STRUCTURAL CHANGES IN TURKISH NATIONAL INCOME: 1950–60

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THIS paper undertakes a brief survey and analysis of the changes in relative sectoral prices in the Turkish economy and in the composition of its national output over the period 1950–60. Though the formal growth models in economic theory assume stability in the composition of national output as well as relative prices of goods as *per capita* real income rises, it is a well-established fact that the patterns of production and relative prices undergo considerable changes in the course of economic development. It is noteworthy that even if no rigid uniformity is observed, both cross-sectional and historical studies reveal striking similarities in the structural patterns of economic change.[2] The first part of the paper gives a brief description of the changes in the composition of Turkish national output and relative sectoral prices with a view to comparing the structural changes in the Turkish economy and the expected developments. The second part of the paper is aimed at isolating some specific factors which seem to have influenced the observed pattern of change in the major sectors of the Turkish economy.

It must be admitted that a period of ten years is too short to permit an analysis of structural change in the economy. Yet the non-availability of national income figures and other data required for economic analysis inevitably confined this survey to a fairly short period. Nevertheless, taking account of the fact that the long-run consists of different short-runs, even a period so short as ten years may be helpful in the explanation of expected developments over a long time span.

I. STRUCTURAL CHANGE AT THE GOODS LEVEL

Structural change at the goods level signifies a change both in the composition of national output and in the relative prices of goods in the course of economic development. This section will survey first relative sectoral growth rates in real terms and

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[2] E. M. Ojala, *Agriculture and Economic Progress*, London, 1952. Colin Clark, *The Conditions of Economic Progress*, London, 1951. H. B. Chenery, 'Structural Patterns of Changes', *American Economic Review*, February 1960.

in the following paragraphs changes in relative sectoral prices.

Change in Real Output. The major changes in the composition of Turkish national output in the 1950–60 decade are characterized by a decline in the relative share of agriculture, an increase in that of transportation and services[1] and no change in the share of industry as a broad category. The decline in the relative share of agriculture during a period of economic growth conforms to other empirical findings but the constancy observed in the relative share of industry constitutes a sharp contrast to the expected pattern of change. Table I below gives the relative shares of the major sectors in Turkish national income.

TABLE I

Relative Shares of Major Sectors in Turkish National Income
(at 1948 factor costs)

Year	Agriculture	Industry	Trans-portation	Services	Total
1950	50·0	16·1	5·4	28·5	100
1951	52·3	15·0	5·1	27·6	100
1952	51·3	15·5	5·7	27·5	100
1953	50·6	16·5	5·5	27·4	100
1954	44·9	17·7	7·3	30·1	100
1955	45·4	17·2	7·5	29·9	100
1956	46·3	16·9	7·3	29·5	100
1957	44·7	17·9	7·3	30·1	100
1958	46·9	16·7	6·5	29·9	100
1959	44·9	16·7	7·5	30·9	100
1960	43·9	16·8	7·9	31·4	100

Source: *National Income of Turkey*, 1948–58, No. 391, and 1948, 1953–60, No. 420, Ankara, I.U.M.

However, the broad category classified as industry in Table I conceals substantially different trends followed by the different sub-categories, i.e. public utilities such as electricity, water and gas, construction industry, mining and manufacturing industry. A further break-down of the industrial sector into these four sub-categories shows that the most rapid growth has occured in public utilities, followed by the construction industry; the manufacturing industry has grown the least.

Thus, the industrial sector has not only been growing much

[1] Services cover all the remaining items of Turkish national income, i.e. trade, financial institutions, private professions and services, revenue from residential dwellings and Government services.

more slowly as compared with transportation and services, but amongst its sub-categories the most rapidly growing have been again those producing domestically-consumed services. In Table II below, the indices of net value added in constant prices in the agricultural sector and the components of the industrial sector can be seen.

TABLE II

Indices of Net Value Added in Agriculture and Industry (at 1948 factor costs)

Year	Agriculture	Industry			
		Mining	Manu-facturing	Construction	Electricity, gas, water
1948	100·0	100·0	100·0	100·0	100·0
1950	97·0	123·1	108·0	162·2	118·0
1951	117·1	153·2	115·0	168·7	132·0
1952	124·7	181·8	122·9	203·5	153·5
1953	136·5	200·3	135·0	282·2	183·0
1954	109·6	182·2	143·4	233·7	217·5
1955	119·5	191·6	148·2	245·5	256·5
1956	129·9	227·1	155·1	249·0	295·5
1957	133·2	247·3	165·6	308·2	337·5
1958	156·5[1]	230·1	174·4	331·3	385·0
1959	156·0	213·4	181·4	350·1	431·5
1960	157·2	215·1	188·9	352·6	479·0

Source: see Table I

[1] The increase in agricultural output is attributable to revised methods of estimation. Estimation methods have not been revised for other sectors.

