other traded sectors,
including imports which can then be evaluated in world price and (b) primary
inputs or value added. It is the evaluation of the latter in world prices,
which poses the problem and an approximate method of solution would be to
assume that the weighted average of the nominal protection to the traded
products measures the excess of the value added in the non-traded sector
over their social opportunity cost. This is on the assumption that the
excess of the rewards in domestic prices of the non-traded inputs over
their social opportunity cost is primarily due to the protection granted
to the traded sectors, which raises the profitability of the domestic
production of the traded commodities and hence raises in turn the demand
for non-traded inputs necessary for the production of the traded commodities.

[3] S.R. Lewis and S.E. Guisinger, op. cit.

Table 4

Effective Subsidy
(Non-traded inputs in Value Added)

Rate of Subsidy	Number of Industries 63/64	65/66	Percentage Distribution of 63/64 Industry	65/66
0 - 24	2	7	4.88	17.95
25 - 50	15	20	36.58	51.28
51 - 75	18	11	43.90	28.20
76 - 100	5	0	12.20	0
101 - 125	0	0	0	0
126 - 150	0	0	0	0
151 - 200	0	0	0	0
200 and above	1	1	2.44	2.56
	41	39	100.00	99.99
Taxation				
0 - 50	1	4		
51 - 100	1	0		
100 - 150	2	4		
151 - 200	1	1		
	46	48		

Eighty-four percent of the industries in 1963/64 and about ninety-seven percent of the industries in 1965/66 receive export subsidies below 75% of the FOB value of exports. Moreover, about forty-four percent of the industries in 1963/64 and twenty-eight percent in 1965/66 receive subsidies between 51% and 75%.

Secondly, during 1963/64 the effective subsidy is lower than the nominal subsidy in all cases but three, i.e., cotton, jute and edible oils and fats which have the effective subsidy higher than the nominal subsidy. During 1965/66 in the two additional industries, i.e., basic metals and metal goods industry, the effective subsidy is lightly higher than the nominal subsidy. During 1963/64 the industries which receive negative effective subsidy (taxation) are silk and artificial silk, one variety of wearing apparel, one branch of non-metallic mineral products industry, transport equipment, and transport products. During 1965/66 even though the same branches of non-metallic minerals, wearing apparel and transport receive additional nominal subsidy, they continue to receive

negative effective subsidy. Excluding edible oils and fats, the highest effective subsidies in 1963/64 are between 80%-82% and are received by some categories of soaps, rubber manufactures and some varieties of cotton textiles. The same commodities receive the highest subsidy in 1965/66 but the range of effective subsidy for the highest category is between 61% and 71%.

The lowest subsidies in 1963/64 are received by one variety of non-metallic minerals and one category of non-electric machinery, with 2% and 24% subsidy respectively. In 1965/66 the lowest subsidies (0-24%) are received by the following industries: sugar (2%), threadball (2%), cork and wood (19%), footwear (22%), one category of non-metallic minerals (8%), one variety of non-electric machinery (3%) and one variety of pens and pencils (18%).

Thirdly, comparing the average rate of export subsidy with the average rate of effective protection in 1963/64 (Appendix) one finds that in ten cases out of thirty cases the effective protection is greater than effective subsidy; in ten cases the two rates are fairly close to each other and in eleven cases, the effective subsidy is greater than the effective protection. This general conclusion is the same, even though the distribution of the individual industries into these three categories is quite different if the measurement of effective subsidy, which excludes non-traded inputs from value added is used. One might say, therefore, that in one third of the cases, the bias of the commercial policy is towards the import substitution whereas in another third of the cases the bias is clearly towards the export expansion. In the rest of the industries the commercial policy appears neutral between the export expansion and the import substitution.

During 1965/66 in twenty two cases the effective protection is greater than effective subsidy and in eight cases, the effective subsidy is greater than the effective protection. Only in one case, the effective subsidy is equal to the effective protection. Thus by 1965/66 the bias of the commercial policy has changed considerably in favor of import substitution as against export expansion. The progress which was achieved during the first two or three years of the 1960's in substantially offsetting the general bias towards import substitution was partly offset by the downward revision of the rates of nominal subsidy, which took place consequent on the reduction of the bonus rates and the reduction in the permissible ceiling on the export performance licensing by 1965/66.

An analysis of the relationship between the nominal and effective subsidy, on the one hand, and that between the effective protection and the effective export subsidy, on the other, in both years (1963/64 and 1965/66) and on the basis of the different treatments of the "non-traded inputs" seems to indicate the following conclusions:

(1) That the nominal export subsidy is generally higher than the effective subsidy. There are industries receiving high nominal export subsidy which receive negative effective export subsidy. The incidence of the effective subsidy in terms of the individual industries is very widely distributed.

