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# INFLATION DYNAMICS AND ITS SOURCES IN THE OTTOMAN EMPIRE: 1586-1913

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# Inflation Dynamics and Its Sources in The Ottoman Empire: 1586-1913

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# Inflation Dynamics and Its Sources in The Ottoman Empire: 1586-1913

**Abstract**

This study examines the dynamics and determinants of inflation in the Ottoman Empire during the 1586-1913 period. There might be two main reasons for inflation: fiscal expansion and monetary expansion where the monetary expansion could be generated through the debasement of local currency (*Akçe*). We used a set of political and structural variables in order to explain the change in the inflation dynamics. In particular, we considered the war years, periods of Ottoman history which show different characteristics (the slow down period, the recession period and the break up period) and the period of constitutional monarchy. Moreover, we tested if the inflation process was the same for each sultan and all of the sultan behaved differently from the rest of their reign during their first year. Accordingly, the empirical evidence reported here suggests that war accelerated inflation as expected and fiscal expansion rather than the debasement of the *Akçe* was a main reason for inflation. Moreover, the slow down, the recession and the break up periods affected inflation positively; both fiscal expansion and the debasement of the *Akçe* were seen in these three periods as sources of inflation. In addition, each sultan had different inflationary policies during his period. However, each sultan accelerated inflation in the first year of his reign by the debasement of the *Akçe* or by fiscal expansion. Last, the constitutional monarch period had a significant positive effect on inflation; however, fiscal expansion rather than the debasement of the *Akçe* was the source of inflation in this period.

Key words: Inflation, Debasement, Fiscal Expansion and Ottoman Empire.

Jel codes: E31, H11 and H30.

## I. Introduction

This paper studies the dynamics and determinants of inflation in the Ottoman Empire during the 1586-1913 period. There might be two main reasons for inflation; monetary expansion due to the generation of seigniorage revenue by debasing the *Akçe* and fiscal expansion. We used a set of political and structural variables in order to assess the dynamics of inflation and its alteration with these political variables.

We consider three main possible structures concerning the common notion of political intervention in an inflationary policy. Firstly, many wars were seen in the Ottoman period and financing a war means extra expenses. Hence, it could be interesting to examine the effects of war on the dynamics of inflation. Ferguson (1996) argues that war was inflationary in Germany during the First World War. Moreover, Bolbol (1999) finds that war was one of the main reasons for high inflation in Lebanon during the Civil War period. Similarly, our empirical results suggest that the war accelerated inflation, as was expected and fiscal expansion rather than the debasement of the *Akçe* was the source of inflation.

The second structure is the Partisan Political-Business Cycle (PBC), initiated by Hibbs (1977), which deals with characteristic differences in the economic policies of governments according to their constituencies. By this line of thought, governments apply fiscal and monetary policies to favour their constituencies and economic outcomes such as the level of output and inflation: These variables fluctuate along lines as a function of the ideology of the party in power so that they will be re-elected. For example, Alesina and Sachs (1988) show that the Republican Party in the United States has been relatively more concerned than the Democratic Party about inflation rather than output since the partisan theory suggests that Democratic voters will be more concerned about unemployment relative to inflation than Republican voters. The deviation of output growth from trend occurred mostly in the first half of end term, while the rate of growth of inflation was systematically different for the entire term under the Democratic administrations. The Republican Party, on the other hand, tried to deviate inflation growth from the trend in the first half of the terms. That is, the real effects of new policies are stronger at the beginning of new administrations. Moreover, Alesina and Roubini (1992) show that elections and changes of governments in eighteen OECD economies affect inflation. They find that inflation tends to increase immediately after elections and long run partisan differences in the inflation rate are seen.

