

THE "PRICE REVOLUTION" IN THE OTTOMAN EMPIRE AT THE END OF THE SIXTEENTH CENTURY

The "price revolution", this "unique economic phenomenon in the early period of the world market"¹, and its various forms of manifestation — the depreciation and devaluation of money, the rapid increase — appeared and developed not only in Europe but also in other areas, such as the Ottoman Empire and Persia.² The present paper attempts to examine the Turkish price revolution in the period before the early 17th century (1606).

Among the *phenomena of the Ottoman price revolution*, the *process of the depreciation of coins*, primarily that of the akçe (asper) should be mentioned in the first place. The monetary affairs of the Ottoman Empire were founded on a silver based monetary system, whose fundamental unit was the silver akçe³. Other silver and gold coins of greater value, of both foreign and home origin, were of course also in circulation, such as the para, piastre, and the altun. The term bimetallism, however, could be applied to the economic-monetary life of the Empire only in a rather limited sense: the akçe was used mainly within the Empire, while the coins of greater value circulated in the international trade.⁴ The inflation of the akçe was negligible in the first half of the 16th century, its value rate to the gold coin (altun) hardly changing at all. The exchange rate between 1491 and 1516 was usually 52 akçe to the altun, rising to 55 between 1517 and 1549, and to 60 between 1550 and 1566.⁵ After the death of Soliman, on the succession of Selim II (1566), the government reduced the silver content of the akçe (from 0.731 gms to 0.682 gms), but tried to keep its official rate of exchange the same.⁶ Nevertheless, the akçe immediately began losing its value, and its "market price" went down. In 1574, Sultan Murad III sent a ferman to Palestine to the effect that one gold piece should be exchanged for 40 paras (80 akçe) in the province. The decree also mentions the exchange rate in Istanbul, which was 35 para (70 akçe) to the altun.⁷ No doubt, the exchange rate in Palestine better reflected the extent of the inflation of the akçe than that in Istanbul, since the government was able to enforce its regulations more effectively in the capital. The market value of the gold piece moved between 80 and 100 akçe during the same period.⁸

The depreciation of the akçe continued in the 1580s, during the war with Persia (1578 — 1590). Therefore, the government issued a decree between 1584 and 1586 which devaluated the chief means of paying. The silver content of the new coin was reduced to nearly half of that of the earlier (0.384 gms), and 120 new akçe was to be had for the altun.⁹ The effectiveness of this measure can be inferred from a ferman sent to Aleppo in 1588, according to which 120 akçe was had for one altun in Istanbul, and which also prohibited more than 120 akçe to be had for one gold piece in Aleppo. The Sultanic ferman also mentions two other silver coins besides the akçe: the kurus (piastre), worth 80 akçe, and the padisahi, worth 8 akçe.¹⁰ It appears from the ferman that the inflation was more or less checked in the central regions of the Empire; it was more difficult, however, to enforce the regulations fixing the official exchange rate in the provinces. In 1589 — 90 the government drew the old coins from circulation and issued new pieces to establish monetary

stability.¹¹ The “market price” of the akçe, nevertheless, continued to tend to be lower than its official exchange rate. From a ferman to the Governor of Adana, in 1591–92, it transpires that in defiance of the decree — which set the rate of the akçe at 120 to the altun and 70 to the kurus — the altun was had for 130, and the kurus for 80 akçe.¹² The 1594–95 ferman to Anatolia yields the information that the province had been drained of the more valuable coins (altun, piastre), and that the akçe was extensively forged; 18–19 akçe pieces were struck from one dirhem (3.2 gms) silver. According to the decree, the rate was 135 akçe per altun and 85 akçe per piastre. The ferman limited the number of akçes to be struck from one dirhem to 8, and strictly forbade the selling of altun and piastre for more than the official exchange rate.¹³ Centrally issued measures, however, could not stop the process of the depreciation of the akçe. According to Sanderson, the English ambassador in Istanbul, the exchange rate between March and September, 1599, was 140 akçe to the gold ducat, and after September it went up to 160.¹⁴ The preamble to *the price regulations of November 15, 1600* (Narh Defteri) says that the value of the akçe had decreased to the extent that 180 pieces are had for one altun. The inflated akçe was drawn in again, and new coins issued. Although the silver content of the new akçe was lower (0.323 gms), the official exchange rate was set at 120 akçe per altun. The Narh Defteri intended to raise the value of the akçe together with that of silver, and to stabilize the exchange rate at the 1584–86 level. To this end, the value of the money was raised 33% with the prices simultaneously lowered to the same extent.¹⁵ For a long time after that, till 1618–19, the value and the silver content of the akçe remained essentially unchanged.

Considering in itself, for the time being, the depreciation of the akçe, without regard to the raises of the market prices, it transpires that, between 1566 and 1600, the value of the akçe, in relation to gold, sank to its half in the official exchange rate (from 60 to 120), even, occasionally, in the free market, to its third (from 60 to 180). In other words, during the period under consideration, the akçe underwent a 200% and/or 300% inflation (accordingly, the value of the altun going up proportionately). The silver content of the akçe fell to somewhat lower than its original half (from 0.731 to 0.323 gms) during the period under discussion. The changes of the silver content and the exchange rate of the altun and akçe thus corresponded to one another. The government — as indicated by the devaluation in 1584–86 and the regulations in 1600 — decreased the precious metal content of the akçe in a somewhat greater proportion than it did its exchange rate to the altun. The free market exchange rate of the akçe, on the other hand, usually fell lower than its silver decreased.