Services, which as a broad category cover a wide variety of productive sectors, have shown the highest growth rate. This increase suggests that a greater division of labour has been possible and has led to a widening of the domestic market and a creation of external economies in the remaining sectors of the economy. However, though one would expect a greater increase in agriculture and manufacturing industry in consequence of this development, this has not been the case. The following table (Table III) gives the relative shares of the productive sectors classified under services.

Change in Relative Prices. It is interesting to note that changes in relative prices in various sectors over the same decade indicate the importance of supply elasticities in the course of

TABLE III

Relative Share of Sectors Classified as 'Services' (at 1948 factor costs)

Year	Trade	Financial institutions	Private professions and services	Ownership of dwellings	Government services
1950	10·5	1·7	4·1	2·6	9·8
1951	10·7	1·6	4·0	2·5	9·0
1952	10·6	1·7	4·1	2·4	8·9
1953	10·4	1·8	3·8	2·4	9·2
1954	9·7	2·4	4·5	2·8	10·9
1955	9·8	2·4	5·1	2·9	9·9
1956	9·9	2·4	4·9	3·1	9·4
1957	9·7	2·4	4·9	3·5	9·8
1958	9·9	2·6	4·8	3·5	9·3
1959	10·4	2·6	4·6	3·9	9·6
1960	10·5	2·6	4·5	4·3	9·7

Source: see Table I

economic development. The shifts in relative prices have been inversely related to the growth rates of major sectors, i.e. the most rapidly growing sectors have shown the lowest price increases in general, while prices in slowly growing sectors have increased more rapidly. However, this does not necessarily mean that the importance of a rise in demand or demand elasticity can be ignored.

The most rapidly growing sectors, i.e. transportation and services, have had much slower increases in prices than industry. In fact, the terms of trade have moved considerably in favour of the industrial sector after the abolition of trade liberalization in 1953. By the end of the period under review the gain in terms of trade of this sector was of the order of 44 per cent. On the other hand, a break-down of the industrial sector into its subcategories reveals that the most rapid price increase took place in the manufacturing industry, i.e. the least rapidly growing sub-sector.

In studies on economic growth, the relative rise in the share of manufacturing industry *pari passu* with a rise in *per capita* income is generally explained by a change in comparative advantage as capital accumulation speeds up and enables the country to substitute domestically produced products for imports, by the high income elasticity of demand for final manufactured goods and by the high demand for intermediate goods

of the industrial sector. Also, manufacturing industry along with the highest growth rate is found to have relatively greater rises in prices.[1] Thus, the rapid rise in demand and high income elasticity for the products of this industry as well as its supply elasticity favourably affect the growth of the sector.

In view of the expected demand developments and low supply elasticity[2] as revealed in the Turkish case, the gain in terms of trade of the manufacturing sector was meagre. However, the degree of inelasticity – indicated by the wide shift in relative prices in its favour – of this important sector necessitates further examination of the problem. Table IV shows the implicit price indices by major sectors and for manufacturing industry separately.

TABLE IV

Implicit Price Indices in Turkish National Income
(1948 = 100)

Year	Agriculture	Industry (all sub-sectors)	Manu-facturing	Trans-portation	Services
1950	98·4	96	101	97	100
1951	101·2	103	113	104	101
1952	105·5	114	125	121	109
1953	112·6	120	143	123	117
1954	115·2	152	168	123	137
1955	136·0	172	185	134	155
1956	148·9	205	231	151	158
1957	193·0	233	279	173	168
1958	217·2	281	336	186	187
1959	253·0	336	374	228	227
1960	259·0	359	381	252	229

(This table has been computed from the national income figures in constant and current prices. See *National Income of Turkey*, op. cit.)

As regards relative price changes, the agricultural sector has not followed a uniform trend. It has either lagged behind or led other sectors throughout the whole period. It displays two divergent trends with a sharp turn after 1956. In fact, although

[1] H. B. Chenery, op. cit.