The Ottoman Empire was governed by sultans rather than political parties and there was no election system. Similarly, not all administrations had the same preferences on inflation because not everybody was affected by the inflation in the same way. The differences in the preferences of supporters caused the differences in the behaviour of each sultan. Hence, different processes were observed after the accession to the throne of new sultans. These processes represent attempts by the sultans to prevent rebellions by the soldiers and urban population. For example, the major constraint against the application of policies to overcome the unfavourable fiscal environment was the *janissaries* in Istanbul, special soldiers paid with the local currency (*Akçe*). For this reason, each sultan adopted different inflationary policies to gain the appreciation of his supporters and opponents in the first year of his reign. Therefore, we can examine how the Ottoman Empire shows the Partisan PBC or not by analysing each sultan's inflationary acts. Our results suggest that each sultan's reign showed different acceleration in inflation and the policies of the debasement of the *Akçe* and fiscal expansion were the main sources of inflation. Moreover, each sultan increased inflation in his first year on the throne as a result of the debasement of the *Akçe* or fiscal expansion.

In addition, we can take into account the different historical eras (the slow down, the recession and the break up periods) in Ottoman history in order to see the waves of inflation and the sources of inflation during those periods since each era showed different social, economic and political characteristics. Our result shows that the slow down, the recession and break up periods affected inflation positively and the debasement of the *Akçe* or fiscal expansion were the main reasons of inflation.

The third structure analyses the effects of the fractionalized governments (coalition or minority governments versus majority governments) on their inflationary policies. More fractionalized and more polarized governments (differences in ideological preferences) were seen in the constitutional monarchy period than in the absolute monarchy period. They faced greater difficulties in coordinating action over fiscal and monetary policies. Roubini and Sachs (1989) argue that it is more difficult for coalition governments to raise taxes and decrease government expenditures. Hence, a more fractionalized government causes higher budget deficits and inflation. Coalition is one of the main economic institutions that leads to chronic and persistent inflation (Arce and Daniel, 1994). Minority parties and coalition governments are more constrained by electoral concerns so they try to satisfy influential constituencies and special interests in order to be re-elected (Haynes and Stone, 1990). Hence, the debasement of *Akçe* and fiscal expansion caused acceleration in inflation to put in order unfavourable fiscal situations in the *constitution*al monarchy era. Our empirical evidence

suggests that the period of *constitution*al monarchy had a positively significant effect on inflation. However, anti-debasement acts rather than debasement were seen, and fiscal expansion was the main reason for increasing inflation in this period.

Pamuk (1997) argues that the fiscal and monetary conditions in the Ottoman Empire emerged as the primary explanation for the debasement of the *Akçe* during the seventeenth century. The Ottomans faced severe fiscal pressures and struggled with rising military expenditures and the adverse consequences of inflation during this period. One of the main responses to this environment was currency debasement, which provided temporary financial relief but also contributed to a new momentum of price increases. Hence, these results make his study resemble ours more. Our research differs from his study on three accounts. Firstly, he did not focus on the dynamics of inflation analyses deeply as we did; that is, he did not explain waves of inflation according to the important political structural variables. Secondly, Pamuk (1997) showed that inflation had adverse consequences on state finances. However, he only analyzed the debasement of the *Akçe* as a source of state finances that caused inflation, whereas, we also looked at the fiscal expansion as another main policy for inflation and examined the effects of fiscal expansion on inflation. Thirdly, he examined only the seventeenth century for the debasement analyses, while we took into account the historical eras of the Ottoman Empire (the slow down, the recession and the break up periods) and *constitution*al monarchy period in our analysis.

Our result shows that debasement was one of the main reasons for the acceleration of inflation in the seventeenth century. This result confirms Pamuk (1997). However, we also proposed that fiscal expansion was another main explanation for the variability of inflation in this period. Furthermore, his article provides evidence that the debasements were the results of fiscal difficulties and that the state benefited in the short run. There was no such long-term strategy during this particular period. Similarly, when we analysed each sultan's period separately, we can see that they did not follow the same policy. However, debasement appeared in all three historical eras in Ottoman history except the period of *constitution*al monarchy.

