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EVOLUTION OF FOOD CONSUMPTION IN TURKEY AND IN THE MEDITERRANEAN

Martine PADILLA and Selma ÖNCÜOĞLU*

The first part of the paper examines the characteristics of the agro-food systems in industrialized and developing countries. Following this overview, the Mediterranean food consumption patterns are compared to the international trends. The second part of the paper studies the food consumption patterns and nutrition intake in Turkey. This is done by analyzing the levels and trends in production, consumption and regional distribution of main foodstuffs. The paper concludes that after an improvement in the food situation in the 70's, there has been a general deterioration in the early 80's. It is argued that one can speak not of insufficient food intake, but of food imbalance, and social distribution rather than size of growth in agricultural production is required for the solution of the problem.

PART I - MEDITERRANEAN FOOD CONSUMPTION PATTERNS

1.1- WORLD CONTEXT: GLUT SOCIETIES, SOCIETIES IN THE PROCESS OF GROWTH

To deal with the theme of the food consumption evolution on an international scale we must examine the characteristics of the agro- food systems in industrialized and developing countries and situate the geographical area to be studied.

* Research Staff at the Mediterranean Agronomic Institute of Montpellier (I.C.A.M.A.S.). This paper was presented at The International Colloquium on Agriculture, Industrialisation and Social Changes in Turkey and in the Eastern Mediterranean in Adana, May 29 - June 1, 1989.

This approach is necessary as we often hear of an internationalisaton of the food economy. Although certain aspects of it are uncontestable, yet the forms of development are not comparable, and the behaviour patterns do not follow the same logic.

The emergence of a glut economy in the west.

In the historical model of western development many elements have favoured the coming of a mass consumer society with a high food availability per capita ratio and a large range of products to choose from. There has been a considerable increase in purchasing power, which is the basis of any development in a monetarized market economy. Western development has been secured by agricultural and industrial growth, a necessary but insufficient conditon to development as long as the growth is evenly distributed; this has been affected by a transfer of agricultural and agro-industrial productivity gains to the consumer.

This diffusion means abundance for the majority and consequently a certain homogenisation in consumer behaviour and a convergence towards a dominant consumption pattern which could be qualified as agro-industrial. This designation is justified if we consider that once a certain level of agro-food development is reached, the market mass is advantageous above all to industry and to the services incorporated in the products.

Towards a new theory of consumption

Food consumption patterns (F.C.P.) in western countries are those of a glut economy, a rapid description of which is given below.

A glut society can be defined as a society in which the needs of all individuls are fully satisfied; i.e. the physical needs as well as the psychological or socio-cultural needs, which are expressed through the quality aspect of the products, are satisfied.

In the OECD countries we can already notice **a zero growth rate in the volume of food consumption.**

However, this saturation in terms of final calories is not systematically associated with a saturation in primary calories, for the substitution of vegetal calories for animal calories in the F.C.P. has not been achieved everywhere, as we know the accelerator effect of animal products on vegetable production. In the long term the saturation in primary calories will be a reality as there are already indications of a reversal in the historical tendancy in the anglo-saxons countries.

Another characteristic: **food expenditure is relatively saturated**: it reached around 20% of the total budget in 1980 in industrialised countries; **but not absolutely saturated:** the desire for quality products implies cheap products being replaced by more expensive ones.

In the high-income occupational categories we can already perceive an absolute saturation in food expenditure which means that the only substitutions between products that occur are between different expensive products.

In glut societies there is an evolution in consumer behaviour. High standards of living have accelerated the "catch up" phenomenon between social classes, thus reducing disparities in consumption. However there is no evidence of consumer homogenisation as the "Abundance Society" creates a proliferation of different products and varied behaviour patterns. The theory of "alimentation, a class phenomenon", justified in a historical context, may be questioned in a glut society **where income level no longer explains food consumption.**

The new consumer:

- adjusts the amounts consumed to his physiological needs. Indeed we can note that in certain very advanced countries the energy intake (in final calories) is inversely proportional to the income.

- seeks quality products, i.e. products whose nutritional, hygiene, economic, (services incorporated in the product), socio- cultural (alimen-

tary symbolism) characteristics correspond to his personal concept. All societies generate food ideologies defined as social attitudes with respect to alimentary facts, and the industrial society has created the health-food myth. This new ideology has emerged as a reaction to the uncurbed growth of the agro-industry which has created an "uneasiness towards food products" owing to the excessive use of fertilizers, pesticides, antibiotics, hormones, additives, colouring, etc. The consumer, no longer able to control his alimentation, has reacted against it.

-prefers industrial foods whose user-friendly incorporated services reduce the time spent in preparation and cooking, and thus increase leisure time. These agro-industrial products are stabilized, homogenized, packaged, differenciated and branded. There are **service foods** which simplify culinary chores, allow the ingestion of "one- portion aliments" and encourage "snacking" which in respect to the new consumer behaviour patterns, explains their success.

-solicits **served-food** away-from-home eating whether gastronomic, convivial or day to day (fast food, canteen) is progressing rapidly. Today the American consumer spends more than 40% of his food budget on this item while his European counterpart spends 15-20%.

-chooses products in such a way that the traditional substitution trends of basic agro-food products amongst themselves are no longer valid. The consumption of fats, oil and meats has reached a peak; that of cereals, roots and tubers is no longer on the decrease, sugar consumption is diminishing.

The consequence of these new behaviour patterns is a destructuring of the consumer society. There is no well defined F.C.P. for a given income level for a precise socio-professional category. We are faced with differentiated behaviour patterns which are able to coexist in all social classes and even on an individual level. The captive consumer no longer exists, the modern consumer decides, he manages his time and his resource, he varies

his "pleasures" (pastimes). In other words, he is a **fickle consumer**.

Heterogeneous structure of agro-food system in developing societies

The western development process which has taken place in a precise historical context can obviously not be transfered to other societies. It would be inexact to consider developing countries as being on the road to a universal agro-food growth similar to that of very industrialized countries, with a historical gap of several decades.

Developing countries have a heterogeneous structure in which we can see simultaneously all the historical stages of western agro-food development. There coexist pre-agricultural forms of food economy based on harvesting, hunting and fishing, a subsistance economy based on self-consumption, a commercialised agricultural form linked with urbanisation phenomenon and finally an agro-industrial economy form with respect to international transfers. This is however a simplified schema if we consider that there are sometimes intersections or superpositions between two or more sub-systems. However, globally the populations sub-jacent to each of the sub-systems have a standardized food intake due to the constraints they must submit to. We cannot speak of a unique or homogeneous agro-food system and there is no link between the present period through which developing countries are going and any other period in the history of western agro-food development.

Coexistence of several patterns of differentiated food consumption

Food consumption in developing countries is evolving, but at a slow rate. In these countries the population is still essentially rural, and the weak economic growth means a structural stagnation in food consumption.

The melting pot for growth is in the effect of urbanisation. The urban dynamic is the principal cause of transformation in traditional food consumption patterns (FCP). The consequence of this is an improvement of the food situation for actively employed households and a change by adaptation to urban poverty for those financially worst-off.

The urban factor modifies living conditions and allows the expansion of the food economy on a market and monetary level. The city is also an outlet for international flows, thus setting the stage for a certain westernisation of FCP facilitated by mass media diffusion and advertising. We can observe a certain assimilation between "Western", "Modern" and "Health". The penetration of the western pattern is also facilitated by collective consumption habits which are based on the European or American models (canteens, hospitals).

New standards of living and advertising direct consumption towards practical products (bread, pre-cooked semolina, pasta, margarine) which incorporate services but offer cheap calories.

The diffusion of western FCP's remains however limited. Those in the high income bracket are, above all, responsible for this diffusion, though it permeates more or less all the social categories through its "convenience products" (tinned foods, concentrated foods and drinks).

In accord with the diversity of situations and the degree of integration in the market economy, we can generally differentiate five fundamental consumption patterns in developing societies: the self-subsistence model, the diversified rural model, the privileged urban model, the intermediate urban model, and the marginal urban model.