[2] The term 'supply elasticity' is used here and in the following sections in a rather loose sense to denote the relationship between output growth, which presumably covers shifts in the supply curve, and prices, which reflect the effects of shifts in the supply curve as well as the demand curve. It will be seen in the following section that both sectoral output growth and relative prices have been largely influenced by exogenous factors which made the use of the term 'supply elasticity' inappropriate in this context. Thus the term must be interpreted not in its usual formal sense but in the sense attributed to it to suit our purposes.

between 1950-7 the yearly price increases of agricultural products have been on the average 7·5 per cent, in the latter part of the period, the rate of increase has doubled to 15 per cent. During the first part of the period, agricultural prices have lagged behind all others, while in the latter half of the period, aside from industrial prices, the reverse has been true.

It is also interesting to note that price increases seem to have accelerated in all sectors except services, after the devaluation of the Turkish currency in 1958. The yearly price increases recorded until 1958 have been on the average 21 per cent for industry and 10 per cent for transportation and services. After the currency depreciation and other policy measures which accompanied the stabilization policy in 1958, price increases have gained momentum although the rate of product growth has declined, being 42 per cent yearly for industry and 12 per cent for transportation. The only sector with a declining rate of price increases is services; in this case, the yearly increase has fallen from 10 to 7 per cent.

This short survey of relative price changes reveals that during the decade under review there have been wide shifts in relative sector prices, and that in each case they have been closely related to the growth rate of the sector. Transportation and services have had a high supply elasticity, while the reverse has been true for manufacturing industry. Agriculture has been able to maintain a high elasticity in the earlier part of the period although it lost much of it in the latter part.

II. SPECIFIC INFLUENCES ON SUPPLY ELASTICITY

The observed supply elasticity of major sectors of the Turkish economy can be partly explained in terms of specific factors which have influenced the sector growth rates. This section will discuss the importance of such factors with a view to indicating some analytical and policy implications.

Distribution Pattern of Investment. Like most of the underdeveloped countries of today which have embarked upon a programme of economic development, the public sector in Turkey contributes heavily to output and investment. Despite the liberal programme of the party in power throughout the whole decade under review, the public sector has grown in importance as compared to the previous periods.

Private investments in the economy are motivated invariably

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by profit expectations net of a risk premium, while public investments are directed to an enhancement of social utility rather than being motivated by direct profitability. In the case of State economic enterprises, it is no longer possible to distinguish the aim so clearly, though they might be expected to aim, by and large, at the latter rather than the former.

The rapid growth rate observed in public utilities and transportation, is in fact attributable to the emphasis given by the political party then in power, to the creation of external economies rather than direct production. Moreover, the increasing rate of population growth which Turkey experienced during the period under review, along with a process of rapid urbanization, was responsible for the increasing proportion of public investment. Apart from 1951 and 1952 when private investment showed a sharp increase, the public sector has steadily absorbed a rising proportion of the economy's resources as can be seen from the following table (Table V).

TABLE V

Distribution of Investments between the Public and Private Sectors

Year	Private sector %	State economic enterprises %	Public sector %	Total
1950	57	15	28	100
1951	61	13	26	100
1952	62	16	22	100
1953	56	17	27	100
1954	59	16	25	100
1955	44	27	29	100
1956	50	20	30	100
1957	43	22	35	100
1958	36	24	40	100
1959	38	20	42	100

Source: O. Okyar, 'Yatirimlarin Sektorler Itibarile Dagilisi', Forum I Sunbat 1962.

The sharp decline in the share of the private sector after 1954, when inflationary price increases and foreign exchange difficulties upset the relatively stable conditions of the previous period, is specially striking. It is also worthy of note that a relatively higher proportion of private investment has been allocated to private residential dwellings concomitantly with the

decline in private investment. Hence, not only has private investment lost in importance after 1954 but at the same time it has been diverted to a non-productive form of investment, rather than adding to the productive capital stock of the economy.

To follow more closely the effect of the distribution of investment on the rate of output growth in different sectors, data on the distribution of investment by sectors, for the whole period are required. As yet, however, these are not available. Nevertheless, on the basis of data pertaining to 1948–55 the changes in the distribution of investment can be analysed. Table VI indicates that, during the first half of the period, on an average 23 per cent of total investment (public plus private) was allocated to agriculture and manufacturing industry. These two sectors contributed more than half of the national income. On the other hand, 77 per cent of the total investment was allocated to sectors contributing less than half of the national income.