This study extensively analyzes inflation dynamics with the longest historical data that is available for the Ottoman Empire. In addition, we examined the effects of different social and political situations on inflation movements. Therefore, these explanations may contribute to an understanding of why fiscal deterioration and inflation arise in the Ottoman Empire.

The rest of this paper is organized as follows. The data is described in the second section. The methodology is discussed and empirical evidence is reported in the third section. The fourth section presents our conclusions.

**II. The Consumer Price Index for Istanbul 1469-1918**

The data for the Consumer Price Index for Istanbul is the first of its type for the Middle East, in fact for anywhere in the non-European world. It is considered as the most detailed and reliable for these four and a half centuries (1469-1918). It was prepared by Şevket Pamuk and published by the Turkish State Institute of Statistics (SIS) in 2000. The data is available in Tables 1-3. Table 1 shows the Consumer Price Index, which combines the food prices obtained from the account books of pious foundations (*vakıf*) with the prices of non-food items. Table 2 presents the annual silver content of the *Akçe*. Pamuk constructed price indices expressed in grams of silver which were obtained by multiplying the value of the price index by the silver content of the Ottoman currency for the same year. These indices are shown in Table 3.

The prices for Istanbul were calculated utilizing a large volume of Ottoman archival documents. They were basically extracted from data on the prices of standard commodities: food and non-food items. Three separate price indices were constructed for the food items according to the type of institution involved in consumption, whereas only one price index was constructed for the non-food items. One of the food price indices is based on the account books and prices paid by the many pious foundations, both large and small, and their soup kitchens (*imaret*). The second food price index is based on the account books of the Topkapi Palace kitchen. The third utilizes the officially established price ceilings (*narh*) for the basic items of consumption in the capital city: Istanbul.

Standard commodities were used for these price indices in order to minimize the effects of quality changes. Each of these food indices includes the prices of ten to twelve main consumption items. These are as follows: flour, rice, honey, cooking oil, mutton, chick peas, lentils, onions, eggs, sugar (for the palace only), coffee (beginning in the seventeenth century for the palace, and in the eighteenth century for the pious foundations), and olive oil for burning. Among these, flour, rice, cooking oil, mutton, olive oil and honey provided the most reliable long term series and carried the greatest in the food budget. The prices of non-food items were obtained from a variety of sources, most importantly the palace account books. The commodities considered are soap, wood, coal and nails.

The weight of food items in the overall indices was fixed between 75% and 80%, based on the available evidence regarding the budget of an average urban consumer. The weight of each commodity in the overall index was based on the shares of each in total expenditures of the respective institutions. Greater weight was given to the indices based on the prices paid by the soup kitchens and, more generally, the pious foundations because the palace and the *narh* prices might be considered as official or state controlled prices. The weights of the individual commodities were kept constant as long as they were included in the index.

**III. Empirical Evidence**

In order to capture the effects of political and structural changes on the dynamics of inflation, the transfer function analysis is used and the following model is estimated:

$$X_t = \sum_{i=1}^{p} \beta_i X_{t-i} + \gamma Z_t + \varepsilon_t$$

where $X_t$ is the policy variable in interest; $p$ is the lag order; $Z_t$ is the political and structural variable and $\varepsilon_t$ is the error term at time $t$. Here, $\gamma$ is the coefficient of our interest to assess the effects of political and structural situations on inflation dynamics.

In order to conduct this study, a benchmark model is needed. An autoregressive model is estimated for the inflation process. First, inflation is calculated as the change in the logarithm of two consecutive price indices. Then, inflation was regressed on its own lags with a constant term. In order to determine the optimum lag order, the Final Error Criteria is used. This method determines the optimum lag order such that the residual term is no longer autocorrelated. The first four lags were used to account for the dynamics of inflation, indicating the AR(4) process. Hence, inflation was regressed on its four lags with the constant term and the results are presented in Table 4 in column I of Panel A. The data set on price indices calculated by Şevket Pamuk covers the period between 1469 and 1918, but we started the sample from 1586 due to the frequency of missing observations and adopted the AR(4) process for inflation. We ended the data in 1913 to avoid the hyperinflation of the First World War years. In addition to lag values, inflation was also regressed on some political and structural variables, the coefficients of which account for the change in the dynamics of inflation not in inflation.