(2) The ranking of the industries in terms of the nominal subsidy is widely different from the ranking in terms of the effective subsidy. There are instances of reversal of the ranking, if one or the other measure of subsidy is used. An industry which receives a higher nominal subsidy than another in many cases ends up with a lower effective subsidy.

Since the relative incidence of the nominal subsidy is not related to
the relative incidence of the effective subsidy, and since the nominal
subsidy via the various export incentive schemes cannot determine the
relative incidence of the effective subsidy on the individual exports.
In other words, the differentiation between the individual commodities
in terms of the nominal subsidy on the basis, let us say, of differential
elasticities of supply and demand, home and foreign, may in fact result
in the rates of effective subsidies which are unrelated or even inversely
related to the differential elasticities. This is different from the
evidence so far obtained on the relationship between the nominal and
effective protection in that the ranking of the individual industries
by either the nominal or the effective protection is greatly similar so
that an industry which is granted a relatively high nominal protection
also receives a relatively high effective protection[1]. A comparable link
between the nominal and the effective export subsidies does not exist.
The export policy conceived in terms of nominal subsidy results in a
random distribution of the relative rates of effective subsidy as between
the different industries. This indicates export promotion policy has
to be conceived essentially in terms of effective subsidy.

(3) Pakistan has progressed during 1960's in the direction of
increasing the effective subsidy. But after 1963/64 there is a reduction
in the rates of bonus and of export performance licensing resulting in
a fall in the rate of effective subsidy. While in 1963/64 a great majority
of the manufacturing industries has equal or higher export subsidy than
effective protection in 1965/66 the position is reversed. The bias of
policy as of 1965/66 seems to be in the direction of import substitution

[1] S.R. Lewis and S.E. Guisinger, Measuring Effective Protection, etc.
op. cit.

in spite of a large variety of export incentive schemes. The rationale

of the reduction of the export incentives in 1965/66 as compared with

the previous years is complicated. It was not clear in the minds of the

authorities whether the export incentive scheme was directed more towards

the correction of the overvaluation of exchange or towards the assistance

to infant industry. Since they wanted to differentiate the correction of

overvaluation for different commodities on the basis of differential

elasticities of demand, they often experimented with the various rates of

bonus and performance licensing for individual commodities, with a view to

testing the sensibility of charges to export performance. But the whole sale

reduction 'n 1964/65 of all bonus rates which were 40% and above to 30% was

partly based upon the assumption that the previous rates were excessive

either from the point of view of the correction of overvaluation barring

regard to the elasticity of export demand, or from the assistance required

by the infant industries to face competition abroad. Partly it was based

on the consideration that cost disadvantage of the Pakistani industries

should be offset by an improvement in efficiency through improvement

in labour or management or reduction in costs of power and infrastructure.

There was no evidence on elasticity of demand at the disposal of the

authorities except the actual performance of experts since 1951/60.

However, actual performance of individual exports is a combined result

of differential elasticities of both supply and demand as well as the

pre-existing cost differential between the Pakistani and foreign products.

Moreover, preference for policies to reduce factor prices in an attempt

to reduce industrial costs rather changing the exchange rate for

correcting the imbalance between the domestic costs and prices and

the foreign costs and prices indicates a faith that somehow the existing

exchange rate is the ideal to which the industries must grow up to through a reduction in costs vis-a-vis the rest of the world. Moreover, it was suggested in 1963/64 that one important bottleneck in the way of expansion of exports was the shortage of imported inputs to exapnd output insofar as these inputs were distributed via quantitative restrictions and licensing. The bonus import list was as yet not extended to include a large number of raw materials. It was thought that even to cheapen inputs via export performance licensing is a better way of giving subsidies than export bonus. The extension of the export performance licensing to a larger group of industries, however, did not offset greatly the reduction in the bonus rate. From the point of view of export promotion it made logically no difference whether exporters received a higher percentage of freely saleable licenses (bonus rate) or licenses which had restricted saleability. Exporters could either produce more and export the extra production or divert a larger portion of existing output to the export market, if either alternative is equally profitable. The only difference is that the latter alternative would leave a smaller output for domestic absorption and raise domestic prices.

The changes in the nominal export subsidy emanating from the export bonus and export performance licensing in the three distinct years reflect the fluctuations in the government policy regarding magnitude and pattern of export subsidy, as given below.