One of the important characteristics of the “price revolution” is *the dramatic rise of the prices of various products*. This is, naturally, related to the fact that the value of the universal equivalent, the akçe, decreased. Not unlike in Europe, it was chiefly the prices of *agricultural products* that went up significantly. An attempt is made below to analyse the changes in the prices of these products. One of the reasons to do so is that it is about these products that we have the greatest quantity of the kind of data that allows the drawing of certain conclusions. On the other hand, this group of commodities is most representative of the Turkish price revolution, the economy of the Ottoman Empire being overwhelmingly agrarian in character (the weight and significance of urban guild-type industries being much less than that of agriculture).

The prices of grain rose significantly during the period between the end of the 15th and the beginning of the 17th centuries. The price paid for 1 kile (25.7 kgs) of grain in Istanbul was about 13 akçe in 1489–90, 23 akçe in 1585–86, and 71 akçe in 1605–06.¹⁶ At the same time, in the district around Edirne 1 kile of grain cost something like 6–10 akçe between 1540–55, wavered between 9–20 akçe after 1566, and rose to 40–65 akçe between 1597–1607. In Bursa, on the other hand, the price of grain increased only 2–3 akçe per kile (from 4–5 to 7) between 1539–1564, while it went over 52 akçe in 1617.¹⁷ The years between 1550 and 1600 saw grain prices quintuple in Ankara, and decuple along the Aegean coast.¹⁸

The price of rice also went up high. In 1489–90 it was sold for only 16 akçe per kile in Istanbul, in 1585–86 it cost about twice as much, that is 33 akçe, and in 1600, before the Narh Defteri, you had to pay 56 akçe for it. The regulation set its price at 39 akçe, but by 1604–05 it had shot up again to 60 akçe.¹⁹

As regards the changes in the price of butter, it appears that the market price of 6 akçe in 1490 doubled by 1585 to 12 akçe. Before 1600, 1 okka (1.285 kgs) of butter cost 26 akçe, to be reduced to 19 akçe by the price regulations.²⁰ The Narh Defteri cannot have produced enduring results in the case of butter, either, since according to data from the territory of Hungary under Turkish occupation, it cost 25 akçe already in 1601.²¹

Honey was sold in Istanbul at about 4 akçe per okka in 1489–90, and about 9 akçe in 1585–86. According to the regulations, before 1600 one could occasionally be charged as much as 20 akçe for 1 okka of honey, and the decree set the new price at 13 akçe. This, by 1604–05, had risen to 18 akçe.²²

Flour cost 18 akçe in 1489–90, and 25 akçe in 1585–86. Before 1600 the price of 1 kile of flour was as high as 120 akçe. The regulation set the new price at 80, 75, and 50 akçe depending on the quality of the flour. In 1604–05 flour still cost 75 akçe, i.e. it had remained at the 1600 price level.²³

Lamb cost one and a half akçe per okka in 1489–90, going up to 3 akçe by 1585–86.²⁴ According to data from Turk-occupied Hungary, it had climbed to 6–9 akçe by 1590–94.²⁵ Before the decree of 1600, the price of lamb was often as high as 20 akçe to the okka, which the regulation lowered to 13 akçe. In 1604–05 lamb was even cheaper, 10 akçe.²⁶

The six commodities considered above seem to be well representative of the tendency of rising prices of agrarian products.²⁷ According to the available data, prices, compared to those at the end of the 15th century, rose slowly, moderately before 1585, *the pace of increase gathering speed significantly between 1585 and 1600*. According to Barkan, who regards the prices of the year 1490 as 100%, by 1585 the price index had risen to 182% expressed in akçe, and to 162% expressed in real (the silver content of the akçe). By 1588–89 the former had rocketed to 365%, while the latter had risen only to 182%. The increase of the price index slowed down somewhat between 1589 and 1596, but the akçe-index still reached 532%, and the real-index 266%. In 1600, the Narh Defteri resulted in the decrease of the two indexes to 418% and 209%, respectively. Before long, however, new increase followed, the akçe-index reaching 630%, which can be regarded as the top, and the real-index staying a little below that of the year 1596 (265%).²⁸ The two decades between 1585 and 1606 saw the price index of agrarian products expressed in akçe undergo a 3.4-fold, and the real-index a 1.6-fold, increase. Naturally, there is a considerable divergence between the various products, since the prices of lamb and

flour sextupled and quintupled (before 1600), while grain price trebled, butter, honey, and rice prices doubled only. The rapid, overall rises of prices were definitely preceded by the gradual (after 1566), and the dramatic (from 1584) devaluation of the akçe. As it has been mentioned above, the official exchange rate and the silver content of the akçe sank only to its half, its free market price at most to its third between the years 1566 and 1606. *While the official exchange rate of the akçe remained essentially unchanged between 1584 and 1600, and its free market price decreased also only 60 – 70%, during the same period of time the average price increase of agrarian products was over 300%.*

A number of explanations have been put forward about the possible *causes* of both the European and the Ottoman “price revolution”. Traditional monetary theory attributes the inflation to the massive inflow of American precious metal (chiefly silver) into Europe, which assumed gradually larger proportions after 1560, topping around the turn of the century.²⁹ One obvious handicap of the monetary theory is that it fails to answer the question why the prices increased in differing degrees. It was, to wit, the agrarian prices, and, within them, the grain prices that increased most spectacularly (at the average of between four and sixfold). The prices of industrial products increased less dramatically (falling short of even a threefold rise), and wage increases lagged even behind the latter.³⁰ The demographic theory tends to lay the “price revolution” at the door of the growth of population. Researches have revealed that the population of Europe increased about 30 million in 150 years (1450–1600). Agricultural technology, however, could not keep pace with this relatively very significant growth of population, hence grain prices – being those of vital commodities – went up to greater extents than industrial prices.³¹ The next theory regards the price revolution as the sign, and the consequence, of a change in economic structure. The scholars who put forward this theory have pointed out that the industrial, urban population of Western Europe grew faster than the agriculture was able to provide them with surplus, and it was this that caused the change in the price structure. West European inflation then, “through the channels of international commerce ... spread to Southeastern Europe, and was, in the beginning, even favourable to the interests of the region.”³² The West European market for agricultural products, and the high prices of agriculture instigated the development of agricultural commodity production in the East European region, and that finally lead to the development of the system of the so called second serfdom (*Zweite Leibeigenschaft*), based on forced labour.