In this type of society the behaviour patterns and styles of consumption are distinct according to the food system to which the consumers are assimilated. In view of these considerations any analysis or forecast on food demand is uncertain because the significance of market economy's tendential food laws is limited when applied to developing countries. These laws are valid only when applied inside the market system. However it would not be an exaggeration to say that in many developing countries more than half of the food economy results from the domestic economy. For these populations the use value of the products is more important than their market

value. Production capacities, the objective conditions of consumption and the socio-cultural model generated by poverty are more explicative variables than income and price comparisons.

On the other hand for populations which are totally integrated into the monetary system, price and income elasticities are most significant, given that an important slice of the budget is alloted to food (40-80 %). But the little increase in purchasing power inhibits market expansion.

1. 2- THE MEDITERRANEAN FOOD CONSUMPTION PATTERN

We consider this overview of the major world trends as a necessary preliminary to a consideration of the Mediterranean countries in so far as these countries have as we shall see a special position on the international scene.

The Mediterranean countries are in an intermediate situation

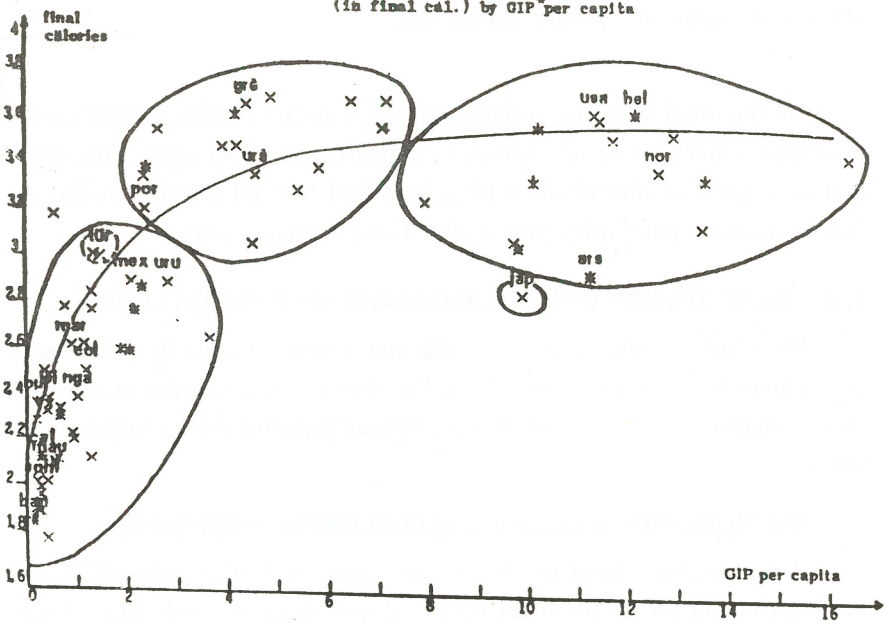
If we compare food availibility per capita with the national income level per capita for all countries we are able to trace a trend curve around which there is a certain dispersion which indicates substitution phenomena and illustrates the originality of the models. (Figure 1)

We can distinguish three major zones:

-Zone I which groups virtually all the developing countries i.e. 70% of the world population. Economic and nutritional poverty are predominant in these countries. The average food availability varies between 1,900 and 2,000 calories per capita per day of which less than 10% are derived from animal products. The consumption pattern is the traditional type mainly based on consumption of cereals or roots and tubers with in certain cases consumption of fresh fruits and vegetables or a few animal products.

The countries of the southern Mediterranean region (Magreb, Egypt) and those of the Near and Middle East, including Turkey, are in this zone.

FIGURE 1 - THE WORLD DISTRIBUTION OF FOOD AVAILABILITIES (in final cal.) by GIP* per capita



Source : FAO, 1983; World Bank, 1988

* G.I.P. : Gross Interior Product

- Zone III groups the "opulent countries which show a high income and food availibility scale: these are the "glut" economies already described. Only one Mediterranean country is in this position: France, where the consumption pattern is very close to the anglo-saxon one.

- Finally, zone II which we could call an intermediate zone, is characterized by high levels of food availability with, nevertheless, a fairly low proportion of animal products (20 - 25% of the food intake) and this is in spite of a moderate income scale. The European Mediterranean countries are situated in this zone. The FCP's in these countries differ from the

western model in the relatively high consumption of cereals, fruits, and vegetables which are outstanding characteristics of the traditional patterns. However, they are similar to the glut model in the high levels of final consumption.

Nutritional equilibrium model

If we use the triangular method to trace the representative points of the different world FCP's, each point being the resultant of three nutritional constituents of a ration (the protein, lipid, and carbohydrate parts in an average food intake), we can determine the world nutritional trend which shows that the transit from traditional models to western models brings a substitution of carbohydrates with lipids, while the relative weight of proteins remains stable (10 - 12 % of final calories).

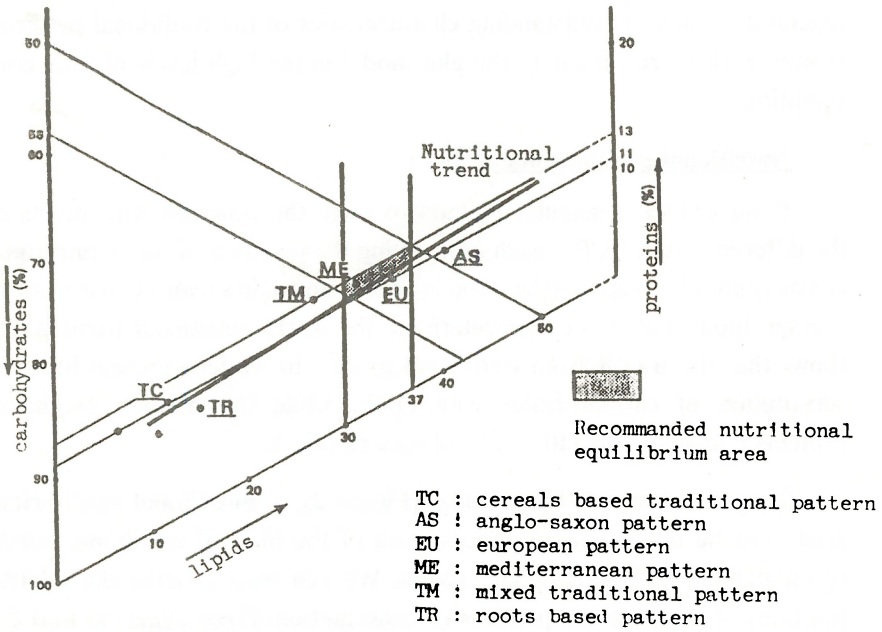
To get a required food intake (Figure 2), a **nutritional equilibrium area** must be defined by the intersection of the lines of nutritional norms recommended by international experts. We can then observe the relative positions of the different patterns of consumption. Once again we find the Mediterranean FCP in an intermediate position between the very lipid-based Anglo-Saxon and European patterns and the very carbohydrate-based traditional patterns. The Mediterranean FCP is right in the centre of the nutritional equilibrium area.

Patterns for primary energy

All the FCP's (food consumption patterns) may be reduced to three basic patterns which correspond to the averages of the 3 groups of countries previously mentioned: the traditional, intermediate and western patterns.

If we calculate the "vegetable biomass" needed to cater for an individual's food requirements in each of the models (on the basis of 7 vegetable calories for 1 animal calorie) with the biomass expressed as "equivalent in cereals" (on the basis of 3500 CF/Kg of cereals) we see that the western FCP is three times higher for initial matter than the traditional FCP.

FIGURE 2-EVOLUTION OF NUTRITIONAL AND FOOD STRUCTURES IN RELATION WITH THE INCREASE IN FOOD INTAKE (1)



TC : cereals based traditional pattern
AS : anglo-saxon pattern
EU : european pattern
ME : mediterranean pattern
TM : mixed traditional pattern
TR : roots based pattern

Source : L. MALASSIS, M. PADILLA, 1986, p.57

(1) The principal ANPS figure twice on this graph : once to show the nutritional structure (underligned signs) and once to show the food-intake structure. The shaded part of the graph indicates the nutritional equilibrium area recommanded by the nutritional scientists for western Europe.