Export Subsidy as Percentage of FOB Exports

Rate of Subsidy	Percentage Distribution of Industries		
	1963/64	1965/66	1967/68
0 - 24	1.78	1.61	0
25 - 50	5.36	62.91	3.20
51 - 75	58.93	35.48	62.90
76 - 100	5.36	--	--
101 - 125	28.57	--	--
126 - 150	--	--	--
151 - 200	--	--	--
200 and above			

However, there have been subsequent increases in 1967-68 in the export bonus scheme, involving a rise in the bonus percentage as well as in the premium on the bonus vouchers. However, the increase in the percentage of export bonus has been associated with a rise in the tariff rates and an enlargement of the bonus import list, both of which have the effect of raising the import rate of exchange and hence the degree of nominal protection. The substantial changes in the bonus rates and import items as well as the expansion of list of imports under the bonus scheme have followed the devaluation of the pound in September 1967 in order to offset the adverse effect on Pakistan's trade balance. Even

prior to the increase in import duties and the enlargement of the bonus

list in 1967/68, there was a rise in the degree of nominal protection as

evident from the most recent study of the domestic prices of the imported

goods in 1966/67.[1] The changes in the export and import policy in 1967

have further increased the degree of nominal protection. Given the past

relationship between the nominal and the effective protection, there

has been presumably an increase in the degree of effective protection

along with an increase in effective export subsidy. The relative changes

in their magnitudes cannot be quantified at this stage without further

analysis. It is not only that the effective protection is in the majority

of cases higher than the effective subsidy, but also that there is no

correlation between the ranking of industries by effective protection and

by effective subsidy.

(4) In a certain sense the rate of effective protection is an

index of the domestic cost of saving or earning foreign exchange. If it

is assumed that the domestic intermediate traded inputs in a given activity

can be either exported directly or be used in other export or import

substituting activity, then the opportunity cost of the domestic traded

intermediate inputs is the value of the intermediate inputs in world

prices. Consequently the net foreign exchange earnings from a unit of

export would be the gross earnings minus both the import component of

the unit of export and the value of the domestic traded inputs in world

prices. Therefore, the relevant domestic costs involved in the net foreign

exchange earnings so defined, would be the value added in domestic prices,

since the opportunity costs of the domestic intermediate inputs are

already deducted from gross the earnings of foreign exchange. If the

[1] M. Alamgir, op cit.

costs of the intermediate inputs in domestic prices were to be included
in the costs of earnings of foreign exchange, then the inefficiency of
the supplying industries will be reflected in the costs of earning or
saving foreign exchange by the specific activity or the industry in
question. Given the existing structure of the domestic industries and
the present pattern of the inter-industrial flows, an alternative way
of looking at domestic costs could include the domestic costs of the
intermediate inputs used by the activity engaged in earning or saving
foreign exchange and this is considered later on. If, however, the costs
of the intermediate inputs in would prices are considered, then the
domestic cost of foreign exchange is given by $\frac{Vd}{Vw}$ where Vd is the vlue
added in domestic prices and Vw is the value added in world prices.
This implies that the ranking of the industries in terms of the above
formulation of the domestic cost of foreign exchange would be the same
as the ranking by the degree of effective protection since the rate of
effective protection is equal to $(1 - \frac{Vw}{Vd})$. The higher the degree of
effective protection, the higher would be the domestic resource cost
of earning foreign exchange.

The rates of effective subsidy computed above for 1963/64 were
compared to the effective protection in terms of ranking of industries.
The rank correlation was insignificant implying that the grant of the
export subsidy is not designed to minimize the cost of earning foreign
exchange by granting higher subsidies to those exports which are less
expensive in terms of the domestic resource cost.

That the rates of effective subsidy are not correlated with the
domestic costs of earning foreign exchange is also confirmed by alternative
estimates of the domestic costs of earning foreign exchange. Three

alternative estimates of the domestic costs of foreign exchange are made, all of which include the cost of domestic intermediate inputs in domestic prices. These estimates are: (a) the direct and indirect domestic resource cost, (b) the direct domestic resource cost and (c) the direct and indirect wage costs. The domestic costs do not include (a) the indirect taxes on output and (b) the import duties on the intermediate, imported inputs.[1/] Moreover, all the three estimates of domestic costs are highly correlated; they are also correlated with the effective rate of protection. In other words, whether the domestic intermediate inputs are evaluated in world prices or domestic prices, the ranking of the industries remains unchanged, whichever the index of the domestic costs that is used. The rank correlation coefficient between the effective rate of protection (1963/64) and the direct and indirect resource cost per unit of export is 0.482 and is significant at 5% level of significance. The ranking of industries, however, by effective subsidy in both 1963/64 and 1965/66 and by the direct and indirect domestic resource cost is not correlated. The correlation coefficient was 0.045 and -0.076 and is not significant. Thus, whichever index of the domestic

1/ The direct and indirect estimates are based upon the inverse of the input-output table of 1963/64; this inverse, however, is based on a set of coefficients of the non-traded inputs which in a subsequent examination have been found to be overestimated. Even though the corrected flow coefficients are available, the inverse which has been available for the present study includes the uncorrected or unadjusted value of the non-traded inputs, to see if the ranking of the industries differs if one or the other set of coefficients is used. The ranking of industries, however, by the direct domestic domestic costs inclusive of the non-traded inputs and by the direct domestic cost as adjusted for the non-traded inputs, is very highly positively correlated. This increases confidence in the use of the estimates of the direct and indirect domestic costs based on unadjusted data on the non-traded inputs.

resource cost is used, the rate of effective subsidy is unrelated to
the domestic resource cost of earning foreign exchange.