Getting involved in a war requires extra expenses. Therefore, we tested whether the policies adopted during the war years in order to struggle with military expenditures caused

inflation or not. In order to capture the war years, a dummy variable was designed. The *war* variable was added to the benchmark model (It takes the value of one if there was war in this year and zero otherwise). The empirical evidence suggests that the *war* years accelerated inflation. However, the coefficient of the *war* variable is not statistically significant.[1] This result is presented in Table 4 in column II of Panel A.

The military strength of the Ottoman Empire caused heterogeneity of tax revenue in the different regions of the Ottoman Empire for the government spending requirements. Loss of some portion of land might dictate the government's fiscal and monetary setting. These two factors might determine the inflation level. Thus, three dummy variables for the three different historical eras of the Ottoman Empire are introduced: the *slow down* (1586-1699), the *recession* (1700-1792) and the *break up* (1793-1913) periods. Inflation was regressed against its four lags and the three dummy variables. However, the constant term was not included in the regression. The technical reason behind this is to avoid what is referred to as the "dummy variable trap". If the intercept term, which always implicitly takes the value of one, were included with the dummy variables, which always sum up to one, perfect multi-collinearity arises. Thus, the constant term was dropped out in order to avoid the multi-collinearity trap. The estimates of parameters are presented in Table 4 in column III of Panel A. The empirical evidence reveals that the *slow down*, the *recession* and the *break up* periods affected inflation positively. However, the increasing trend of inflation was highest in the *break up* period, which was the worst period of the empire; and lowest in the *recession period.* Even if the coefficient of the *break up* period is statistically significant, the coefficient was not significant for the *recession* period. Moreover, in order to test whether each period had different inflationary policy or not, we can perform the F-test. The F-statistics value is 0.15, so we cannot reject the hypothesis that inflationary policy was the same in each period.

A change of *sultans* can be taken as another explanatory variable for inflation dynamics since each *sultan* had different economic policies in order to manage the economy. Therefore, we tested whether the different policies of each *sultan* caused acceleration in inflation differently. Each *sultan's* period dummy variables were designed for that and these were added to the benchmark model. The empirical results are presented in Table 4 in column IV of Panel A. The estimates suggest that the periods of Sultans *Ahmed I, Murad IV, Osman III, Mustafa IV, Mahmud II* and *Mehmed Resad V* showed statistically significant increasing movement in inflation. The highest acceleration in inflation was seen in the Sultan *Osman III* period. However, the periods of Sultans *Mustafa II* and *Murad V* showed statistically

[1] The level of significance is 5%, unless otherwise noted.

significant deflationary movements and the highest deflationary process was seen in the Sultan *Mustafa II* period. Moreover, in order to test whether each *sultan* had different inflationary act or not, we can perform the F-test. The result of the F-test is 1.96, which suggests that each sultan showed different inflationary acts at the 5% statistically significant level.

Each sultan may prefer to have more expenses during the *first* year in his reign since he wants to prevent rivals in order to stay on the throne longer. He may also prefer to apply favourable fiscal and monetary policies to win the good will of soldiers, supporters and opponents. Hence, we test whether the first year policies of each sultan were one of the reasons for inflation dynamics or not. In order to capture this, a dummy variable was designed and the regression result is presented in Table 4 in column V of Panel A. The empirical evidence suggests that the *first* year policies of sultans affected inflation positively. However, the *first* year coefficient is not statistically significant.