The inquiries into the price revolution of the Ottoman Empire are, no doubt, based on the theories that explain the analogous phenomena in Europe. *One of the main types of hypotheses* attributes the inflation to the *ingress of economic-commercial processes outside the Ottoman Empire*; the other basic type regards the price revolution rather as the consequence of *changes within the Empire*. There is also a wide-spread *pragmatic method*, which explains the radical price rises in terms of the *joint effect of several factors*.

According to the most popular explanation, the main cause behind the Ottoman “price revolution” was the *cheap silver from Peru* flowing into Europe since the 1580s, resulting in a significant inflation, and this European inflation spreading to the Turkish Empire through the channels of commerce.³³ It must be remembered that, due to the effect of Mexican silver, prices in Europe had been growing since the 1550s, and a slow rising of prices can be discerned to have been

going on in the Ottoman Empire as well.³⁴ Adherents of this view also hold that the Turkish price revolution unfolding after the 1580s was also helped on by the price of gold, lower than in Europe, which caused the Ottoman Empire, as it were, to be flooded by European silver coins. In 1584, one of the most important items imported to the Empire from Europe was the silver real, boxfuls of it.³⁵ The influx of silver in the form of coins was also made easy by the "free trade" economic policy of the Turkish Empire, related to the fact that the main goal of the government was to secure a steady supply of necessary commodities and the importation of those in short supply. Thus it was only the exportation of commodities essential in providing for the population (e.g. that of grain) that was impeded, while imports were not restricted in any way whatsoever. The Ottoman state was based on a subsistence economy, struggling with a chronic shortage of precious metals, so the government encouraged the import of silver. On the whole, the Ottoman economic policy was based on bullionist views, regarding the active foreign trade balance exclusively in terms of the quantity of specie amassed in the vaults of the treasury.³⁶

The other theory tracing the Ottoman price revolution to external causes emphasizes the importance of *Western European demand for agricultural products*, and the high prices it led to. Both Barkan and Cook have observed that to no avail did the Turkish government prohibit the exportation of raw materials and food essential for the internal supply of the Empire, since the promise of big profits led to smuggling.³⁷ Cook's explanation as regards this phenomenon, namely that the price of grains on the coast of the Aegean Sea was twice as high as in Anatolia, is that it was primarily those regions of the Empire with good transportation facilities that could respond to the Western demand.³⁸ Barkan is of the opinion that the penetration of the so called Atlantic economy into the closed Ottoman economic system, on account of the differences between their price systems, resulted in the latter beginning to develop into an agrarian system producing for the market.³⁹ Shaw similarly stresses the point that economically developing and growing Europe, on account of the resulting boom in raw materials, was able, with its high prices, to draw these from the closed Ottoman economy.⁴⁰ Others have also pointed out that the Ottoman Empire was transforming towards the end of the 16th century, its medieval subsistence economy metamorphosing into a more developed market economy. The "price revolution" is believed to have played an important role in this development, speeding up, like a catalyst, its inner processes.⁴¹

Of the *internal factors*, the significance of *demographic changes* within the Empire have been emphasized. Braudel has hypothesized a significant growth of population in the Mediterranaeum including the Turkish Empire, which resulted, on the one hand, in the increasing demand by the Western Mediterranaeum, and on the other, in the decline of the grain-exporting capacity of the Eastern Mediterranaeum (i.e. the Ottoman Empire). He dates the boom in grain and the large-scale Turkish grain exports to the years between 1548 and 1564.⁴² Barkan also accepts the idea of a significant demographic growth in the 16th century. On the ground of surveys between 1520–30, and between 1570–80, he postulates a growth of 71% in Rumelia, and 55% in Anatolia. In his opinion, based on the sources, mainly the urban population grew in this period; nearly 90% in 40–50 years. At the same time he raises the question about the possibility of a mere "redistribution" of the population having taken place within the framework of an increasing urbanisation and a strengthening depopulation in the rural areas.⁴³

According to a survey, this period saw a 40% and an 80% increase of the population in the villages and in the towns, respectively, of the Ottoman Empire.⁴⁴ Cook has questioned Braudel's thesis that Turkish grain exports decreased after the 1560s because of the increasing internal demand. He believes, on the contrary, that large scale grain smuggling, that is, a more intensive – albeit illegal – grain trade, was carried on between 1570 and 1590 than previously. He generally accepts the view that the population of the Ottoman Empire grew significantly between 1450 and 1575, justified by the general tendency of the peasant holdings to be subdivided. He voices serious doubts, however, regarding the continuous growth of the population, especially in the last two decades of the century.⁴⁵ More recent studies, while confirming demographic growth between 1547–48 and 1569–70, bring forth evidence to the decrease of population between 1570 and 1613, particularly in the villages.⁴⁶