TABLE VI

Percentage Distribution of Investment by Productive Sectors, 1948–55

Sector	1948	1949	1950	1951	1952	1953	1954	1955	Average for the period
Agriculture	9·7	11·2	13·5	16·0	17·3	10·6	8·5	8·4	11·3
Manufacturing	8·7	10·9	10·3	11·0	12·3	11·4	13·1	13·2	11·9
Construction	0·7	0·9	1·4	1·2	1·3	1·6	1·2	1·2	1·2
Mining and energy	5·3	6·9	7·2	5·2	6·0	6·5	7·4	7·4	6·7
Trade	4·2	7·7	6·8	6·0	6·0	7·8	10·0	8·2	7·6
Transportation	26·6	23·9	24·5	27·5	24·1	28·3	22·2	20·9	24·2
Residential dwellings	30·3	26·5	26·1	24·5	24·5	25·1	30·6	33·3	28·3
Professional services	14·5	12·0	10·2	8·6	8·5	8·5	7·0	7·4	8·8
Total	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

Source: Dr. K. Gurtan, *Turkiyede Yatirimlar*, Table XIX, p. 148, Istanbul, 1959.

Table VI also shows that residential dwellings and trade have absorbed a significant and rising proportion of private investments. As the private sector is dominant in these two activities one would not be at fault in assuming that they have come to occupy an increasingly important place in private investments. On the other hand, in view of the fact that the State contributes an overwhelming proportion of investment in mining, energy and transportation, it can be presumed that these have occupied

a significant position in State investments in the latter half of the period as well.[1]

Agriculture contributed 40 to 50 per cent of national income during the 1950–60 decade. An increasing proportion of investment had gone to this sector until 1953 when agricultural output showed substantial increases. As private investments are of considerable importance in this sector of the economy, presumably the decline in this sector has been accompanied by a rise in investment in trade and residential dwellings. With the steady decline in its share of total investment and the continuance of conditions which favoured the rise of private investment in trade and residential dwellings, it can be expected that agriculture further lost ground in its share of total investment in the latter half of the period under review.

In contrast to agriculture, residential dwellings and trade (dominated by the private sector) and transportation, mining and power (dominated by the public sector), private and public enterprises compete in manufacturing industry. The share of investment allocated to this sector shows a rise after 1954 when, as indicated previously, stable economic conditions were upset. However, this rise was temporary. The import possibilities have had an important bearing on the change of the investment rate in manufacturing industry. This will be discussed in the section dealing with the effects of foreign trade on investment.

This survey of the distribution pattern of investment during the 1950–60 period reveals that in private as well as public investment the directly productive sectors, i.e. agriculture and manufacturing industry, have been neglected in favour of the indirectly productive sectors. Hence, one may presume that the different growth rates observed in various sectors of the economy have been closely related to the particular distribution of public as well as private investments.

It was previously indicated that the public sector and, to a certain extent, the State economic enterprises aim by and large at the creation of external economies and enhancement of social utility. In view of this special feature, it can be assumed that the allocation of public investments occurs outside the price mechanism in contrast to private investment where the rate of

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[1] The rise in the relative share of 'ownership of dwellings' (Table III), in transportation (Table I), and in electricity, gas and water after 1955 in national income supports this argument.

profitability is the guide in investment allocation. Despite considerable shifts in favour of manufacturing prices during the decade, the fact that private investments have not risen substantially reveals the existence of some other factor which has hampered this rise. The decline in the rate of investment in agriculture is presumably the outcome of the steady shift of the terms of trade against agricultural prices until 1957. As no data are available for the latter half of the period it is difficult to make any guesses as to the development of investment in this sector when the terms of trade started to move in its favour. Nevertheless, given weather conditions which have a considerable effect on output, the constancy observed in output growth in addition to the previously indicated shifts in the allocation of private investments might suggest a not too favourable development.