In order to explain the effect of government policies on inflation during the period of *constitution*al monarchy, a dummy variable was constructed and added to the benchmark model. This is related to the effects of fractionalized governments on inflation. More fractionalized governments face higher budget deficits and greater difficulties in coordinating inflationary action in order to finance deficits. The result is showed in Table 4 in column VI of Panel A and we can say that the period of *constitution*al monarchy had a positive significant effect on inflation.

The regression results of the *slow down*, the *recession* and the *break up* periods are presented in Panel B, Panel C and Panel D, respectively, in the Table 4. While the *war* years caused an increase in inflation during the *slow down* and the *break up* periods, deflationary movements were seen during the *recession* period. However, the coefficient of *war* variable is statistically significant only in the *slow down* period. In addition, even though the highest inflation was seen in the Sultan *Osman II* period and the highest deflation was observed for the Sultan *Mustafa I* period in the *slow down* era, their coefficients are not statistically significant. Moreover, the emprical results suggest that the periods of Sultans *Osman III* and *Selim III* in the *recession* era and those of Sultans *Mustafa IV, Mahmud II* and *Mehmed Resad V* in the *break up* era had statistically significant effects on the acceleration in inflation. However, the Sultan *Mustafa II* period in the *recession* era and the Sultan *Murad V* period in the *break up* era showed a statistically significant deflation. The highest inflationary movement was seen in the Sultan *Osman III* period in the *recession* era and the Sultan *Mustafa IV* period in the *break up* era. Furthermore, the Sultan *Mustafa II* period in the

*recession* era and the Sultan *Murad V* period in the *break up* era showed statistically significant and the highest deflation. These results are very parallel to the Panel A column IV results in Table 4. Morever, although the coefficients of the *first* year variable are positive in both the *recession* and the *break up* periods, it is statistically significant only during the *recession* period. However, the coefficient of the *first* year variable showed a deflationary trend during the *slow down* period, which is not statistically significant. Moreover, the results suggest that there was statistically significant acceleration in inflation during the period of *constitution*al monarchy as a result of the policies, which were applied in this period.

Inflation could be observed either due to fiscal expansion or seigniorage revenue due to the debasement of the *Akçe* in the long run. Hence, it is interesting to examine the source of inflation. Even if Spanish gold and silver were seen during these periods, we control these with the inflation dynamics, which is captured by the number of autoregressive lag orders. The empirical results of the debasement of the *Akçe* are presented in Table 5. The Table 6 results are based on the price indices expressed in grams of silver. It is worth mentioning that even though nominal prices increased, prices expressed in grams of silver stayed in the relatively narrow range since the changes in prices in this index depend on the change in grams of silver. Therefore, the difference between two prices gives us a change in the grams of silver. The change in the grams of silver might be used as a fiscal tool given that there was no persistent supply shock and gold imports at accelerating rate. Thus, if the increase in price level is not due to a monetary factor, then it should be due to a fiscal factor. Hence, the empirical results of fiscal expansion are presented in Table 6. The negative coefficients in Table 5 represent debasement policies and the positive coefficients in Table 6 represent fiscal expansion policies.

Wars require extra expenses; in particular extra sources of increasing revenue must be relied on. According to the empirical results that are presented in Tables 5 and 6 in column II of Panel A, the *war* years showed anti-debasement acts, but the coefficient is not statistically significant. In addition, statistically significant fiscal expansions were seen in the *war* years. Hence, we can say that fiscal expansion rather than debasement was the main reason for inflation during the *war* years. Furthermore, the *war* years caused statistically significant anti-debasement movements in the *recession* and *break up* periods. However, the debasement was seen due to the effects of war years in the *slow down* period but its coefficient is not statistically significant. Moreover, though the *war* variable has positive effects on the fiscal expansion in the three historical eras, the coefficient of the *war* variable is not statistically significant in the *recession* period. These results are presented in Tables 5 and 6 in column II