Most recently, Gerber Haim has claimed that the causes of the monetary-financial crisis of the Ottoman Empire, in addition to demographic growth and the spreading of money economy, also include the fact that the government, in its struggle to defeat the increasing deficit of the treasury, resorted to devaluation. By reducing the value of the akçe, the government tried to have the growing body of mercenaries and the population in general pay for the deficit. Haim refuses to accept the influx of silver as the main cause of the inflation. He believes the silver imported from Europe did not remain in the Empire but was passed on and ended up in Persia, the Turks being able to pay for Persian silk only in specie.⁴⁷ According to the *pragmatic* Parry, the price revolution should be attributed rather to the joint effects of various causes than to one single factor. He lists the inflow of silver, the growth of military expenditure related to the increase of the armed forces, and the significant growth of the population as the factors that led to the inflation.⁴⁸ Barkan postulates the following four components of the “price revolution”: the international movement of precious metals; changes (disadvantageous for the Ottoman Empire) in commerce; immense military and war expenditure; and the dramatic growth of population.⁴⁹

Having thus surveyed the views current in the literature on the subject, we should now formulate our own opinion about *the causes of the Ottoman “price revolution”*. *The inflation in Western Europe* would certainly seem to have played a *decisive role*, making itself felt in the Turkish Empire through the channels of the Levantine trade, on the one hand, and, on the other, through the illegal trade (i.e. smuggling) in the Mediterranaeum. Western Europe “infected” the economy of the Empire with great quantities of inflated silver coins. Haim's claim that the trade with Persia would have cleaned the Ottoman Empire of the silver from Europe has not been sufficiently substantiated. In addition to its silver, the influence of Europe also worked through its high agrarian prices, which forced, as it were, exports of important raw materials and foodstuffs from the Empire. That is to say, *the more developed Western European economic structure made its higher speed of development felt*, and the Ottoman agrarian system, being much weaker, was able to keep up with it only partially, and at the cost of enormous efforts. Western Europe, in fact, made its impact on the economy of the Turkish Empire with its radically changed *price structure*, which reflected its own internal development, and effected there changes, which were also radical but corresponded to the internal structure of the Empire. To summarise, the *Western European export of specie and the export of Turkish*

agrarian products – the exchange of two, different types of commodities – would seem to have been a fundamentally important cause of the Ottoman price revolution.

There is no doubt, however, that *internal factors* also played a major role in the inflation. What transpires from the studies at this stage is that the demographic growth stopped in the decade preceding the price revolution, and the last two decades of the 16th century through the beginning of the 17th are rather marked by the decrease of population. Thus the increase of the internal demand for agrarian products just during the critical period can be hypothesized only if the *demographic structure* had also changed. This seems very likely, since during the period of demographic growth (1540–1570) the urban population grew faster than the rural, and even during the time of the decrease (1570–1613) towns were less affected than villages.⁵⁰ Owing to the rising taxes, many peasants moved to the towns leaving their lands. The depopulation of villages, in direct proportion to the extent of the inflation, assumed larger and larger dimensions towards the end of the 16th century. *The growth of the urban population (including the members of the paid military, the bureaucracy, the imperial household, etc.), that is of the consumer classes, on the one hand, and the decrease of the proportion of the rural agrarian producers, on the other, could effect the increase of the internal demand for agrarian products, thus pushing up their prices. In addition to the external demand from Western Europe, the internal demand of the towns of the Ottoman Empire could also be an important factor of the price revolution.*⁵¹

Factors related to the treasury and the administration of public revenues should also be considered besides the deeper, economic causes of the “price revolution”. During Soliman’s reign the balance of the budget was to a considerable extent (cc. 70 million akçe) to the favour of the revenues as opposed to expenditure. Towards the end of his life, however, a small deficit (cc. 6 million akçe) appeared indicating the existence of economic and financial difficulties in the Ottoman Empire.⁵² After the Persian wars, in 1591, the revenues were about one third less than the expenditure (a deficit of cc. 70 million akçe), the deficit growing to catastrophic proportions in 1597 (cc. 600 million akçe).⁵³ The deficit of the treasury would seem to confirm the phenomenon observed in connection with the agrarian prices; the inflation, *the monetary crisis hit the bottom in the late 1590s. One of the causes of the growing deficit in the budget was the enormous cost of the two prolonged military entanglements at the end of the century, the Persian war (1578–1590) and the Fifteen Years’ War (1593–1606).*⁵⁴ Military spending was significantly enhanced by a process, rather general in the 16th century; *the growth of the number and the proportion of the mercenary troops* within the army. At the beginning of Soliman’s reign, in 1527, the total number of the janissaries, and the sipahis of the Porte was about 13.000; in 1567 it was over 21.000, in 1582 over 27.000, and in 1609 the janissaries alone numbered 37.000.⁵⁵ This swelling of the mercenaries of the Porte put the government in a difficult position, and several times during the inflationary period it lagged behind with the payment due at every quarter (ulufe).⁵⁶ In order to eliminate the deficit, to pay the mercenaries, and to continue the prolonged wars effectively, the government devaluated the akçe (1584) and paid the soldiers with the new coins, and introduced other measures as well (raised taxes, gave the vacant timars to tax-farmers, etc.)⁵⁷ The devaluation of the akçe accelerated the inflation. The akçe, rapidly losing its value, was extensively forged, thus becoming more and

more a copper piece. People wanted to get rid of the depreciating coins, thus speeding up their "circulation". *The inflation of the akçe was added to the inflation of silver ingressing from Western Europe*, the two processes strengthening one another. *The internal and external factors together led to the — in this age unusual — rise of agrarian prices between 1580 and 1606.*

The "price revolution" affected the economic and social system of the Ottoman Empire, causing fundamental changes in its "classical" Turkish system of institutions. The inflation contributed to the disintegration of the *timar-system* and the *servant system* (devshirme).