Another point worthy of note is that the sectors of the economy which have attracted a significant portion of both private and public investment have been those which have a fairly high capital intensity.[1] While directly productive sectors have received a fairly small proportion of total investment despite their low capital intensity and have attained relatively slow growth rates, the reverse has been true in the case of indirectly productive sectors. The position of private residential dwellings is specially striking for their high capital intensity and the high proportion of private investment which they have attracted. Table VII gives the net output in thousand Turkish

TABLE VII

Net Increase in Output per Million of Investment

Sector	Net increase in output (000 T.L.)
Construction	3,036
Agriculture	2,671
Trade	803
Services	780
Manufacturing	468
Transportation	256
Mining, energy	175
Dwellings	44

Source: K. Gurtan, op. cit., p. 181.

[1] Capital intensity signifies in this context the marginal capital-output ratio and will be referred to shortly as the c/o or capital-output ratio.

lira created by net investment of one million Turkish lira by major sectors of the economy.

Presumably, the consideration that real estate is a hedge against inflation and the high remuneration which speculative dealings in trade yield in such times is the basic explanation for the observed allocation of private investments. It is highly probable that the true yield of speculative enterprises is not reflected in the above figures for 'trade'.

This survey of the distribution pattern of investment indicates that the changes observed in the composition of national output and relative prices have been strongly affected by the preference attached to certain activities by both the public and private sectors of the economy.

Effects of Foreign Trade. A study of the developments in foreign trade over the same decade sheds further light on the particular structural changes observed in the composition of national output and relative prices. The period is characterized by widely divergent changes ranging from trade liberalization in the years from 1951 to 1953, to extreme foreign exchange shortage between 1956 and 1958 and finally the depreciation of the Turkish currency in August 1958 as part of a monetary stabilization policy. In fact, the nature of these developments is clearly reflected in domestic changes despite the fact that Turkey is not a country where the value of exports or imports constitutes a significant proportion of domestic national income.

Trade liberalization, embarked upon in 1951, resulted in the exhaustion of the country's meagre foreign exchange reserves and a growing deficit in the balance of payment. The liberalization period was one of relative price stability with an important upsurge in private investment. The increase in supply permitted by a growing balance of payments deficit and rapid increases in domestic output helped meet rising domestic monetary demand as well as giving a spur to exports due to relatively stable price conditions. These three years can actually be considered as the 'golden era' in the history of Turkey's economic development. Not only did price stability reign but a rate of growth never to be reached again, was attained in the important sectors of the economy (Table II).

To trace the effects of foreign trade developments after 1953 on the domestic economy, the following table giving imports, exports and the deficit in dollar terms will be helpful.

TABLE VIII

Imports, Exports and Foreign Trade Deficit
($ million)

Year	Imports	Exports	Deficit
1950	283·1	263·4	19·7
1951	398·5	314·1	84·4
1952	551·0	362·9	188·1
1953	527·8	396·1	131·7
1954	474·1	334·9	139·2
1955	493·2	313·3	179·9
1956	403·7	305·0	98·7
1957	393·6	345·2	48·4
1958	312·3	247·2	65·1
1959	438·7	355·1	83·6
1960	464·9	320·8	144·1

Source: *Turkiye Iktisat Gazetesi*, 1 Subat 1962, Ankara.

The growing foreign trade deficit ended with the abolition of the trade liberalization policy in 1953. The deficit spending of the Government kept monetary demand high after 1954 although a curtailment of imports decreased the supply in the domestic market. Part of Turkish exports have an endogenous demand, i.e. the exportable surplus is an inverse function of domestic income growth. Thus, increases in real and money income in the domestic economy deflected to the internal market part of agricultural export products for which demand is partly endogenous. On the other hand, part of Turkish exports have an exogenous demand, i.e. the exported volume and price are mainly dependent on demand in importing countries. Parallel to the rise in the general price level in the economy, the overvalued Turkish currency put these products at a disadvantage in foreign markets *vis-à-vis* the products of rival countries despite export premiums. Hence the fall observed in export value after 1954 which continued until after depreciation.[1]

The non-availability of sufficient foreign aid together with depleted foreign exchange reserves resulted in the curtailment of supply in the domestic market. This was specially true in the case of imports of consumers' goods which were curtailed to

[1] In connection with the increase in import value and decline in export value, account should also be taken of the adverse movement in terms of trade between 1953 and 1960. The price index for imported goods rose from 100 in 1953 to 115 in 1960, while the price index for exported goods fell to 93, so that the terms of trade stood at 81 by the end of the period, indicating a loss for Turkey of 19 points (in Turkish currency).