From the point of view of the success of the export promotion
efforts, it is important to examine not only whether the export subsidies
have been oriented or biased towards the commodities which are less
costly in terms of domestic resources, however defined, but also whether
the subsidies have been successful in promoting exports. There are two
issues here: Firstly whether the manufactured exports of all descriptions
which have received subsidies have responded to the stimulus; all of them
have received subsidies even though at different rates; have they all
grown in response to the subsidies? Secondly, the manufactured goods
have grown at different rates and a moot question is whether the
differential rate of growth of the individual exports is related to the
differential incentives or subsidies. It is the second aspect which is
relevant in the present context judging rationale and the effectiveness
of the differential structure of the export subsidies which are provided
by the present export policies. The period for which the performance
of the various manufactured exports is examined here extends from
1960 to 1967. Prior to this period the manufactured exports besides
the jute and cotton textiles are comparatively insignificant.

An attempt has been made to relate the rates of growth of the
individual exports to the effective subsidies. Both the estimates of
industry wise effective subsidies, one including the non-traded inputs
as part of the value added and the other not including them, have been
correlated with the rates of growth of the individual exports. The
structure of the effective subsidies, estimated by the either method

for both 1963-64 and 1965-66 are not significantly correlated with the

differential rates of growth of the individual exports. The rank cor-

relation coefficient between them in 1963-64 is -0.062 and +0.162

respectively for each type of effective subsidy; they are not statistically

significant. Similarly, the rank correlation coefficients between the

effective subsidies of 1965-66 and the rates of growth of exports are

-0.317 and 0.070 respectively and are not statistically significant.[1]

An alternative way of testing the relationship between the structure

of the effective subsidies and the growth of exports is to relate the

former to the relative importance of the individual exports in the

total manufactured exports. The proportions of the total manufactured

exports constituted by each individual export are estimated for the

two different periods i.e., 1961-62/1963-64 and 1964-65/1966-67. The

relative importance of the individual exports does not significantly

change between the two periods.[2] The structure of the effective subsidies

of 1963-64 is not related to the relative importance of exports either

during 1961-62/1963-64 or during 1964/65-1966/67. Neither is the relative

importance of exports during 1964-65/1966-67 related to the structure of

effective subsidies in 1965-66. (The results of detailed statistical tests

are given in the appendix).

1/ The first coefficient relates to effective subsidies include non-traded
inputs in intermediate inputs and the second coefficient includes them in
the value added. It is worth mentioning that the two types of effective
subsidies are correlated between themselves both in 1963-64 and in 1965-66
The rank correlation coefficients in 1963-64 and 1965-66 are respectively
0 464 and 0.669. They are statistically significant. Moreover, the rank
correlation between the effective subsidies of two different periods are
significant. This is true of the two formulations of the effective
subsidies. For first type of effective subsidy the rank correlation
is 0.670 and for the second type it is 0.909.

2. The rank correlation between the proportions of individual exports
to total exports in the two successive periods is as high as 0.738 and
is statistically significant.

Thus, on the basis of the available evidence the structure of
subsidies does not seem to be related to the differential performance
of individual exports. However, the above findings or tests are not
conclusive. Obviously there are other factors besides the differential
export subsidies which may contribute to the differential behaviour of
individual exports. It is necessary to isolate the influence of other
factors such as changes in world demand or world trade, domestic supply
situations and relative changes in domestic prices etc. before one can
pass final judgement on the influence of the structure of subsidies on
the differential performance of exports. Moreover, one particular limitation
of data is worth repeating. The classification of exports is not
detailed enough to correspond to the differential subsidies so that
averages have to be used; this is specially relevant for the export
performance licensing which is provided for the refined subdivisions of
industry or commodity groups, whereas the classification of exports
at that level of dissegragation is not available. For the purposes of
the present analysis each industry is considered twice; once on the
assumption that the whole industry receives export performance licensing
even though a part of it receives it and next, on the assumption that
it receives no performance licensing. These two rates of subsidy are
then averaged to derive one estimate for the industry. To the extent
that items with performance licensing vary widely in importance vis-a-vis
to the total exports of the industry, this method would overestimate
subsidy in one case and underestimate in another. In other words, in a
case with very few items with export performance licensing this leads to
an overestimate of subsidy and in a case with a large number of items with
performance licensing this leads to an underestimate. Hopefully the

assumption is made that the bias in either direction would be random and not systematic so that ranking of industries would be undisturbed.