The Mediterranean pattern is at an intermediate level; despite a high consumption level in terms of final calories, the moderate proportion (about 20 %) of animal products means that pressure on vegetable resources remains reasonable. This pattern is considered as "moderate" and may be taken as an objective for societies in a transitional period.

The average increase in agricultural growth depends upon the global level of consumption and the ratio of animal calories. Up to now rural economists have not seemingly paid sufficient attention to the means of increasing agricultural growth, a consequence of the substitution of animal calories for vegetable calories. This means that if we wish to raise the global

TABLE 1 - SCALE OF CONSUMPTION LEVELS IN THE WORLD

Patterns	Final cal. per day	% of animal calories	Primary calories (4)	Equivalent in cereals (5)	
				kg/year /capita	Rounded up averages
Western (1)	3500	40	11900	1241	1200
Intermediate (2)	3000 à 3500	20 à 25	6600 à 8750	688 à 912	800
Traditional (3)	2300	10	3680	383	400

(1) Member countries of the OECD except Japan and Mediterranean countries
(2) Mediterranean and East European countries as well as Japan and Rio de la Plata
(3) Developing countries except those geared towards cattle-breeding
(4) On the basis of 7 vegetables calories for 1 animal calory
(5) On the basis of 3 500 calories per kg of cereals

Source : L. MALASSIS, M. PADILLA, 1986

intake by 100 final calories, it requires a vegetable supply of 225 calories in the intermediate Meditteranean pattern compared to 340 in the western pattern.

The Meditteranean pattern: intermediate or transitional?

The method of international comparison may lead us to believe that the general tendency is towards the westernization of FCP's through the intermediate pattern, in other words, that the Mediterranean pattern is a compulsory passage from traditional to western and therefore a transitional pattern.

In the light of historical evolution, it would seem that the Mediterranean pattern is only intermediate: those traditional countries (OPEC members, for example) which have seen their average food supply rise sufficiently in the last 15 years to reach western levels have not, over the same period, been able to close the gap as far as produce of animal origin is concerned. Despite a high income level they have not reached the Meditterranean type of food consumption. Animal produce remains the fundamental factor in differentiating between consumption patterns.

PART II - FOOD CONSUMPTION IN TURKEY

2.1. AN APPARENT FOOD BALANCE

Turkey's farm-produce industry is self-sufficient, or so its economic and political officials maintain. Though it is true that Turkey's agricultural trade balance is positive, this does not necessarily mean that it is in a position of self-sufficiency. A nation is only self-sufficient when its population's food intake is at a satisfactory level. It is quite easy to imagine a country where there is a food balance but where this balance does not correspond to the satisfaction of real (and not potential) needs for everybody. Its self-sufficiency is only apparent and may be considered as part of a political game.

Examining intake levels seems to confirm the idea of self- sufficiency in Turkey, with a supply of 3.180 kcal per inhabitant in 1983-5 period (FAO). If we consider that the recommended optimal levels are betwen 2200 and 2600 kcal for every country in the world, at 2280 kcal for Turkey the requirements seem to be met. These figures however reflect only supply and not real consumption. If we refer to food surveys, average consumption is 2400 kcal per person per day, a figure within the optimal bracket.

Let us note that this is only an average figure and that considerable imbalances appear if we examine different produce, different regions and different social categories. It is only in these 3 fields that Turkey's food intake can be really understood.

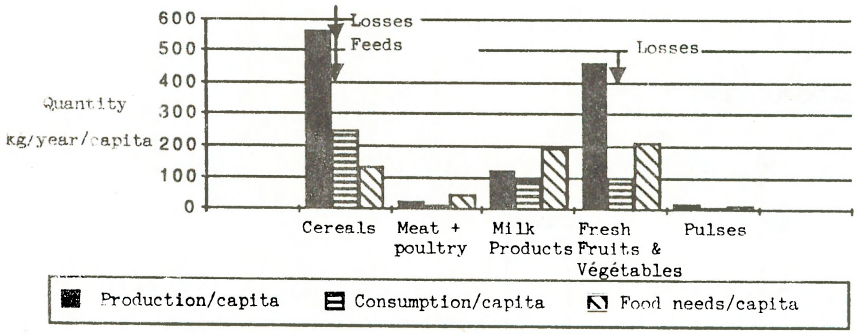
2.2. -PRODUCE IMBALANCES

By comparing the level of production per inhabitant with the level of real consumption for the main foodstuffs, it can be seen that on average, Turkey has a net surplus of cereal produce; is rich in variety and quantity of fresh fruit and vegetables and has a slight surplus in dairy produce. There is however a deficit in meat produce.

It is possible to compare the level of production available for human consumption (losses and livestock feed subtracted from production totals) with the level of requirements per inhabitant. The latter were calculated on the basis of the produce required to form an ideal food intake[1]. (Figure 3)

It may be seen that the deficit in produce of animal origin (meat and dairy produce) is considerable and that surplus in fruit and vegetables is slight if we bear in mind the amount of losses. Real consumption is generally inferior to requirements because, as priority is given to exports especially of cereals and fruit and vegetables, consumption adjusts to the home market supply.

FIGURE 3-SUPPLY/DEMAND BALANCE BY PRODUCT - 1980/81



Source : D.I.E., 1974-76, 1981, 1984 ; FAO/OMS, 1986 ; HACETTEPE/UNICEF, 1977 ; KOCAMAN, T., 1976, GENCAGA, H.,1985

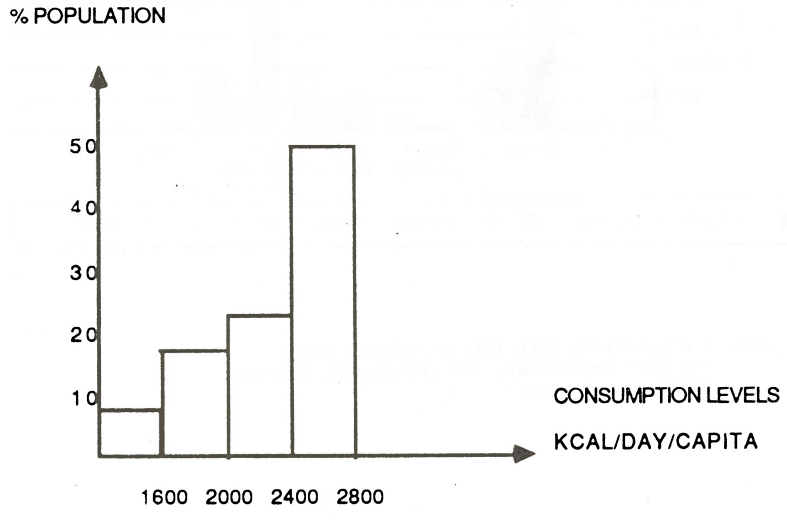
2.3. CONSUMPTION INEQUALITIES

Average data on consumption levels may hide situations either of insufficient or excessive consumption which may be detected by distribution graphs.

If we consider population percentages in terms of different consumption levels it is possible to evaluate the numbers of people facing nutritional risks. (Figure 4)

According to the last survey(1984) the population is divided up as follows:

FIGURE 4 - SOCIAL DISTRIBUTION OF FOOD CONSUMPTION



Source : T.O..K.B./UNICEF,1987

As the average level of consumption recommended for the Turkish population is 2280 kcal, one can see that a third of the population does not reach this figure and that 8% are in a critical situation with a consumption level below to the vital minimum of 1600 kcal.

The situation has however been improving. In 1974, 17.5 % of the population were below the critical line and 43% in a situation of insufficient diet[2].

Malnutrition, i.e. faulty unbalanced diet, is a more frequent phenomenon than insufficient diet especially in the lack of animal proteins. In 1974, 40 % of the population received less than 12 g/inhab./day. This rate had not been modified by 1984. The fact that no improvement was detected over the ten year period is directly linked to income levels.