permit the imports of required capital equipment. In fact, imports of consumers' goods which stood at 343 million Turkish lira in 1952 fell to 204 million Turkish lira in 1955 and 108 million Turkish lira in 1958. The imported consumers' goods consist largely of manufactured items for which substitutes are hardly available amongst domestic products. The reduction of imported consumers' goods to one-third of the previous amount and the inability of domestic manufacturing industry to supply substitutes easily for the missing items deflected the rising demand to the poor substitutes in the internal market and gave strong impetus to prices of manufactured goods. In fact, the deflection of residual demand to the internal market not only explains the sharp rise in manufactured goods prices but also the rise in the relative importance of manufacturing industry during the period when foreign competition was eliminated from the domestic market. It is interesting to note that a rise in the percentage of investment relative to net value added together with a rise in the relative contribution of small enterprise in total net value added have accompanied the fall in imports of consumers' goods. However, after 1956 the extreme shortage of foreign exchange had adverse effects and as a result not only imports of manufactured consumers' goods but also of machinery and equipment and of raw materials had to be curtailed.

The two tables below help follow the effects of foreign trade on manufacturing industry more closely. The first table (Table IX) gives imports in million Turkish lira by major groups. The second shows investments as a percentage of net value added in manufacturing industry, the relative share of manufacturing in national income and the change in the share of small enterprises in total manufacturing output. (Table X.)

The foreign trade bottleneck, causing a considerable rise in the domestic prices of manufactured goods, initially increased the rate of investment in this sector by raising profit expectations (Table X). The increasing profitability of investment as prices rose, however, encountered difficulties as the availability of foreign exchange further decreased. It is worthy of note that the period 1956–8, which was one of extreme import restrictions, also witnessed a decline in the rate of investment in manufacturing industry. This decline is to be explained not only in terms of physical and quantitative restrictions on the amount of

TABLE IX

Imports by Major Groups
(T.L. million)

Year	Raw materials	Equipment and machinery	Consumers' goods	Construction materials
1950	267	273	165	95
1951	363	365	279	119
1952	427	599	343	187
1953	420	537	295	238
1954	367	500	262	210
1955	433	504	204	252
1956	350	508	127	155
1957	491	350	136	134
1958	393	306	108	76
1959	582	499	134	101
1960	501	588	126	96

Source: *Turkiye Iktisat Gazetesi*, 29 Haziran 1961, Ankara.

TABLE X

Investment in Manufacturing Industry

Year	Investment as a % of net value added in manufacturing	% Share of manufacturing in national income		% Share of small enterprises in total manufacturing output
		1948 factor prices	current prices	
1950	10·7	9·8	10·7	48
1951	14·0	9·1	10·1	46
1952	11·1	8·9	10·3	41
1953	17·8	8·8	10 9	41
1954	19 3	10 4	13·5	45
1955	19·9	10·0	12·5	44
1956	23·7	9·8	14·0	47
1957	12·2	9·8	14·3	43
1958	11·3	9·2	14·3	41
1959	8·3	9·2	13·4	N.A.
1960	N.A.	9·3	13·7	N.A.

The first column refers to investments undertaken in State enterprises and private firms employing ten or more workers and or using engines with 10 h.p. or above. The second column shows the relative share of manufacturing output in constant and current prices. The third column has been computed as the difference between net value added in total manufacturing industry and in firms in the first column of the table.

Source: *Monthly Bulletin of Statistics*, No. 73, p. 138, No. 82, 83–84, p. 179; Ankara.

capital goods available, but also by a rise in risks associated
with investments leading to a decline in the rate of profitability.
On the other hand, profitability in speculative dealings in
imported commodities rose sharply. As foreign exchange re-
strictions prevented an even flow into the country of raw
materials and spare parts, manufacturing industry suffered inter-
mittently from idle capacity and unemployment accompanied
by sharp increases in prices. Hence, the increase in risks, the
decline in the rate of investment and price rises stemming from
a deficiency in available supplies in the internal market which
were further strengthened by commodity speculation.[1]

One other interesting development is the change in the
relative share of small enterprises in manufacturing output,
which closely followed developments in foreign trade and the
change in the relative importance of manufacturing industry in
national income. It can readily be seen in Table X that the
period of trade liberalization witnessed a fall in the relative con-
tribution of small enterprises from 48 per cent in 1950 to 41 per
cent in 1953. This partly explains the relative decline of the
manufacturing sector in national income. Conversely, the foreign
trade difficulties which became acute from 1954 onward seem
to have given a particular impetus to production in small enter-
prises until the institution of the stabilization policy in 1958.
This, in fact, has been a period of rise in the relative share of
manufacturing industry. Hence, there is presumptive evidence
that not only the rate of investment in large enterprises (private
and public) but also changes in the relative share of small enter-
prises seem to be closely linked with foreign trade developments.
However, output in small enterprises seems to be more volatile
and more sensitive. As small enterprises mostly work with high
and sharply rising marginal and average costs,[2] they are easily
eliminated by foreign competition and favourably affected by a
lack of it.