of Panel B, Panel C and Panel D. Therefore, we can conclude that fiscal expansion was the main reason for inflation in the *war* years during the three historical eras as well. In addition, debasement was the main inflationary policy to overcome the fiscal deterioration for the *slow down*, the *recession* and the *break up* periods. However, the coefficient of the *slow down* period is not statistically significant. These are presented in Table 5 in column III of Panel A. Although the *slow down* and the *break up* period showed fiscal expansion as a source of inflation, their coefficients are not statistically significant. Moreover, a fiscal shrink was seen in the *recession* period but its effect was not statistically significant. These results are represented in Table 6 in column III of Panel A. The highest debasement was seen in the *break up* period and the highest fiscal expansion was seen in the *slow down* period.

Each *sultan's* inflationary acts can also be interpreted with the estimates reported in Tables 5 and 6 in column IV of Panel A. The F-statistics suggest that each *sultan* adopted different debasement and fiscal policies and accelerated inflation differently. The F-statistics are 1.92 for the equality of *sultan* dummies in Table 5 and 1.64 for the equality of *sultan* dummies in Table 6. According to the empirical results, the periods of Sultans *Mustafa I, Mehmed IV, Mahmud I, Abdulhamid I* and *Mahmud II* showed statistically significant adaptation of debasement policies. Although most of the sultans' periods represented debasement, the highest acceleration of debasement was seen in the Sultan *Süleyman II* period but its coefficient is not statistically significant. However, Pamuk (2000, p.204-217) argues that the greatest debasement was seen in the Sultan *Mahmud II* period in the Ottoman Empire. Hence, this result does not support our expectations. The estimates we report capture the debasement dynamic acceleration rather than the debasement itself. Hence, this could be the main reason for our differences. Furthermore, the periods of Sultans *Ahmed I, Mustafa IV* and *Mehmed Resad V* showed statistically significant fiscal expansion policies and the highest fiscal expansion was seen in the Sultan *Mustafa IV* period. However, the periods of Sultans *Mustafa II* and *Murad V* showed statistically significant fiscal shrink policies and the highest shrinkage can be seen in the Sultan *Mustafa II* period. In addition, the periods of Sultans *Mustafa I, Murad IV* and *Mehmed IV* showed statistically significant debasement in the *slow down* era. The periods of Sultans *Mahmud I, Mustafa III, Abdulhamid I* and *Selim III* showed statistically significant adoption of debasement policies in the *recession* era. The Sultan *Mahmud II* period had a statistically significant coefficient for the debasement in the *break up* era. The highest debasement was seen in the Sultan *Süleyman II* period in the *slow down* era but its coefficient is not statistically significant. The Sultan *Selim III* period in the *recession* era and the Sultan *Mahmud II* period in the *break up* era showed the highest statistically

significant debasement. The highest and statistically significant fiscal expansion was seen in the Sultan *Ahmed I* period in the *slow down* era. Although the Sultan *Osman III* period showed the highest fiscal expansion in the *recession* era, its coefficient is not statistically significant. The periods of Sultans *Mustafa IV* and *Mehmed Resad V* showed statistically significant adoption of fiscal expansion policies and the highest fiscal expansion was seen in the Sultan *Mustafa IV* period in the *break up* era. These empirical results are presented in Tables 5 and 6 in column III of Panel B, Panel C and Panel D and they are very parallel to the Panel A (column IV) results in Tables 5 and 6. Also, the empirical evidence suggests that each sultan choose debasement or fiscal expansion in the *first* year of his reign in order to win the goodwill of the soldiers and urban population so that he could stay on the throne. The results are presented in Tables 5 and 6 in column V of Panel A. Also, the *first* year results that are presented in Tables 5 and 6 in column IV of Panel B, Panel C and Panel D showed that both debasement and fiscal expansion were the reasons for inflation in the *recession* and *break up* periods. Although debasement was seen in the *slow down* period, fiscal shrinkage rather than fiscal expansion was seen in this era. However, the coefficients of the *first* year variable are not statistically significant. In addition, the period of *constitution*al monarchy showed statistically significant anti-debasement policies. The empirical results suggest that only fiscal expansion was the main source of the acceleration in inflation during the period of *constitution*al monarchy. These results are presented in Tables 5 and 6 in column VI of Panel A and in column V in Panel D. Pamuk (2000, p.222-242) says that debasement ended after 1844. Thus, our results are parallel to his findings.