Nevertheless, nutritional risk is present whatever the level of family income since the deciding factor in malnutrition especially for children is the level of education. The most recent surveys show that 90% of cases of malnutrition were among children of illiterate or poorly educated families. If we turn however to the relationship between the average consumption level for the family (directly related to income) and the proportion of children who present a high degree of malnutrition (70% of standard height/weight) through 25% are from the poorest categories, almost 40% are paradoxically from families with quite sufficient income levels (>2400 kcal/inhab/day).

One may also notice that the probability of nutritional risk increases if the individual lives in a village (fewer than 2000 inhabitants) or in a big town (100000 inhabitants), (the metropolises not included). Risk probability also rises in the region of East Anatolia where the level of insufficient malnutrition reaches 17 % and in the Black Sea region with a rate of 12 % in 1982. Malnutrition linked to insufficient animal products is most frequent in the Mediterranean region. We shall now see how all this is connected to economic and social conditions.

2.4. REGIONAL DISPARITIES

If Turkey has considerable agricultural potential it is due to the climatic, ecological and geographical differences of its 5 regions.(3)

Cereals are grown in every region with a predominance in Central Anatolia, except for corn which is grown most favourably by Black Sea. The highest quantities of pulses are to be found in Central Anatolia, the Mediterranean inland area, and particularly in South East Anatolia. The tegean and Mediterranean coasts are the main producers of fresh fruit and vegetables. Cattle-raising and milk are a speciality of East Anatolia. Meat production is however much higher in the Aegean-Marmara region, thereby demonstrating the migration of cattle destined for slaughter from the east and north-east to the west of the country.

These regional differences, which all for certain social and economic reasons, contribute something to the wealth of the country, also create disturbances with the national balance.

The natural regional differences are accompanied by disparities in economic development, urbanization and industrialization. Between the various regional patterns of consumption there are considerable differences which are accentuated by the gap between urban and rural patterns. The urban pattern from the west for example, is exactly the opposite of the rural pattern from the east or south-east. While the Istanbul citizen consumes abundant quantities of animal produce, fatty substances, rice, pulses, fresh fruit and vegetables; the subsistence farmer of the east must find his calories in cereals, sugar, milk and dairy produce which is mostly home-produced. The amount of fresh fruit and vegetables, fish and fatty substances in his diet is low in both absolute and relative terms.

The highly industrialized and urbanized west attracts and in fact monopolizes the greater part of the food supply through its higher purchasing power and its higher demand. The interregional network is channeled firstly

towards the metropolises of the Aegean- Marmara area and only then to the urban centres of the other regions.

The rural consumption models (Figure 5a) from the relatively underprivileged regions are traditionalist owing mainly to an archaic socio-cultural structure and to subsistence farming. Purchasing power is not sufficient to create a level of demand that is attractive enough to warrant the opening of new trade networks.

The urban consumption pattern (Figure 5b) from these regions is more or less marked by the regional agricultural structure with a high proportion of cereals in the diet. Nevertheless there are higher quantities of fruit and vegetables, pulses and animal produce.

The abundance of food in urban centres cannot be disassociated from the general social-economic framework and constitutes a centre of attraction for rural exodus. (Table 2) It reveals how privileged towns are in Turkey for food supplies.

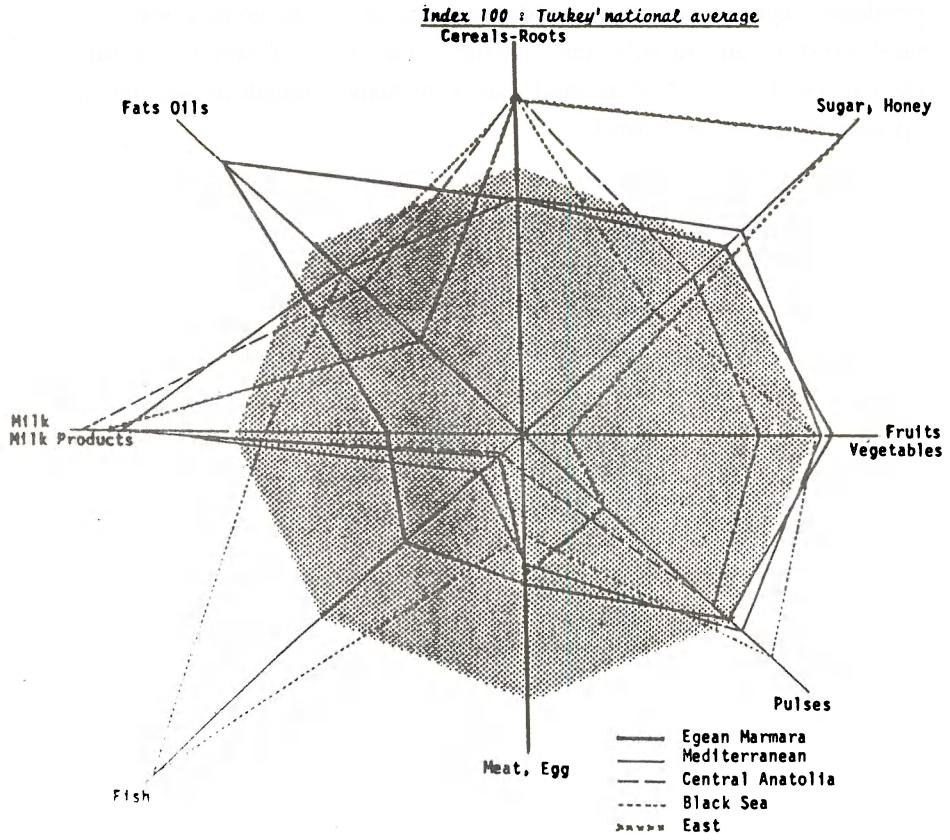
However, rural immigrants in the metropolises and urban centres add to the number of unemployed and low-income groups on the fringes of society. Consequently the socio-economic disparities are widened even further.

Neither the infrastructures nor the socio-cultural functions of the cities are sufficiently developed to accomodate the immigrants. Shanty towns spring up, social and economic ills increase and the general sense of imbalances is felt more deeply.

The rural exodus is perfectly reflected in the occupational structure of the working population. (Tables 3 & 4) In 5 years (1980-85) the number of agricultural workers has decreased at an average annual rate of 9.2%. This

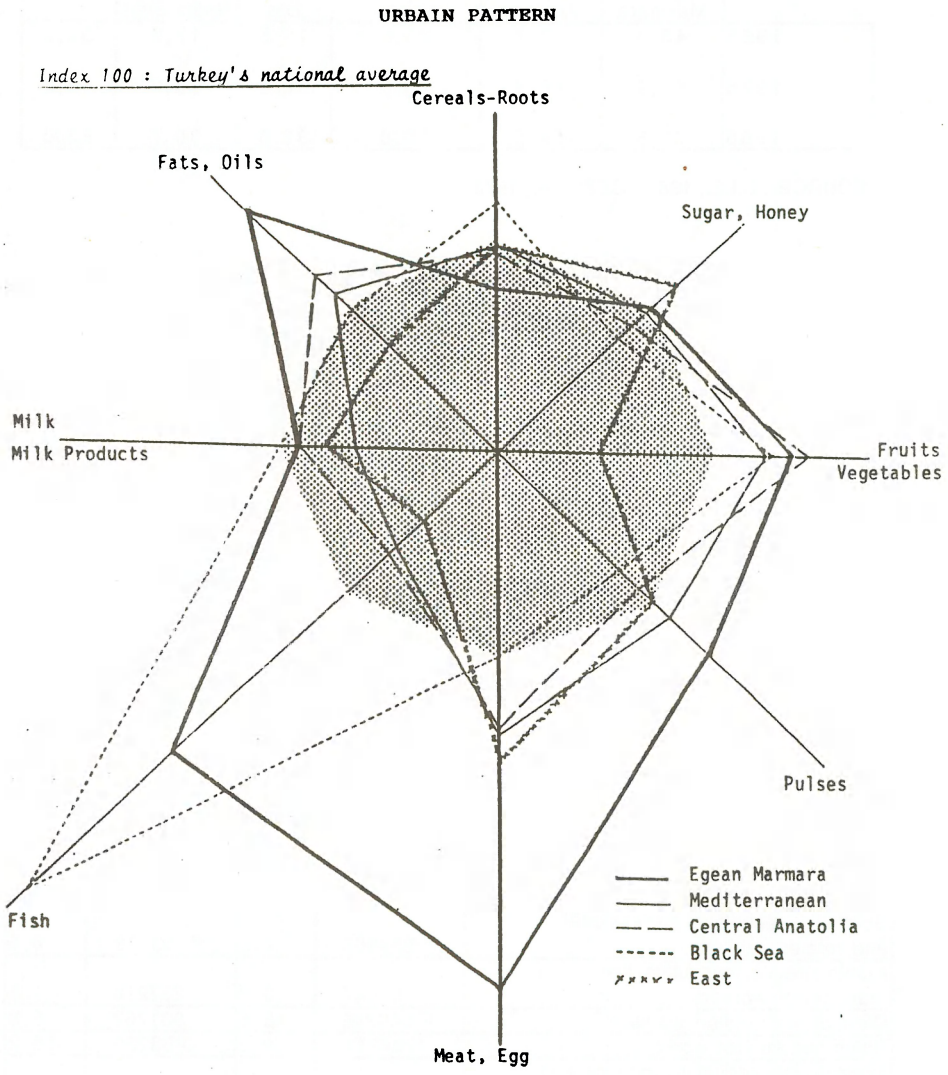
FIGURE 5a - REGIONAL DIFFERENCES 1981/82