In spite of all these limitations, however, it stands to reason that if the differential structure of subsidies were of overwhelming importance in determining the differential performance of the individual exports, the exercise or the test undertaken here would have indicated this influence.

One important factor, besides the export subsidies, which affect the actual perf rmance of the exports is the relative magnitude of the effective subsidy vis-a-vis the effective rate of protection. As mentioned earlier the relative strength of the former vis-a-vis the latter determines the relative attraction or profitability of producing for the export market as against production for the domestic market. If the degree of effective protection measures the relative inefficiency of the domestic production vis-a-vis the world prices, effective export subsidy measures the extent to which the latter offsets the costs disadvantage and enables the exporter to c mpete abroad. Following this line of reasoning, an attempt is made to test how the export performance is related to the ratio of the effective protection to effective subsidy. One would expect a negative correlation between this ratio and the export performance The ratio of effective protection to effective subsidy does not appear to be related to the export performance of the individual exporter as measured by the relative importance of individual exports in total exports in any of the formulations of the effective subsidy in any of the years considered Nor is the ratio of the effective protection to effective subsidy related to the rate of growth of exports. The rank correlation coefficient is low and statistically insignificant. However,

the rank correlation coefficient is consistently positive in all the cases and is higher than what it is if the effective subsidy alone and the export performance are correlated.[1]

The differential performance of exports, given the structure of subsidies, is to a great extent a function of the differential elasticities of domestic supply and of foreign demand for exports. Quantitative evidence on the differential supply and demand elasticities of individual exports is not available to enable an analysis along these lines.[2] Some broad generalizations may be in order about elasticities of export demand. Insofar as Pakistan supplies, except in the case of jute goods, a very small share of the world market in the case of most of the manufactured exports she is likely to face a highly elastic foreign demand for her manufactured exports. But this presumption would be true without qualification only if there was no market imperfection in the

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1/ The correlation between the structure of nominal subsidy in 1963-64 and the differential rates of growth of exports (1966-67) is also low and insignificant. However, the rates of nominal subsidy in 1963-64 are negatively correlated with the relative importance of the different individual exports during 1961-62/1963-64 and the correlation is significant, indicating that the higher rates of nominal subsidy are provided to the relatively unimportant earners of foreign exchange. This is also true of the relationship between the rates of nominal subsidy in 1965-66 and the relative importance of exports during 1964/65-1966/67 i e., they are inversely related. However, the strength of this relationship in 1965-66 is considerably weaker and is not significant statistically. An attempt is also made to test whether the direct and indirect domestic resource cost is related to the export performance of the individual industries. There appears to be no correlation indicating that Pakistan has not achieved the expansion of her foreign exchange earnings by greater emphasis on those which cost less in terms of domestic resources. Since the direct and indirect domestic resources cost is highly correlated with the effective rate of protection, the differential growth performance of different industries is also not related to the domestic resource cost as measured by the effective rate of protection.

2/ It is also important to remember that the relatively very high rates of growth of many of the minor exports is partly a statistical phenomenon because of the very low initial level of their exports in the early sixties. The rate of growth of exports during 1960-61/1966-67 is negatively correlated with their relative importance during 1961/62-1963/64. The rank correlation coefficient is -0 650 and is statistically highly significant.

international trade. Consumer preference for the established brand names

in world trade and the existence of considerable product differentiation

coupled with the differences in the success of salesmanship in a world of

imperfect knowledge tend to reduce the elasticity of export demand with

respect to price. Moreover, because of the differences in quality and in

the absence of adequate standardization the manufactured exports of an

underdeveloped country like Pakistan in fact face a different market

compared with the high quality, standardized manufactured exports of

the developed countries. To some extent price needs to be lower than

those of the competing products already established in the market in

order partly to break down the barriers of consumer's preference and

partly to compensate for the low quality and the inadequate standardization

of the products. In addition, a country like Pakistan does not sell, so

to speak, in a world market as theoretically conceived. The world market

for the Pakistani exporter is really the traditional market with which

the trade and communication links have been in existence since the earlier

times and with the market and demand conditions of which the exporters

are familiar. This is evident from an examination of the direction of

trade over the years; in the early years export trade was concentrated

in the direction of those countries with which the trading relations

dated from the colonial days as part of the British Imperial preference

system. New markets subsequently have been cultivated by the government,

consuler efforts and trade agreements on the one hand, and through the

exploration of new markets abroad by the enterprising exporter, on the

other.