Performing the regression analysis as an AR(4) process decreases the number of observations in the analyses due to the frequency of missing observations. Hence, we apply the AR(1) process for the inflation dynamics. In this case, we added a new dummy variable for the *rise* period (1478-1585). The basic results of the analyses were robust.[2] The empirical evidence suggests that *war* accelerated inflation as expected and fiscal expansion rather than the debasement of the *Akçe* was the main reason for inflation. Moreover, the *slow down*, the *recession* and the *break up* periods affected inflation positively; both fiscal expansion and the debasement of the *Akçe* were seen as sources of inflation during these three periods. However, the *rise* period is associated with lower inflation. Thus, during the early years of the empire (that is the *rise* period), there was no need to rely on inflationary policies. Hence, the empire had some ways of increasing its revenue other than the monetary or fiscal ones during

[2] These estimates are available from the authors upon request.

the early years. However, it is important to note that even though the *rise* period does not show any debasement acts, we can see that the deflationary trend in inflation came from the fiscal shrinkage in the *rise* period, probably due to the more spoils rather than lower government spending. In addition, each *sultan* showed different inflationary policies in his period. However, each *sultan* accelerated inflation in the *first* year of his reign by the debasement of the *Akçe* or fiscal expansion. Lastly, the *constitution*al monarchy period had a positively significant effect on inflation; however, fiscal expansion rather than the debasement of the *Akçe* was the source of inflation in this period.

## IV. Conclusion

In this study, we examined the dynamics of inflation in the Ottoman Empire during the 1586-1913 period. We focused on two main inflationary acts, fiscal expansion and seigniorage revenue due to the debasement of the *Akçe* in order to explain the behaviour of inflation. We used a set of political and structural variables, the coefficients of which account for the change in the dynamics of inflation. We also extended our sample starting point to 1478 to apply the AR(1) process to examine dynamics of inflation. Accordingly, the empirical evidence suggests that the *war* years accelerated inflation as we expected and fiscal expansion rather than debasement was the main inflationary policy to cope with war expenses. Moreover, the *slow down,* the *recession* and the *break up* periods affected inflation positively. Both fiscal expansion and debasement were seen in these three periods as sources of inflation. However, deflationary movement was seen during the *rise* period due to fiscal shrinkage. In addition, each *sultan* showed different inflationary policies in his period. However, the *first* year of each sultan accelerated inflation by debasement or fiscal expansion. These results are consistent with the Partisan PBC. Furthermore, the period of *constitution*al monarchy had positively significant effect on inflation. However, we can see fiscal expansion rather than debasement in the period of *constitution*al monarchy as a main inflationary policy. This result is in conformity with our expectations since fractionalised government raises inflation. It is important to note that there is not much difference between the AR(1) and the AR(4) process for examining the sources of dynamics of inflation since the signs of the coefficients of the variables are almost the same.