RURAL PATTERN



Source : Our calculations based on GENCAGA,H.,1985

FIGURE 5b - REGIONAL DIFFERENCES 1981/82



Source : Our calculations based on GENCAGA, H., 1985

TABLE 2 : PORPORTION OF URBAN POPULATION WITHIN TOTAL REGIONAL POPULATION

	Egean-Marmara	Central Anatolia	Mediterranean	Black Sea	East & South-East	Turkey
1965	48,0	29,7	29,6	13,5	17,6	32,6
1975	51,9	45,8	43,0	26,2	33,0	41,8
1985	70,5	54,5	50,8	32,0	39,7	53,0

SOURCE : D.I.E., 1987 ; CEZIK, A., 1978

decrease however was not reflected in the employed working population as this too fell at an average annual rate of 2.7 %. This decline may be evidence of emigration by adults of working age to foreign countries (% 4.5 of the working population in 1985 according to official figures). On the other hand the number of people seeking work rose by 26.8 % per year and the number of people whose socio- professional category was unidentified rose by 28.4 %. It is perhaps necessary to add that the number of unemployed women increased at an average annual rate of 6.1%. These peasant women are considered as unpaid domestic workers in the rural environnement and as unemployed in the urban environment.

This leads us to say a word about the social disparities in Turkey.

TABLE 3 : OCCUPATIONAL STRUCTURE OF THE POPULATION

	1980		1985	
	Number of persons	%	Number of persons	%
Economicaly active population	18522322	100	16162790	100,0
Scientific, technical, professional and related workers	839905	4,5	1053378	6,5
Administrative, executive and managerial workers	157847	0,9	287278	1,8
Clerical and related workers	649245	3,5	931762	5,8
Sales and service workers	1704711	9,2	2458226	15,2
Agricultural, animal husbandry and forestry workers, fishermen and hunters	11055218	59,7	7246302	44,8
Production and related workers, transport equipement operators and labourers	4082677	22	4071581	25,2
Workers not classifiable by occupation	32719	0,2	114263	0,7

Source : D.I.E., 1988, D.I.E., 1987

TABLE 4 - ACTIVELY EMPLOYED POPULATION BY EMPLOYMENT STATUS

	1980 Number of people	%	1985 Number of people	%
Employee	6 162 002	33,3	6 398 259	39,6
Employer	176 459	1,0	384 890	2,4
Self-employed	4 277 257	23,1	4 198 913	26,0
Umpaid family worker	7 859 506	42,4	5 180 728	32,0
Actively employed population	18 522 322 .(1)	100,0	16 162 790	100,0

(1) 47 098 persone with non-dentified employment status are included in the total

Source : D.I.E., 1988; D.I.E., 1987

2.5. SOCIAL DISPARITIES AND PURCHASING POWER

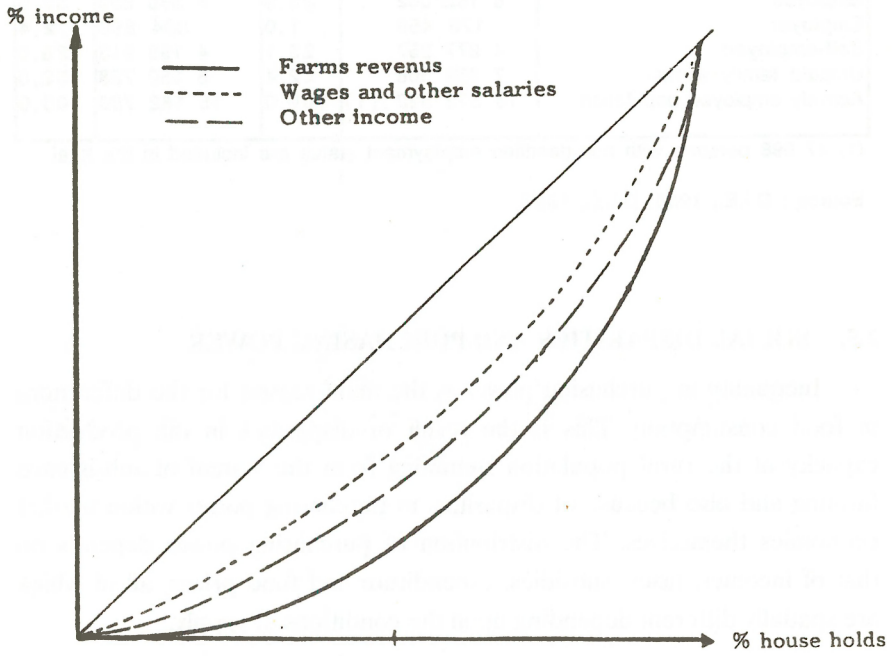
Inequality in purchasing power is the main reason for the differences in food consumption. This is the result of disparities in the production capacity of the rural population stemming from the system of subsistence farming and also because of disparities in purchasing power within market economies themselves. The distribution of purchasing power depends on that of incomes, taxes, subsidies, expenditure and food prices, all of which are spatially different depending upon the conditions of supply.

Income levels are very disparate in Turkey and there is a high concentration of wealth in hands of a minority, particularly in rural areas where the richest 10% of the population owns 40% of the farm income and the poorest 10 % owns only 1 % or less of total income. (Figure 6)

By crossing the socio-professional structure with wage levels in the different economic sectors from 1969, 1979 and 1983 it is possible to deduce that two thirds of the employed working population have wages which are near the average national wage. This allows us to use the average national wage as a basic indicator to calculate the evolution of purchasing power over a period of 30 years (1959-89). In the table below we have shown how the table long it takes on an average wage to buy 1 kg of certain foodstuffs. (Table 5a & 5b)

FIGURE 6 - INCOME CONCENTRATION IN TURKEY

1982



Source : our calculations based on GENCAGA,H., 1985

Between 1959 and 1979 (and in particular from 1969 onwards) we can see a clear improvement in purchasing power especially where "transformed" produce (margarine, olive oil, sugar, soft cheese) and rice are concerned. There is stability in perishable foodstuffs (milk, fruits and vegetables) and bread, and only a slight drop in purchasing power for meat.

However the collapse in purchasing power in relation to inflation between 1979 and the end of the 80's is striking. With the exception of milk, all food produce and in particular meat, soft cheese, pulses, fatty substances and even fresh fruit and vegetables experienced alarming price increases

that were not matched by wage rises. In the last few years the effects of stagflation have taken their toll upon wages and incomes.