Service estates or income estates (=timar) meant that their holders, the sipahis, were granted the right of collecting taxes and duties in lieu of payment, and were in turn obliged to provide military service; they were expected to march to war with a number of troops depending on the size of their incomes. As a result of the agrarian boom and the rise of prices, the value of the duties the peasants (reyas) paid in specie was losing its value, and mainly the small holder sipahis were, therefore, less and less able and willing to fulfil their military obligations. The government occasionally responded drastically to the sipahis' absence from military campaigns.⁵⁸ The high agrarian prices urged the sipahis to settle down and regard their service holdings as hereditary possessions ("*feudum*"). Their number, at the same time, was dramatically decreasing,⁵⁹ and they sank to a lower level as a class, though not disappearing completely. According to Barkan, "the first victim of the widespread inflation was the semi-feudal military ... cavalry".⁶⁰ The government was also responsible for the process of the sipahis' being driven into the background. This feudal cavalry, with its obsolete weaponry and tactics could not keep up with the general military development, and thus in the wars at the end of the century a gradually increasing role was played by the growing paid troops of the Porte (janissaries, sipahis of the Porte), and other mercenary elements (sekban, sarija).⁶¹ The government also contributed to the sipahis' losing weight by refusing to distribute the vacant timars, and — as an effort to raise the revenues of the treasury — giving them to tax-farmers, instead. A portion of the timar estates was acquired or bought by court favourites, usurers, tax-farmers, and janissaries. Significant concentration of estates can also be perceived in this period, in some cases more than fifty timars owned by one person.⁶² The class taking the place of the sipahis was far from being homogenous. Obviously, the new owners would not even hear of the military obligations that previously had gone with the timars, which slowly began to turn into hereditary estates. The process was strengthened by the appearance of the *çiftlik*, formed on some of the timars, and resembling the Eastern European manorial estate. Riding on the wave of the agrarian boom, the *çiftliks* appeared at the end of the 16th century, mainly in the fertile plains, spreading extensively, however, rather in the 17 — 18th centuries.⁶³ It was also due to the effect of the "price revolution" that the wealthy elements of the Ottoman Empire, having joined the trade of commodities,⁶⁴ started to get involved in commodity production, as well.

In addition to the timar system, the devshirme system also began to disintegrate. The mercenaries of the Porte (kapi kulu), on account of the depreciation of their pay, began to get involved in trade and crafts. Since the janissaries were exempt from taxes, other elements also tried to avail themselves of this privilege by having themselves included on the payroll, without fulfilling the military obligations

that would have to go with it.⁶⁵ The infiltration of merchants and artisans among the mercenaries of the Porte was rendered easier by that the sons of the janissaries – regarded by the law as Moslim – were admitted into the mercenary units first (from 1574) according to a quota, and later the “status” of janissary became generally hereditary.⁶⁶ The swelling up of the mercenary units of the Porte had two serious consequences. One was that discipline deteriorated to incredible extents, and the other that this military class, increasingly merging with merchant and artisan elements, and more and more frequently used in factional struggles, was gaining political weight in Istanbul. The inflation led to mutinies among the kapi kulu troops (e.g. in 1592, 1600, 1603), which the government could suppress only with difficulties.⁶⁷ The growing number of mercenaries made devshirme, the “child-tax”, unnecessary, and in the 17th century it disappeared completely.

The price revolution had serious consequences in the villages as well. Due to the inflation, the depreciation of the akçe, the government raised the taxes. While in the early 16th century the jizye was only 40 akçe, at the end of the century it was 240 akçe. The permanent wars made the extraordinary, so-called avariz taxes, regular, annual taxes to be paid in money.⁶⁸ The abuses of tax-farmers rendered the peasants’ condition more difficult and caused them to leave their lands for the towns or organize themselves into landless, roaming, and plundering bands (levend). The government proposed to solve the problem posed by the levends with its settlement policy (e.g. when Cyprus was taken in 1571, settlers were sent there), and/or by turning these bands into military (sekban, sarija) units. The so-called jelali uprisings at the end of the 16th century, in which the levends and the small holder sipahis joined forces against the central government supporting the tax-farmers, were suppressed with difficulties (between 1596 and 1610).⁶⁹

The Ottoman “price revolution” was *significant* in several respect. It was, on the one hand, *an important factor in the* economico-monetary, social, political, and spiritual *crisis* of the Ottoman Empire.⁷⁰ During the 17th century this crisis evolved into a prolonged process of decline. The Ottoman Empire found itself *on the periphery of the* just emerging world economy, more and more subordinated to Western Europe, the new center. However, the price revolution, besides its damaging consequences, resulted in *promising changes* as well. Commodity production and money economy gained strength, and although this process led to the disintegration of what was basically a subsistence economy, and of the traditional, oriental type society with its institutional system, it can still be regarded as basically beneficial. The elements that rode the crest of the agrarian boom accumulated considerable amounts of capital, yet this could not trigger off a Western European style capitalization process.⁷¹ The main reason for that seems to have been that the advantageous agrarian prices drew the attention of the classes that grew rich on tax-farming, usury, and commodity trade towards land. Industry, at the same time, did not promise similar profits, its guild structure also preventing the penetration of commercial capital. *The two sides of the original accumulation of capital* (the accumulation of capital, and the accumulation of labour deprived of the means of production in the towns) *could not be joined.*⁷² The turn of the capital towards agriculture resulted in the unfolding of a *re-feudalization tendency similar to that in Eastern Europe.*⁷³