On the other hand, domestic inflation has definitely had an
adverse influence on the export possibilities of agricultural pro-
ducts for which the demand is mainly exogenous. Tobacco,

[1] The high profitability of commodity speculation has the further effect of
increasing interest rates in the free market by raising the demand for loanable
funds. This lowered even farther profit prospects in industrial investments.

[2] The exemption of small enterprises from income and expenditure taxes until
the recent income-tax law and under certain conditions from social security
premiums enabled them to compete with large enterprises in spite of their high
costs.

dried fruit and cotton, which together constitute more than 50 per cent of the value of total Turkish exports, and a few other minor items can be classified under this category. The inflationary price rise and the consequent over-valuation of Turkish currency rendered the export of these major items extremely difficult. Despite considerable increases in production, the exportable surplus declined throughout the inflationary period of 1953–8. The favourable effects of currency depreciation in 1958 seem soon to be exhausted under the effect of continuing price rises in the internal market.

Thus, the foreign trade bottleneck attributable by and large to domestic inflation has had adverse effects on the one hand on the rate of investment in manufacturing industry and on the other hand on major exports of the economy by increasing the non-exported quantities, e.g. stocks. Initially, the decline in the exports of cereals, which were looked upon to increase the foreign exchange earnings of the country, was one of the major causes of the curtailment of imports as domestic production belied optimistic expectations. Later, the exports of other conventional Turkish agricultural products were adversely affected as a consequence of inflation. Had agricultural production lived up to expectations, presumably, the economic difficulties which Turkey has been facing since 1955 would have been largely alleviated.

Role of idle resources and weather conditions. Agriculture, being the main source of income in the economy and giving the major export items, has a twofold effect on the growth of the remaining sectors. On the one hand, a rise in agricultural production widens the market and, on the other hand, by increasing the exportable surplus it facilitates imports of capital items, i.e. finances investment in other sectors of the economy. In view of its twofold importance, the lagging behind of production in this sector is of far greater importance than that in manufacturing industry. The constancy observed in the net value added in this sector since 1958 may constitute a major bottleneck to further growth of the economy unless overcome by specific policy measures.

The existence of idle land resources played a considerable role in the high elasticity of supply between 1950 and 1953 when net output increased by almost the same percentage as the area under cultivation. This high elasticity had a favourable effect

as it kept down the general price level by increasing agricultural supply in the domestic market as well as the supply of manufactured consumers' goods by making imports possible to meet the rising demand. Moreover, the increase in the overall rate of investment in the economy during this period finds its explanation in the rapid *per capita* increases in real income, in import availabilities of capital goods, and the general price stability which has reigned in the economy. The existence of idle land resources has been of primary significance in this development. However, account should also be taken of the extremely favourable weather conditions in the 1950–3 period.

Between 1953 and 1956 acreage under cultivation increased by a little less than 10 per cent, but agricultural output did not attain the 1953 level until 1957. Unfavourable weather conditions, which have a considerable influence on cereal output carried on under dry-farming methods, affected output levels adversely in this major branch of the agricultural sector. In consequence, cereals which had become export items previously could no longer be exported and in fact hardly met the increased domestic demand. The reversal of the trend in cereal exports resulted in a decline in foreign exchange earnings (Table VIII) which, inevitably, had to be accompanied by import restrictions. Hence, idle land resources and weather conditions seem to have had an important influence on the favourable economic conditions of the 1950–3 period while the starting of economic difficulties in 1954 can be at least partly attributed to unfavourable weather conditions and the gradual exhaustion of idle land resources.