To underline the present impossibility for wage earners to feed themselves correctly in Turkey we have compared the purchasing power of a minimum wage earner in France (from the area of greater Paris) with that of a Turk with a minimum legal wage in the industrial sector of Istanbul. We are thus able to see how much more effort the Turk must make to feed himself. (TABLE 6)

In 1989, a 2-child family living on 2 average wages (250000 TL/ month) must allocate 76 % of its total monthly income to food in order to fill the typical family shopping basket[4]. (TABLE A-7)

The same family would have spent 46 % of its total income for the same basket in 1959, 33 % in 1969 and 37 % in 1979. A closer examination of the results from the three consecutive national studies on food consumption and nutrition[5] shows the relative deterioration of food intake in Turkey. (TABLE 7)

As the methodology was not homogeneous for each survey we shall confine our comment to these results. Nevertheless one of the most obvious points is the decline in the consumption of almost all foodstuffs (with the exception of sugar) between 1974 and 1984.

The results suggest that there was a substitution of animal produce for pulses. In the same way a transfer took place from red meat to poultry, fish and eggs.

A clear drop in the quantities of milk and dairy produce consumed is directly related to the drop in animals used for milking in favour of animals for slaughter.[6]

TABLE 5a - EVOLUTION OF THE PURCHASING POWER IN ISTANBUL

The working time needed by an average wage-earner to buy 1 kg of certain food stuffs (in hour)

	Bread	Red meat	Milk	White cheese turc	Cocos	Margarine	Olive oil	Sugar	Rice	Leeks	Oranges	Potatoes
1959	0 H 23	3 H 30	O H 41	3 H 35	1 H 40	3 H 13	3 H 04	1 H 57	1 H 35	0 H 20	1 H 00	0 H 26
1969	0 H 21	3 H 28	0 H 44	3 H 12	1 H 22	1 H 56	2 H 27	0 H 57	1 H 32	0 H 16	0 H 48	0 H 17
1979	0 H 16	4 H 11	0 H 42	2 H 51	1 H 33	0 H 57	1 H 45	0 H 25	1 H 02	0 H 27	0 H 38	0 H 25
1987	0 H 25	6 H 00	1 H 07	4 H 09	2 H 48	1 H 56	2 H 46	0 H 48	1 H 04	0 H 23	0 H 23	0 H 21
1989	0 H 50	8 H 25(1 8H 58(3)	0 H 54	8 H 20	2 H 14(1	2 H 48	4 H 38(1 2H 48(4)	1 H 09	3 H 12	0 H 46(2	1 H 55	0 H 38

(1) Detail price are of February
(2) 1 kg of spinachs
(3) 1 kg of calf meat
(4) 1 kg of sun-flower oil

Source : D.P.T 1988, ; D.I.E., 1963, 1975, 1987,1989 : D.I.E., 1988, Cumhuriyet Daily, 14.07.1989

TABLE 5 b - EVOLUTION OF THE PURCHASING POWER IN ERZURUM (In hour)

	Bread	Red meat	Milk	White cheese	Cocos	Margarine	Olive oil	Sugar	Rice	Leeks	Oranges	Potatoes
1959	0 H 23	2 H 19	0 H 43	2 H 49	1 H 30	3 H 17	3 H 28	1 H 57	1 H 16	0 H 21	0 H 49	0 H 18
1969	0 H 22	2 H 50	0 H 37	2 H 58	1 H 09	2 H 03	2 H 39	0 H 57	1 H 21	0 H 22	0 H 33	0 H 19
1979	0 H 14	2 H 20	0 H 34	2 H 26	1 H 23	1 H 02	1 H 52	0 H 24	1 H 05	0 H 22	0 H 38	0 H 21
1987	0 H 22	4 H 11(1)	0 H 43	2 H 55	2 H 19	1 H 41	2 H 34	0 H 41	0 H 56	0 H 25	0 H 39	0 H 18
1989	0 H 38	6 H 24(2) 7 H 02	0 H 38	6 H 24	1 H 36	3 H 12	4 H 22(2) 2 H 49	1 H 01	3 H 12	0H 54(3)	1 H 17	0 H 38

(1) Detail price estimated
(2) Price of february 1989
(3) 1 Kg of spinachs

Notes . (1) Detail prices are of March 89
For the other years, detail prices are yearly average
. (2) Average wage for 89 is taken as the average wage of a edition house employee
(monthly average wage is 125 000 L.T.)

Source :D.P.T 1988, ; D.I.E., 1963, 1975, 1987,1989 ; D.I.E., 1988, Cumhuriyet Daily, 14.07.1989

TABLE 6 : The working time needed by a minimmum wage-earner in France and in Turkey to buy 1 kg of certain food stuffs in March 1989

	Bread	Rice	Cocos	Red meat	Milk	Cheese	Margarine	Olive oil	Sugar	Leeks Spinachs	Oranges	Potatoes	Minimum Guaranteed Wage
FRANCE	0H 21	0H 21	-	1H 22	0H 06	1H 39	0H 42	0H 59 (OH19)1	0H 13	0H 24	0H 17	0H12	29,36 F.F/Hr
TURKEY	1H 07	4H18	3H00	12H03	1H12	11H10	3H47	6H14 (3H47)1	1H33	1H02	2H35	0H52	581,25 LT/Hr

1) Litre of sun-flower oil

Notes For France, detail prices are for Paris city
For Turkey, detail prices are for the city of Istanbul

Source : I.N.S.E.E., 1989 ; D.I.E. 1989, Cumhuriyet Daily, 4.4.1989

TABLE 7 : PER CAPITA CONSUMPTION OF CERTAIN FOOD PRODUCTS IN TURKEY
(at national level)

	kg/year/capita		
Food product group	1974	1981/82	1984
Bread	117,3	156,7	95,8
Cereal products	26,7	42,2	24,6
Pulses	2,9	7,5	9,6
Milk, yoghurt	23	29,6	18,4
Cheese	6,9	9,7	6,1
Milk product in milk equivalent	67,5	77,1	48,9
Meat	14,3	12,1	10,1
Poultry	0,9	1,3	1,1
Fish	1	3,1	1,9
Eggs	2,6	2,7	3,5
Meat, poultry, fish, egg (total)	18,8	19,2	16,6
Fresh vegetables	93,8	70,5	62,9
Fresh fruits	64,7	29	46,1
Vegetables oil	5,5	4,5	5,7
Fats	5,5	7,5	3,7
Sugar and sugar product	10,6	13,5	11,2

Source : T.O.K.B./ UNICEF, 1987, H. GENCAGA, 1985.

Elsewhere the fall in bread consumption, other cereal products and fresh fruit and vegetables is quite apparent. There is also a slight decrease in the quantities of fatty substance consumed.

These results show the link between the considerable drop in purchasing power and the deterioration of nutritional levels in Turkey.

Regional differences show for example that in East Anatolia in the town of Erzurum a person takes less working time to buy the same quantity of produce than in the West of the country.

The reasons which drive peasants near Erzurum to emigrate to Istanbul or abroad rather than to a town near their village are to be found in national imbalances of a socio-economic kind.

Without a better distribution of industry or a road network which reaches remote towns as well as the main traffic routes, and without investment in infrastructure in favour of the underprivileged regions, the socio-economic problems and their immediate consequences on food imbalances will remain for a long time to come. The general deterioration in living standards which has affected Turkey in the 1980's could easily worsen. The heart of the problem no longer lies in agriculture. Rural exodus has erased or disguised rural unemployment and production yields have increased. Although its contribution to GNP is falling, Turkish agriculture is still the driving force of the economy. The bottlenecks must be found elsewhere, in the inability of other sectors to absorb the rural exodus.

2.6. THE INFORMAL ECONOMY: THE LIFEBELT

Despite this very black picture, people manage to survive, to live and work and feed themselves; the effects of inflation have not been translated into violent social outbursts.