A recent estimate of the elasticity of substitution between the

Pakistan jute bags and the jute bags from the competing suppliers in the

United Kingdom market puts it at 13.242.[1] Considering that the share

of the competing suppliers in the U.K. market during 1955-64 is about

88%, the elasticity of demand comes to about 11.00 whereas the elasticity

of substitution of cotton fabrics with the supplies of the competing

exporter in the U.S. market is about -6.377 (1959-64), which yields an

elasticity of export demand of about 5, the competing suppliers' share

being 87% of the U.S. market [2] These two manufactured exports are the

most important manufactured exports of Pakistan. The studies of

elasticities of demand for other countries tend to show that the

elasticities of demand for textile products, to which the major exports

of Pakistan belong are usually smaller than that for the other products

such as chemicals, basic metals, metal products and machinery etc.,

even though the individual products within each group may occasionally

have very low elasticity.[3] Judged by this criterion, Pakistan s

exports may be considered in terms of two broad groups, i.e., textile

and non-textile manufactured goods which coincide with the distinction

1/ N.Alam. The Exchange Rate Management in Pakistan. Unpublished Doctoral Dissertation. Yale University, 1968.
2/ The derivation of elasticity of demand from the elasticity of substitution is given in A.C. Harberger, "Some Evidence on International Price Mechanism," The Journal of Political Economy, December, 1957, pp. 506-522.
3/ Harberger quotes in the study mentioned above the elasticities of substitution between individual groups of the U.S. and U.K. exports, which indicate that the elasticity for cotton cloth and yarn are generally lower than the other categories of manufactured exports, even though there are exceptions. Similarly in a study of price elasticity of the Japanese exports textiles and manufactured food stuffs are found to have generally lower elasticities than chemicals, metals and miscellaneous manufactures. Machinery and equipment, however, tend to have lower elasticities but these as yet are insignificant proportions of Pakistan's manufactured exports. Y. Shinkai, "Price Elasticities of the Japanees exports: A Cross Section Study."
The Review of Economics and Statistics, June, 1968 pp. 268-273 also
M.E. Kreinan, "Price Elasticities in International Trade," Review of Economics and Statistics, November 1967, pp. 510-516.

between the less and the more demand elastic exports. Viewed in this light, the nominal export subsidies are higher for the more elastic export than for the less elastic exports i.e. textile groups of exports. However, the correspondence breaks down once the effective subsidies rather than the nominal subsidies are considered. The commodities which are presumed to have higher elasticities of demand than the textiles group have not only in many cases lower effective subsidies but also in a few instances have negative subsidies or taxation.

Different exports not only have different demand elasticities but also have different supply elasticities so that a higher subsidy is suggested for exports in more elastic supply. Given the structure of demand elasticities, a high supply elasticity ensures a faster increase in the exports and in the foreign exchange earnings. In the absence of any quantitative evidence on the differential elasticities of different manufactured exports in Pakistan, one can only make some broad judgements. In view of the persistent trade gap and the scarcity of imported inputs, industries which are relatively more import intensive have a greater difficulty in increasing their supply in response to a rise in the price of their output than the industries which are based on the domestic raw materials. To the extent that the domestic raw materials are exportable, the inelasticity of the aggregate supply of the domestic raw materials, if any, can be partly relieved by their diversion from the domestic to the export market as has happened in 1950's in Pakistan. The jute, cotton and woolen textiles and the leather products are based on the domestic raw materials and enjoy a greater elasticity of supply than the import based industries. However, to the extent that the elasticity of supply of exports are a function of the domestic supply elasticity

and the domestic demand elasticity, a more elastic domestic demand can offset the relative inelasticity of domestic supply; whether the domestic demand elasticity of the import based industry is sufficiently great to offset the relatively inelastic supply so as to eventually yield an elasticity of export supply which is similar to the domestic resource based industries is an empirical question the answer to which at this stage is unknown. At one extreme if we assume that the export supply elasticities are the same for all manufactured exports then the differentiations between the manufactured exports in respect of elasticities would mainly turn upon the differential demand elasticities.

The discussion of elasticity can be related to the earlier discussion about the differential resource cost of earning foreign exchange. An export with a higher average domestic resource cost may be given a higher subsidy, if the marginal cost is lower than average and vice versa; at the same time it can also be given higher subsidy if it faces a greater elasticity of demand so that it has a higher marginal foreign exchange earning relative to its average earning compared to an export with a lower elasticity of demand. There is an additional reason why an industry with high domestic resource cost can be extended higher export subsidy, if the high cost is the cost of infancy. If one assumes that in the case of Pakistan such industries as the cotton and jute textiles and the leather products are more "grown up"/than the than the rest, latter would deserve a higher subsidy. But as is seen earlier the structure of effective subsidy in general does not follow this pattern, though the structure of nominal subsidy seems in general to conform to this pattern. It appears that the newer manufactures in Pakistan with presumably a greater elasticity of demand and higher costs of infancy

are provided with higher nominal subsidies. This relationship, however,
breaks down when one moves from the structure of the nominal subsidies
to that of the effective subsidy. If the effective subsidy is to be
related to the assumptions made about the domestic resource costs of
the different manufactured exports, duly modified by the considierations
of elasticity and infancy, a different structure of nominal subsidies is
warranted. In the first instance the effective subsidies for the newer
manufactures have to be systematically higher than that for the textile
and leather products. In other words, the structure of effective subsidy
needs to be highly correlated with the present structure of nominal
subsidy.