NOTES

1. For the quotation by Marx, see T. WITTMAN: *Egyetemes történet 1500–1789 /World history, 1500–1789/*. Tankönyvkiadó Bp. 1972. 203; for the price revolution in general see T. WITTMAN: *Az árforradalom és a világgpiaci kapcsolatok kezdeti mozzanatai (1566–1618) /The beginnings of the price revolution and world market relations (1566–1618)/*. Bp. 1957.
2. For the Ottoman price revolution, comprehensively, see BARKAN, Ö.L.: *The Price Revolution of the Sixteenth Century: A Turning Point in the Economic History of the Near East*. *International Journal of Middle East Studies* 6 (1975), 12; VINAVER, B.: *La crise monétaire turque 1575–1650*. In: *Publications historique de l'Académie des Sciences de Belgrade*, 1958.; see also TÓTH S.: *A 16–17. századi török válság fő kérdései /The main questions of the Turkish crisis of the 16–17th centuries/*. *Acta Iuvenum. Sectio Historica. Tomus II.* (Ed. GALÁNTHA M. – TÓTH S.) Szeged 1980. 81–89.
3. *Encyclopaedia of Islam I*. Ed. by GIBB, H.A.R. – KRAMERS, J.H. Leiden 1960. 317–318 (under "akçe", by BOWEN, H.)
4. For the views against bimetallism see GERBER, H.: *The Monetary System of the Ottoman Empire*. *Journal of the Economic and Social History of the Orient* XXV (1982), 309–310.; for Ottoman money see MANTRAN, R.: *Istanbul dans la seconde moitié du XVIIe siècle*. Paris 1962. 233–279.; GIBB, H.A.R. – BOWEN, H.: *Islamic Society and the West*. vol. I. Part 2. London 1957. 51–56.
5. BARKAN, Ö.L.: *op. cit.* 12.: according to INALCIK, H. (*The Ottoman Empire. The Classical Age 1300–1600*. London 1973. 46.), one gold piece was worth 54 akçe in 1510; according to LEWIS, B. (*Ottoman Observers of Ottoman Decline*. *Islamic Studies*. vol. I. Karachi 1962. p. 85, note 19), one gold piece was worth 40 akçe at the beginning of the 16th century.
6. BARKAN, Ö.L.: *op. cit.* 12.
7. HEYD, U.: *Ottoman Documents on Palestine (1552–1615)*. Oxford 1960. 120.
8. BARKAN, Ö.L.: *op. cit.* 12.
9. *IBID.* 12.
10. HEYD, U.: *op. cit.* 121.
11. BARKAN, Ö.L.: *op. cit.* 13.; GIBB, H.A.R. – BOWEN, H.: *Islamic Society ... vol. I. Part 2*. 49, 59.
12. *Mühimme Defterleri*. vol. 70. No. 482. quoted by GERBER, H.: *op. cit.* 314.
13. *Mühimme Defterleri*. vol. 73. No. 199. quoted by GERBER, H.: *op. cit.* 323–324.
14. *The Travels of John Sanderson*. The Hakluyt Society. Second Series LXVII. London 1931. 294–295.
15. BARKAN, Ö.L.: *op. cit.* 13–14.
16. BARKAN, Ö.L.: *op. cit.* p. 11. table 1. Barkan examined the budgets of three imarets in Istanbul at three different points of time.
17. BARKAN, Ö.L.: *op. cit.* 16.
18. STAVRIANOS, L.S.: *The Balkans since 1453*. New York 1961. 126.
19. BARKAN, Ö.L.: *op. cit.* 10,13.
20. *IBID.* 10.

21. VELICS A. – KAMMERER E.: *Magyarországi török kincstári defterek 1540–1639 /Defters of the Turkish treasury in Hungary 1540–1639/*. vol. II. Bp. 1886. 699. (May 2. 1601), 709 (October 19, 1601); according to data from Istanbul one okka of butter cost 26 akçe again in 1604–5, cf. BARKAN, Ö.L.: op. cit. 10.
22. BARKAN, Ö.L.: op. cit. 10. It is to be noted that he gives the price of honey in kantar (44 okka = 56.5 kgs), and we have converted it into okka. In Bursa, between 1539 and 1565, one okka of honey cost 5–6 akçe, in 1617 cc. 16 akçe (IBID. 16.).
23. BARKAN, Ö.L.: op. cit. 10.
24. See previous note.
25. VELICS A. – KAMMERER E.: op. cit. vol. II. 663.
26. BARKAN, Ö.L.: op. cit. 10, 13.
27. For the price of other products see: BARKAN, Ö.L.: op. cit. 10, 13, 16.
28. BARKAN, Ö.L.: op. cit. p. 15. figure 1; for its assessment see IBID. 16; also GERBER, H.: op. cit. 316.
29. HAMILTON, E.A.: *American Treasure and Andalusian Prices, 1503–1660. A Study in the Spanish Price Revolution*. *Journal of Economic and Business History I* (1928); cf. ZIMÁNYI V.: *Magyarország az európai gazdaságban 1600–1650 /Hungary in the economy of Europe 1600–1650/*. Bp. 1976. 20–22.
30. ZIMÁNYI V.: op. cit. 54–70.
31. ZIMÁNYI V.: op. cit. 24; *The New Cambridge Modern History III. The Counterreformation and Price Revolution 1559–1610*. Ed. by WERNHAM, R.B. Cambridge 1968. 32–35 (the relevant section written by SPOONER, F.C.); KOENIGSBERGER, H.G – MOSSE, G.L.: *Europe in the Sixteenth Century*. London 1972. 28–33.
32. ZIMÁNYI V.: op. cit. 58, 159–160.
33. INALCIK, H.: *The Ottoman Empire ...* 49; LEWIS, B.: *Some Reflections on the Decline of the Ottoman Empire*. *Studia Islamica IX* (1957) 119; OLSON, R.W.: *The Sixteenth Century Price Revolution and its Effect on the Ottoman – Safavid Relations*. *Acta Orientalia (Societates Orientales Danica, Norvegica, Svecica)* 38 (1976) 45–55; *The Cambridge History of Islam*. vol. 1/A. London 1977. 344–345 (the relevant section written by INALCIK, H.); GROOT, A.H.: *The Ottoman Empire and the Dutch Republic (A History of the Earliest Diplomatic Relations 1610–1630)*. Leiden – Istanbul 1978. 8–9; DAVISON, R.A.: *Turkey*. New Jersey 1968. 59; TÓTH S.: op. cit. 83–84.
34. OLSON, R.W.: op. cit. 45–46; INALCIK, H.: *The Ottoman Empire ..* 49; HEGYI K.: *Egy világbirodalom végvidékén /On the frontiers of a world empire/*. Bp. 1976. 114; TÓTH S.: op. cit. 81–83.
35. INALCIK, H.: *The Ottoman Empire..* 49.
36. INALCIK, H.: *The Ottoman Economic Mind and Aspects of the Ottoman Economy*. In: COOK, M.A. (ed.): *Studies in the Economic History of the Middle East (from the Rise of Islam to the Present Day)*. London 1970. 217–218; PARRY, V.J.: *The Ottoman Empire 1566–1617*. In: *The New Cambridge Modern History III*. Cambridge 1968. 370.
37. BARKAN, Ö.L.: op. cit. 6; COOK, M.A.: *Population Pressure in Rural Anatolia 1450–1600*. London 1972. 4–5; for smuggling cf. HEYD, U.: op. cit. 121.
38. COOK, M.A.: *Population Pressure..* 8–9.
39. BARKAN, Ö.L.: op. cit. 7, 26.