There are several possible explanations; firstly women's work. In the 1985 Household Labour Force Survey[7] it was shown that 34% of households have 2 incomes or more. At the same time, according to the 1986 surveys on income distribution[8], 60 % of urban and 90 % of rural households were in fact houseowners.

According to the results of the same survey approximately 50 % of households have other sources of income. These may be rents, interest rates, and income in kind from sharecroppers etc.. Lastly 71 % of households declared that they received agricultural produce and/or prepared them at home.

It must also be noted that an informal economy exists. Most workers seem to have jobs other than those which are declared. All these lateral sources add to their salaries and slightly increase their purchasing power, but they are not mentioned in official statistics. Although the parallel

economy may explain the limited effects of inflation, the deterioration of food consumption in Turkey is real and unavoidable.

The fact that farmers are playing a more important role in the market economy and commercializing more and more of their produce must not be ignored either. This fact obviously reduces subsistence farming levels and worsens their nutritional situation. As the level of subsistence production is incalculable it remains open to controversal debate.

CONCLUSION

The Turkish economy is progressing on a global level and the 1980's have brought quite satisfactory average growth of GNP.

This progress however is not always reflected in terms of social well-being because of the unequal diffusion of this growth. Despite an average improvement, social inequalities are still widening and the numbers leaving the country for urban centers have become worrying. The non-agricultural sectors of the country have not managed to absorb the excess labour force.

Despite the potential of its agriculture, the majority of the population has no access to food which is rich in quality proteins. The food consumption pattern is still based on bread and other cereal products and to a lesser degree on fresh fruit and vegetables.

We shall conclude this analysis with four comments:

- Food, a vital component of global economy, remains an important factor in Turkey since it absorbs almost half of the household budget. So every action, and every policy which aims at global economic balance has repercussions on the food situation through the intermediary of purchasing power.

- After an improvement in the food situation in the 70's, there was a general deterioration in the early 80's. Is it a coincidence that this cor-

responds to the period of macro-economic adjustments in agreement with the IMF? If not, was priority given to global balances to the detriment of social welfare?

- One cannot speak of general insufficient food intake but of food imbalance and persistent malnutrition, essentially for reasons which have to do with education. This situation is menacing because while a serious situaton can be treated by emergency measures, latent malnutrition menaces both present and future capabilities of the population and is difficult to solve.

- Finally there is a lot of talk of the GAP irrigation project in south-eastern Anatolia, a project which supposedly would double agricultural production. Development does indeed require an increase of growth of this size. The key to development however lies in a larger social distribution of growth.

APPENDİX

TABLE A-1 : BUDGETARY COEFFICIENTS - 1985

Expenditure per items / total expenditure (average OECD prices)

	E. E. C.	Turkey	Japan	U.S.A.
Food consumption	23	48	18	15
Housing	21	11	22	17
Medical care and health	10	4	16	10,5
Education, leisure	7	3,5	8	10

Source : D.I.E., 1988

TABLE A-2 : ENERGY NUTRIENTS AND OLIGO-ELEMENTS NEEDED PER DAY AND PER CAPITA ACCORDING TO AGE GROUPS (Recommanded quantities for Turkey)

	AGE GROUP												Suppléments			
	0-1	0-3	.4-6	.7-9	10-12		13-15		16-19		Adult		Pregnant	Nursing	Worker	
					M	F	M	F	M	F	M	F	Woman	Woman	M	F
weight (kg./capita)	7	12	18	25	32	33	46	48	60	53	65	55				
CAL./JR/Capita	800	1300	1700	2100	2500	2400	2900	2500	3100	2300	3000 .(2700)	2200 .(2000)	.+150	.+700	.+1200	.+500
Total proteins (gm./jr/t.)	30	49	64	79	94	90	108	94	116	86	112 .(101)	82 .(75)	.+5,6	.+26	.+45	.+19
Animal proteins (gm./jr/t)	18	29	38	47	56	54	65	56	70	52	67 .(61)	49 .(45)	.+3,4	.+16	.+27	.+11
Lipides (gm.)	27	43	57	70	83	80	97	83	103	77	62 .(56)	46 .(42)	.+5	.+23	.+40	.+17
Animals lipids (gm./jr/t.)	17	27	35	43	52	50	61	52	65	48	39 .(35)	29 .(26)	.+3,1	.+15	.+25	.+10
Carbohydrates (gm)	110	179	234	289	344	330	399	344	426	316	412 .(371)	302 .(275)	.+21	.+96		
Calcium (mgm)	500	500	500	500	600	600	700	600	700	600	500	500	.+500	.+500		
Vitamin A (I.U.)	1500	2100	2100	2667	3843	3834	4834	4834	5000	5000	5000	5000	.+1000	.+3000	.+1000	.+500
Vitamin B1 (mgm)	0,3	0,5	0,7	0,8	1	1	1,2	1,1	1,4	1	1,2	0,9	.+0,2	.+0,4		
Vitamin B2 (mgm)	0,6	0,8	1	1,3	1,4	1,3	1,8	1,5	2	1,3	1,4	1,3	.+0,3	.+0,6		
Niasin (mgm)	6	9	11	14	16,5	16	20	17	23,3	16	18	14	.+3	.+7		
Vitamin C (mgm)	20	30	30	40	40	50	50	50	50	50	50	50	.+30	.+30	.+30	.+20
Iron (mgm)	7	8	9	10	10	10	15	20	15	20	15	20	.+5	.+5	.+5	.+5

Source : M.P.N., 1970 ; BAYSAL, A. 1977

TABLE A - 3 : DAILY QUANTITIES OF FOODSTUFFS NECESSARY TO SATISFY NUTRITIONAL NEEDS

gm./day/capita

FOODSTUFFS	AGE GROUP												Supplements		
	0-1	0-3	.4-6	.7-9	10-12		13-15		16-19		Adult		Pregnant Woman	Nursing Woman	Worker
					M	F	M	F	M	F	M	F			
Red meat and offalis	10	25	37	45	65	65	100	100	100	100	110	110		.+25	.+25
Poultry meat	5	15	15	25	25	25	35	30	35	30	30	30			
Fresh fish	5	6	8	10	15	15	25	25	25	25	30	30			
Eggs	30	50	25	25	25	25	25	25	25	25	20	20			
Milk and yoghurt	750	500	450	450	450	450	450	450	450	450	300	300	.+250	.+250	.+150
Cheese	5	20	30	35	40	40	40	40	40	40	30	30			
Pulses	10	30	30	35	40	35	40	30	40	30	50	35			
Potatoes	15	25	40	50	50	50	70	50	70	50	70	50			
Fresh vegetables	45	150	225	275	300	300	300	300	350	325	300	300	.+150	.+150	
Citrus fruits	15	25	35	50	50	50	50	50	50	50	50	50			
Other fresh fruits	15	50	70	115	125	125	150	150	175	175	175	175			
Bread	10	30	95	175	275	250	320	200	320	200	320	200	.+50	.+100	.+100
Other cereals products	5	25	45	50	50	45	45	50	70	35	85	35			.+50
Rice	5	15	20	25	25	25	35	25	35	30	35	30			
Animal fats and oils	3	7	15	20	25	25	30	25	35	20	30	20			.+15
Margarine and vegetable oils	1	7	15	20	25	25	30	25	35	20	30	20			.+15
Sugar	5	25	40	50	30	30	55	50	55	50	50	50			.+50

Source : Based on the data here-by presented : - BAYSAL , A., 1977 ; KOCAMAN , T., 1977

Note : We used Pr. ATWATER's method for our calculations.