Between 1956 and 1959 acreage under cultivation increased only 3 per cent, i.e. the rate of increase declined farther as most of the available land was brought under cultivation. There was a rise of almost 20 per cent in land under cultivation between 1953 and 1959 which was, leaving aside crop fluctuations due to weather conditions, exactly matched by the increase in net value added (in constant prices) in agriculture. This increase was hardly sufficient to meet the rise in demand due to population increase and an increase in real income, with the consequence that part of Turkish exports with an endogenous demand were deflected to the internal market.

The lands which were brought under cultivation last were undoubtedly of lower quality. In addition, the presumed decline

in agricultural investments which continued into the latter half of the period inevitably resulted in the stopping of output growth. Though agricultural population increased in absolute numbers by a few million, without a parallel increase in investment and/or in land under cultivation a substantial rise in output could not be expected. The marginal product of labour being very low in agriculture, the additions of large masses of manpower cannot bring about the required rise in output. In fact, the rural exodus which speeded up in the latter half of the 50s bears evidence to the worsening of conditions in the agricultural sector under the impact of rapid population increase and the lack of complementary resources.

The sharp rises in relative agricultural prices occurred after increases in output came to a halt and after the devaluation of Turkish currency in 1958. During the last few years Turkey has become an importer of various agricultural food items and raw materials. The exports of some food items such as cereals and oilseeds or some livestock products are now possible because of the agricultural produce received from the U.S.A. under the surplus disposal programme. If the rapid population growth continues, and if the growth of output lags behind because of the low investment rate in agriculture and the exhaustion of idle land resources, the general economic conditions of the country are not likely to improve substantially in the near future.

General Analytical and Policy Implications. The above analysis has revealed the importance of the effects of the distribution of private and public investments, foreign trade, idle land resources and weather conditions on the observed changes in the composition of national output and relative prices in Turkey over the 1950–60 decade. What is worthy of note is that the sectoral distribution of investments and their respective capital intensity seem also to have strengthened the price rises attributed for the most part to inflationary methods of financing. This can easily be understood by taking into account the long gestation period of public investments in general and the long interval involved until the final output comes into the market due to their indirectly productive nature. Thus, not only the inflationary methods of financing investment and the foreign trade bottleneck but also the sectoral allocation of public investments seem to have had an influence upon the rapid price rises in the economy.

As the inflation-financed public investments have been for the

most part of an indirectly productive nature, necessitating long gestation periods, their inflationary effects have been particularly strong in view of the very limited idle capacity in the remaining productive sectors. Conversely, had a significant proportion of inflation-financed public investment been diverted to sectors with low capital-output ratios price rises would have been alleviated by the arrival of the final output at the end of a short interval.[1]

The same has been true in the case of private investment. As previously indicated, the rise in the general price level, the foreign trade bottleneck and the movement of the terms of trade against agriculture contributed heavily to the diversion of an increasing proportion of private investment to non-productive or very indirectly productive sectors with a high capital intensity such as residential dwellings. The same factors have, presumably, also been influential in the steady decline in the relative share of private investment. In all probability, the increase in the efficiency of labour due to living in better dwellings had been almost nil in the case of Turkey as the dwellings involved were not destined for workers or peasants but for the high-income classes who already enjoyed much better living conditions than the former. The financing of a considerable portion of this unproductive investment by credit expansion must have had the same effect as that indicated for public investments, i.e. further strengthening price rises.

The neglect of agriculture and manufacturing industry (which involved a lower capital intensity and, being directly productive, would yield an output at a much shorter interval and hence would alleviate the price effects of inflationary methods of financing) has presumably aggravated the consequences of monetary expansion. The Turkish experience illustrates the danger of resorting to monetary expansion to finance projects which have a long gestation period and which result in increases in output only indirectly and at a considerable interval.

Had the Government promoted selective economic policy measures to increase private investment and output in the directly productive sectors with low capital intensity and diverted a higher proportion of public investment thereto, the rapid increases in output would have alleviated price rises and the consequent foreign exchange difficulties stemming from in-

[1] W. A. Lewis, *The Theory of Economic Growth*, London, 1955, p. 217.

flationary financing methods could have been partly avoided. Moreover, idle capacity in the transportation system and in some of the other social overhead capital might also not have risen.

This short survey supports the thesis that in the case of an underdeveloped country undergoing structural change, sectoral developments may be just as important as increases in aggregate demand in the explanation of a rise in the general price level. Any economic analysis not paying due regard to the sectoral allocation and capital intensity of public and private investments and their presumable effects on the general price level might be misleading and amiss in its policy implications.