40. SHAW, S.: *History of the Ottoman Empire and Modern Turkey*. vol. I. *Empire of the Gazis: the Rise and Decline of the Ottoman Empire, 1280–1808*. Cambridge 1976. 172–173.
41. VUCINICH, W.S.: *The Ottoman Empire (its Record and Legacy)*. New York 1965. 50; GROOT, A.H.: *op. cit.* 8–9.
42. BRAUDER, F.: *The Mediterranean and the Mediterranean World in the Age of Philip II*. vol. I. – II. London 1972 - 1973 (transl. by REYNOLDS, S.) II. 593–594; see also COOK, M.A.: *Population Pressure*. 4–6.
43. BARKAN, Ö.L.: *op. cit.* 27; BARKAN, Ö.L.: *Research on the Ottoman Fiscal Surveys*. In: COOK, M.A. (ed.): *Studies*... 163–171.
44. INALCIK, H.: *The Ottoman Empire*. 46.
45. COOK, M.A.: *Population Pressure*. 4–12, 33.
46. ERDER, L. – FAROQHI, S.: *Population Rise and Fall in Anatolia 1550–1620*. *Middle Eastern Studies* 15 (1979) No. 3. 322–345. The authors are more sceptical as regards the towns, saying that they possibly had larger populations than can be inferred from the tahrir defters (*IBID.* 338.).
47. GERBER, H.: *op. cit.* 313, 315–318.
48. PARRY, V.J.: *op. cit.* 370–371.
49. BARKAN, Ö.L.: *op. cit.* 13.
50. DAVISON, R.A.: *op. cit.* 59; TÓTH S.: *op. cit.* 87.
51. See note above; cf. also TÓTH S.: *Török stratégia a tizenötéves háborúban /Turkish strategy in the Fifteen Years' War/ Acta Universitatis Szegediensis de Attila József Nominatae. Acta Historica. Tomus LXIX. Szeged 1981. 18–19.*
52. LEWIS, B.: *Ottoman Observers*. 81.
53. *IBID.*; see also SAHILLIOGLU, H.: *Sivis Year in the Ottoman Empire*. In: COOK, M.A. (ed.): *Studies*. 241.
54. Sultan Mehmet III. is believed to have taken 5 million gold pieces with him on his campaign to Hungary in 1596, cf. ÓVÁRI L.: *A Magyar Tudományos Akadémia Történelmi Bizottságának oklevélmásolatai /Copies of the Historical Committee of the Hungarian Academy of Sciences/*. II. Bp. 1894. 239. (the report of Mark Venier, Venetian Ambassador, from Constantinople, August 9, 1596); it is worth comparing with this the report of another Venetian ambassador, Morosini, in 1585, according to which the Sultan spends five and half million gold pieces on soldiers, cf. DAVIS, J.C.: *Pursuit of Power. Venetian Ambassadors' Reports on Spain, Turkey and France in the Age of Philip II., 1560–1600*. New York 1970. 142–143.
55. BARKAN, Ö.L.: *op. cit.* 20; INALCIK, H.: *The Ottoman Empire*. 48, 83; according to Morosini's report of 1585 (cf. DAVIS, J.C.: *op. cit.* 131.), there were 16 thousand janissaries and 12 thousand sipahis.
56. According to SAHILLIOGLU, the soldiers were paid by the lunar, but taxes were collected by the solar year, and due to this difference of 11 days between the two kinds of year, every 33 years the so called leap year (sivis) crisis could be expected, when the government owed four payments, that is one whole year's pay to the soldiers (cf. COOK, M.A. (ed.): *Studies*. 230–252.).
57. BARKAN, Ö.L.: *op. cit.* 23.
58. After the battle at Mezőkeresztes, the grand vizir had those who were absent deprived of their holdings, cf. TÓTH S.: *Török stratégia*. 19–20.
59. The number of sipahis in Soliman's time is assessed to have been around 90 thousand, decreasing to 45 thousand by the end of the 16th century, and they

were only about eight thousand in 1630, cf. INALCIK, H.: *The Ottoman Empire..* 48; see also SHAW, S.: *op.cit.* 127.