The foregoing discussion refers to the structure of export
subsidies exclusively in the context of the/manufactured goods and the main
finding was that the differentiation between commodities was haphazard;
but once the comparison is extended to the entire manufacturing sector,
on the one hand, and the agricultural sector, on the other, the bias
of the export policy against the agricultural sector is clear. The
effective rates of subsidies and taxation of the principal agricultural
commodities is seen below.[1]

Table 5

Effective Rate of Taxation or Subsidy

	1963/64	1965/66
Rice (East)	-.05	-.04
Rice (West)	.30	-.03
Wheat (West)	-.10	-.09
Jute	-.30	-.20
Cotton (West)	-.15	-.09
Tea (East)	-.19	-.19
All other agriculture	.29	.21

[1] The effective subsidy to all other agriculture is estimated on the basis
of application of the bonus rate which relates to the minor primary exports,
to the total of the rest of agriculture, even though there are individual
items in this category like wook and hides and skins which enjoy no subsidy
or even suffer from effective taxation.

From the above it appears that jute and tea bear the heaviest taxation. The elasticity of demand of raw jute is assumed to be low and hence the justification for the taxation. There has been a decline in the degree of effective taxation in 1965/66 as compared with 1963/64. In the case of rice there is a decline to 3% effective taxation from a positive subsidy of 30%. The effective taxation of tea continues unchanged at a relatively high level, the main purpose in this case is to keep down the domestic prices by discouraging exports in the interest of domestic consumption which is rapidly increasing. In view of the domestic demand being price elastic, export supply is price elastic but only at the expense of domestic consumption. The elasticity of the supply of tea is assumed to be low. The elasticity of export demand for fine rice exported from West Pakistan is estimated to be very high i.e., 3.14[1/] and the elasticity of demand for cotton in the world trade of which Pakistan has a very small share is also expected to be considerable. Similarly, the elasticity of export demand for raw material in the U.S. market is estimated to be 14.5 whereas that of Pakistani skins in the U.S. is estimated to be 2.3 during 1955-64. But in the same period, the elasticity of demand for cow hides in the Indian market is found to be very low i.e., .096.[2/] In view of the observed cases of the primary exports from Pakistan, which are highly price elastic in demand, the continuation of the effective taxation or zero subsidy can be justified only by a suggestion of inelasticity of export supply. The elasticity of the domestic supply of many of the agricultural commodities under

1/ M. Hussain, "Export Potential of Fine Rice From Pakistan," The Pakistan Development Review, No. 4, Vol. IV Winter 1964, p. 679

2/ N.Alam. The Exchange Rate Management in Pakistan, op cit.

review is low in the shortrun but then the elasticity of their domestic

demand derived from the demand for the finished products is likely to be

high so that the export supply elasticity is likely to be higher than

otherwise would be the case. The provision of the export subsidy on the

face of the inelastic supply would not only provide excess rents to the

landowners or high income to the farmer, but also create inflationary

pressure. So long as the differential in terms of supply elasticity

between the agricultural and manufactured exports remains substantial,

and insofar as the former provides inputs to the latter, an offsetting

increase in the effective subsidy to the manufacturing sector would be

necessary to offset the rising cost of the domestic agricultural inputs

in the manufacturing sector.

Thus while a distinction between the agricultural and manufactured

exports in terms of the degree of effective subsidy is admissble, an

effective taxation of agricultural exports which discourages the domestic

production does not appear to be justifiable. The grant of a positive

effective subsidy to such agricultural exports as rice, jute and cotton

is the only way to increase agricultural exports or to prevent a decline

in Pakistan's share in world trade consistently with the need to raise

the returns to the agriculturalists to induce them to expand agricultural

supply in the long run. The cash crops, i.e., export crops, require

such subsidies especially now that the intensive drive for the increased

domestic production for food may divert resources away from the export

crops to the food crops are recipients of substantial subsidies and price

incentives towards production. The recent inclusion of raw wool under

the bonus scheme at the rate of 20% bonus is a step in the right

direction.