TABLE A-4 : RELATIVE EVOLUTION OF WAGES AND REMUNERATIONS IN TURKEY

Index : G.M.W. = 100

L.T./mouth/person	1969		1979		1987**	
	LT	index	LT	index	LT	index
the guaranteed minimum wage	436	100	3241	100	57958	100
Public Sector worker's wage	642	147	10536	325	104900	181
Private sector worker's wage	546	125	8747	270	91200	157
Average wage on national level	503	115	6012	185	78895	136
Average earning of a pensioner			8692	268	120144	207
Average earning of a widow or orphelin of a pensioner			5514	170	83122	143
Aver. earning of a white collar worker (15/2) (1)	* 659	151	6313	195	81683	141
Average earning of a clerical worker (7/2)	903	207	7883	243	93178	161
Average earning of a clerical worker (1/2)	1925	442	11622	358	160561	277
Deputy remuneration	3644	836	28069	866	865751	1494
Remuneration of executive officer			15419	476	386593	667
Remuneration of sub-prefect			16649	514	362932	626
University professor			19835	612	423908	731
Researcher at university			9733	300	169587	293
Physician doctor at the university			38045	1174	482473	832
Specialised physician			33640	1038	264442	456
Assistant physician at university			13460	415	218445	377
Civil engineer			14277	440	275279	475
Second school lecturer			11159	344	198872	343
Primary school teacher			5982	185	165288	285
Policeman			9181	283	176291	304

* 1970 Statistical data

** 1987 : Net wage + AVT repayment

(1) the numbers in parathesis show the grade and scale of state clergy workers.

Source : DPT, 1988.

TABLE A - 5 : POPULATION DISTRIBUTION BY ECONOMIC ACTIVITIES

	1980		1985	
	Number of persons	%	Number of persons	%
Total population	44 736 957	100,0	50 958 614	100,0
Economically active population	19 212 193	42,9	18 422 980	36,1
Working population	18 522 322	41,4	16 162 790	31,7
Unemployed persons	689 871	1,5	2 260 190	4,43
Economically inative population	11 194 199	25,02	16 399 120	32,2
Pensioners (Retired)	581 158	1,3	1 328 654	2,6
Housewifes	6 950 968	15,5	9 351 027	18,3
Students	2 654 580	5,9	3 340 261	6,5

Source : D.I.E., 1988 ; D.I.E., 1987

TABLE A - 6 : GUARANTEED MINIMUM WAGE IN TURKEY ACCORDING TO OFFICIAL STATISTICAL DATA FOURNISHED BY THE WORKING AFFAIRS MINISTRY OF TURKISH REPUBLIC

MONTHLY GROSS WAGE (T.L.)			
INDUSTRY		AGRICULTURE	
.1/7/1974	1200	.1/8/1974	990
.1/6/1976	1800	.1/7/1976	1500
.1/1/1978	3300	.1/2/1978	2700
.1/5/1979	5400	.1/6/1979	4800
.1/5/1981	10000	.1/5/1981	8610
.1/5/1983	16200	.1/1/1983	13200
.1/4/1984	24525	.1/5/1984	20100
.1/10/1985	41400	.1/10/1985	34200
.1/7/1987	74250	.1/7/1987	65700
.1/7/1988	126000	.1/7/1988	117000

Since 1/7/88, the guaranteed minimum net wage in industry is : 93000 LT/month and in agriculture 86360 LT/month

TABLE A-7 : THE CONSTITUTION OF A WEEKLY TYPICAL FAMILY SHOPPING BASKET ACCORDING TO PR. BAYSAL'S LISTING

	ISTANBUL				ERZURUM			
Needed quantities of food stuffs	1959	1969	1979	1989	1959	1969	1979	1989
5,600 Kgs of bread (14 loaves of 400 grs each)	3,57	6,72	58,41	3612,00	3,53	7,00	51,46	2800,00
1 kg of rice	2,61	2,01	39,79	2500,00	2,10	4,62	41,08	2500,00
2 packets of macaroni	1,63	1,15	9,75	1000,00	1,74	1,33	11,40	1200,00
1,250 kg of lentils or cocos	3,44	5,85	73,63	1688,00	3,12	4,90	65,64	1563,00
1,5 kg of veal or beef meat	8,69	17,75	238,30	10500,00	5,76	14,51	132,50	8250,00
7 liters of milk	8,01	17,43	185,71	4900,00	8,40	14,21	149,31	3500,00
O,5 kg of white cheese	2,70	5,45	54,00	3250,00	2,33	5,07	46,15	2500,00
20 eggs	5,58	9,40	77,60	3200,00	3,76	8,80	78,80	3000,00
3 kg of spinachs or leeks	1,80	2,67	52,02	1800,00	1,72	3,81	42,60	2100,00
6 lemons	1,72	2,28	26,58	900,00	1,90	2,40	27,48	900,00
3 kgs potatoes	2,13	2,88	47,82	1500,00	1,53	3,24	39,72	1500,00
1 kg of onions	0,55	1,68	9,98	500,00	0,58	2,24	10,45	500,00
6 kgs of oranges	9,94	16,50	146,04	9000,00	8,10	11,40	116,88	6000,00
O,5 kg of sun flower oil or olive oil	2,55	4,18	33,13	1100,00	2,87	4,52	35,38	1100,00
0,250 kg of margarin	1,33	1,65	9,03	550,00	1,36	1,75	9,80	590,00
1 kg of power sugar	3,23	3,25	15,74	900,00	3,25	3,25	15,16	800,00
0,5 kg of salt	0,18	0,47	5,85	500,00	0,10	0,25	4,93	600,00
TOTAL EXPENDITURE	59,66	101,32	1083,38	47400,00	52,12	91,06	878,74	39403,00

Note : THE NET AVERAGE WAGE IN 1989 IS125 000 LT/MOUTH

Source : D.I.E., 1977, 1987 ; Cumhuriyet Daily, 9.4.1989

NOTES

[1] Method : For our calculations, we used Pf ATWATER'S method as well as the Foods nutritional composition tables prepared by Ministry of Agriculture of Turkish Republic.

[2] This apparent improvement is due (in fact) to the different methods used for the 84 survey which excluded the Black Sea and Eastern Anatolia, the most disadvantaged regions of the country.

[3] The 5 socio-economic regions (according to the definitions of the DIE and DPT) are : the Aegean-Marmara, Central Anatolia, Mediterranean, Black Sea, East and South East Anatolia. These 5 regions include 9 agricultural regions and present important agricultural, economic, social and cultural differences.

[4] for the calculations of the typical family shopping basket see the table A.7.

[5] -Beslenme 1974, Hacettepe Üniversitesi/UNICEF, 1977, Ankara
-Gıda Tüketimi ve Beslenme 1984, T.O.K.B/UNICEF, 1985, Ankara
-Nutrition and Food Consumption in Turkey, TDF, 1985, Ankara

[6]

	1974	1984
Breeding cattle	34544000	31349000
Slaughtered animals	10372000	16846000

Statistical Yearbook of Turkey 1977 et 1987, DIE, Ankara

7 1985, Urban and Rural Areas Labour Force Surveys, DIE, Ankara. According to the results of 1985 Household Labour Force Survey, 22% of urban and 19% of rural households have no actively employed family-member. 56,4% of urban and 32% of rural households have only one family member actively employed.

[8] Esmer Y. The Socio-Economic Situation and Outlook of the Turkish and al. Househod. TUSIAD, İstanbul. 1987.

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ÖZET

TÜRKİYE VE AKDENİZ ÜLKELERİNDE BESİN TÜKETİMİNDEKİ GELİŞMELER

Çalışmanın ilk bölümünde gelişmiş ve gelişmekte olan ülkelerde tarım-besin sistemleri irdelenmektedir. Bu girişten sonra Akdeniz ülkelerinin beslenme kalıpları uluslararası eğilimlerle karşılaştırılmaktadır. Çalışmanın ikinci bölümünde Türkiye'deki tüketim ve beslenme kalıpları konu edilmektedir. Bu çerçevede Türkiye'deki başlıca besin maddelerinin üretim, tüketim düzeyleri, bölgesel dağılımları ve bu büyüklüklerin zaman içerisindeki değişmeleri incelenmektedir. Çalışma, beslenme açısından 70'lerdeki düzelmeleri 80'lerde bir bozulmanın izlediği sonucuna varmaktadır. Bu bozulmanın besin üretim yetersizliğinden çok, beslenmedeki dengesizliklerden kaynaklandığı ve çözümün tarımsal üretim artışlarından çok sosyal dengesizliklerin ortadan kalkmasına bağlı olduğu savunulmaktadır.