60. BARKAN, Ö.L.: *op. cit.* 23.
61. BARKAN, Ö.L.: *op. cit.* 23, 27; *The Cambridge History of Islam.* vol. 1/A 346–347 (written by INALCIK, H.).
62. HEGYI K.: *op. cit.* 39.
63. STAVRIANOS, L.S.: *op. cit.* 140–141; SHAW, S.: *op. cit.* 173; *Encyclopaedia of Islam.* vol. II. London 1965 (entry "ciftlik", written by INALCIK, H.); cf. also ERGIL, D.: *Class Relations and the Turkish Transformation in Historical Perspective.* *Studia Islamica* XXIX (1973–1974) 77–94.
64. For data on the trade of commodities, see HEYD, U.: *op. cit.* 83, 133; BIEGMAN, N.H.: *The Turco - Ragusan Relationship According to the Firmans of Murad III. (1575–1595).* The Hague 1967. 123, 124–125.
65. HEYD, U.: *op. cit.* 68–69 (firman to the beglerbey of Damascus, July 20, 1577)
66. STAVRIANOS, L.S.: *op. cit.* 121–122; COLES, P.: *The Ottoman Impact on Europe.* London 1968. 167–168, 170–171; PARRY, V.J.: *op. cit.* 365–366.
67. PARRY, V.J.: *op. cit.* 371–372.
68. HEGYI K.: *op. cit.* 106; INALCIK, H.: *The Ottoman Empire..* 50; cf. also the entries "Djizya" and "awarid" in the *Encyclopaedia of Islam;* vol. II. 559–567 (INALCIK, H.), I. 760–761 (written by BOWEN, H.).
69. PARRY, V.J.: *op. cit.* 372–374; *The Cambridge History of Islam.* vol. 1/A. 343–350 (INALCIK, H.).
70. We do not accept GERBER HAIM's view that (*op. cit.* 323) "the monetary changes as such no symptom of economic crisis, but at the most, a sign for economic troubles afflicting the state's treasury".
71. For the accumulation of capital in the Ottoman Empire see INALCIK, H.: *Capital Formation in Ottoman Empire.* *The Journal of Economic History* 1969. 97–140.
72. Cf. TÓTH S.: *A 15 éves háború /The Fifteen Years' War/.* In: *Fejezetek a régebbi magyar történelemből II.* (ed. MAKK F.) Tankönyvkiadó, Bp. 1985. 157.
73. Cf. BRAUDEL, H.: *op. cit.* 593–594.

AZ „ÁRFORRADALOM” A 16. SZÁZAD VÉGI OSMÁN BIRODALOMBAN
(Rezümé)

Az oszmán „árforradalom” jelenségei között a szerző elemzi az ezüst akcse értékcsökkenésének folyamatát. Megállapítása szerint 1566 és 1600 között az akcse ezüsttartalma s hivatalos árfolyama felére, szabadpiaci értéke harmadára csökkent. Ugyanakkor az agrárértékek árai ugrásszerűen növekedtek az 1585 – 1606 közötti két évtizedben, az átlagos áremelkedés meghaladta a 300%-ot is.

A szerző részletesen foglalkozik az oszmán árforradalmat külső (az Európából beáramló ezüst, a nyugat-európai kereslet az agrártermékek iránt) és belső (népesség növekedés, a kormányzat devalvációs politikája) tényezőkkel, illetve ezek együttes hatásával magyarázható hipotézisekkel. A szerző véleménye szerint a török árforradalomban döntő szerepe volt a nyugateurópai inflációnak, amely az inflálódott európai ezüstpénzek bevitelén és a magas áron megvásárolt török agrártermékek kivitelén keresztül „gyűrűzött be”. Bár a kritikus 16. század végi és 17. század eleji időszakban a török birodalom népessége inkább csökkent; a demográfiai struktúra úgy rendeződött át, hogy a városi fogyasztói réteg aránya növekedett, az agrártermelők aránya pedig csökkent. Így a nyugat-európai külső kereslet mellett a belső kereslet is fokozódott az agrártermékek iránt, felhajtva így azok árát. Az árforradalomnak voltak államháztartással összefüggő tényezői is. Szulejmán halálától a 16. század végéig egyre nagyobb kincstári deficit jelentkezett. Ennek okai: a századvég két elhúzódó háborúja, s a fizetett zsoldos csapatok létszámának ugrásszerű emelkedése. A deficit csökkentése céljából folyamodott a kormányzat 1584 – 86 között az akcse devalválásához, majd 1600-ban az akcse stabilizálása mellett a piaci árakat is csökkentette. A központi intézkedések az akcse inflációjához vezettek, amely a nyugat-európai ezüstinflációhoz járult, s e két inflációs tényező egymást erősítette.

A szerző az „árforradalom” következményeként említi a klasszikus oszmán intézményrendszer két fontos részének; a timárrendszernek (szpáhi-rendszernek) és a szolgarendszernek (devsirme) rohamos felbomlását, valamint a falvak rohamos elnéptelenedését (depuláció), s a századvégi dzseláli felkeléseket.

Az „árforradalom” az oszmán birodalom hanyatlásba torkolló válságának egyik fontos oka volt, ugyanakkor erősödött az árutermelés és a pénzgazdálkodás. Jelentős tőkefelhalmozódás is végbement, az agrárkonjunktúra és az ipar gyengesége miatt azonban a nyugat-európai kapitalizációs tendencia helyett a kelet-európaihoz hasonló refeudalizációs tendencia bontakozott ki.