A legitimate question may well be asked whether there are any circumstances
in which the effective rate of protection or subsidy for any industry or
for the economy as a whole should be higher for imports than for exports.
The need for infant industry protection or for compensating the divergence
between social and private cost, suggests, as a second best policy,
departures from a unified effective rate for imports in the cases
where an infant industry or the divergence between social and private
cost can be identified. If a higher effective rate for the particular
sectors is in order, this should, however, hold true for both imports
and exports and such a policy is consistent with the stimulation of
infant industry as well as of those activities whose social benefit
exceeds private benefit. The maintenance of a lower effective rate
for exports in these sectors would limit the size of the market for
them or would surrender the opportunities which may exist in these
sectors for the exploitation of economies of scale. There appears to
be no case to discriminate between the domestic and foreign sales of
these industries or any other industry on economic grounds. Thus there
seems to be no economic justification for the effective protective
rate for imports to be higher than the effective export subsidy for
the same industry, even though the effective import rate for some
industries can be justifiably higher than the effective protective
as well as the effective export subsidy rate for the other industries
for the above-mentioned reasons. There are additional reasons why the
effective protective rate can be differentiated between commodities;
they can be differentiated for (a) attracting foreign investment, when
the gains from foreign direct investment in certain lines exceed the
loss from protection and if there is no alternative domestic policy to

attract the same volume of foreign investment, (b) for using tariffs
or quotas as weapons for exacting concessions in trade negotiations
with a view to achieving a subsequent reduction of the trade restrictions
all around, including the country concerned, (c) for exploiting the monopoly
power in trade and (d) in conducting trade negotiations with trading blocs,
markets of which are effectively separated, as in the case of trade with
the Soviet Bloc.[1] However, in none of these instances there exists a
case for discriminating against the export market in favour of the
domestic market. In each of these cases, the tariff or quota restrictions
should be combined with the equivalent export subsidies. The advantages
of competitive efficiency arising from exposure to world market, more
efficient technology and selling methods of the firms abroad, and
economies of scale beyond the narrow confines of the domestic market,
can be combined with the above advantages of the protective policy.

It is difficult to make out a case for higher effective rate
for imports than for exports, excepting where the social evaluation
of risks and uncertainties of selling abroad as compared to selling
in the domestic market depress the returns from selling abroad below
that of selling in the domestic market, even though the market price
per unit of sale is the same in both the markets. The risks of war,
political changes in the trading countries leading to changes in the
latter's commercial policy, or fluctuations in employment and income
abroad leading to changes in export sales, or the dislocation of
international transportation and communication facilities leading

[1] J. Bhagwati, The Theory and Practice of Commercial Policy: Departures
from Unified Exchange Rates. Paper in International Finance, No. 8
January, 1968. Princeton University, New Jersey, U.S.A. pp. 11-14.

to disruption of export markets (i.e. closure of Suez Canal,) etc. may

depress the social evaluation of returns from export sales and may suggest

higher effective rate for imports than for exports. On the other hand,

if the social evaluation of risks of selling abroad is not higher than

that of selling at home, but if there is a divergence between the private

and social evaluation of risks of selling abroad in the sense that the

former overestimates the risks, the situation is reversed and instead

of a higher import rate, a higher export rate is warranted. There are

in fact two cases where one may argue for an effective export rate

higher than the effective import rate; they arise if (a) the private

costs of cultivating foreign market are in excess of social costs

since the pioneering firm engaged in exporting is not compensated

correspondingly for its costs owing to the rival, follow up firms

sharing the market and (b) if the private returns from exports is

less than the social gain from receiving foreign aid at rates and levels

above what otherwise would be available, since the successful export

performance of a country is often used as the basis by the aid giver

for a larger amount of concessional aid.[1]/

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[1]/ Ibid.

A P P E N D I X - A

y   =   Proportion of export to output 1963/64

X_1 =   Nominal subsidy 1963/64

X_2 =   "   "   1965/66

X_3 =   Effective subsidy 1963/64 Undeflated non-traded inputs

X_4 =   "   "   1965/66   "   "   "

X_5 =   "   "   1963/64 Nontraded inputs in Value Added

X_6 =   "   "   1965/66   "   "   "   "   "

$\log y$ = -6.84   - 4.19 $\log X_1$ R^2 = 0.134   N = 26
            (T= -1.93)

       = -7.94   - 4.80 $\log X_2$ R^2 = 0.190
            (T= -2.38)

       = -3.63   - 0.35 $\log X_3$ R^2 = 0.02
            (T= -0.54)

       = -3.36   + 1.22 $\log X_4$ R^2 = 0.008
            (T= 0.386)

       = -4.11   - 1.22 $\log X_5$ R^2 = 0.170
            (T= -1.88)

       = -3.97   - 0.53 $\log X_6$ R^2 = 0.017
            (T= -0.54)