**Table 1: CPI values for the 1469-1918 period**

| Year | CPI | Year | CPI | Year | CPI | Year | CPI | Year | CPI | Year | CPI | Year | CPI | Year | CPI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1469 | 1 | 1531 | na | 1593 | 3,39 | 1655 | 4,54 | 1717 | 7,02 | 1779 | 19,12 | 1841 | 177,71 | 1903 | 207,66 |
| 1470 | na | 1532 | na | 1594 | 3,88 | 1656 | 4,82 | 1718 | 6,75 | 1780 | 18,94 | 1842 | 189,33 | 1904 | 208,84 |
| 1471 | 1,16 | 1533 | na | 1595 | 4,14 | 1657 | 6,25 | 1719 | 6,91 | 1781 | 17,43 | 1843 | 193,12 | 1905 | 219,55 |
| 1472 | na | 1534 | na | 1596 | 5,23 | 1658 | 5,69 | 1720 | 7,38 | 1782 | 15,12 | 1844 | 169,24 | 1906 | 220,2 |
| 1473 | 1,48 | 1535 | na | 1597 | 6,24 | 1659 | 5,14 | 1721 | 6,95 | 1783 | 15,89 | 1845 | 172,46 | 1907 | 235,28 |
| 1474 | 1,16 | 1536 | na | 1598 | 6,09 | 1660 | 6,01 | 1722 | 6,57 | 1784 | 15,2 | 1846 | 182,39 | 1908 | 254,32 |
| 1475 | na | 1537 | na | 1599 | 4,85 | 1661 | 7,23 | 1723 | 6,34 | 1785 | 17,18 | 1847 | 162,65 | 1909 | 258,91 |
| 1476 | na | 1538 | na | 1600 | 4,79 | 1662 | 5,83 | 1724 | 6,67 | 1786 | 19,22 | 1848 | 220,16 | 1910 | 263,86 |
| 1477 | na | 1539 | na | 1601 | 4,45 | 1663 | 5,15 | 1725 | 7,17 | 1787 | 15,49 | 1849 | 184,51 | 1911 | 284,91 |
| 1478 | na | 1540 | na | 1602 | 4,44 | 1664 | 5,05 | 1726 | 6,9 | 1788 | 16,01 | 1850 | 162,84 | 1912 | 306,99 |
| 1479 | na | 1541 | na | 1603 | 4,69 | 1665 | 4,93 | 1727 | 6,23 | 1789 | 21,15 | 1851 | 174,59 | 1913 | 307,59 |
| 1480 | na | 1542 | na | 1604 | 6,98 | 1666 | 5,28 | 1728 | 7,53 | 1790 | 26,85 | 1852 | 173,17 | 1914 | 307.59 |
| 1481 | na | 1543 | na | 1605 | 6,35 | 1667 | 5,94 | 1729 | 8,08 | 1791 | 22,23 | 1853 | 186,85 | 1915 | 369,1 |
| 1482 | na | 1544 | na | 1606 | 6,28 | 1668 | 6,34 | 1730 | 6,2 | 1792 | 22,09 | 1854 | na | 1916 | 768,97 |
| 1483 | na | 1545 | na | 1607 | na | 1669 | 6,42 | 1731 | 7,97 | 1793 | 24,85 | 1855 | 242,06 | 1917 | 2306,9 |
| 1484 | na | 1546 | na | 1608 | na | 1670 | 6,25 | 1732 | na | 1794 | na | 1856 | 309,68 | 1918 | 5536,57 |
| 1485 | na | 1547 | na | 1609 | na | 1671 | 6,07 | 1733 | na | 1795 | 23,63 | 1857 | 307,24 | | |
| 1486 | na | 1548 | na | 1610 | 4,44 | 1672 | 6,65 | 1734 | 6,74 | 1796 | 24,34 | 1858 | 324,39 | | |
| 1487 | na | 1549 | na | 1611 | 4,1 | 1673 | 6,18 | 1735 | 6,72 | 1797 | 28,71 | 1859 | 283,97 | | |
| 1488 | na | 1550 | na | 1612 | 4,12 | 1674 | 6,66 | 1736 | 7,97 | 1798 | 24,04 | 1860 | 282,38 | | |
| 1489 | 1,3 | 1551 | na | 1613 | 4,05 | 1675 | 7,3 | 1737 | 8,12 | 1799 | 23,81 | 1861 | 335,54 | | |
| 1490 | 1,09 | 1552 | na | 1614 | 4,16 | 1676 | 7,79 | 1738 | 8,92 | 1800 | na | 1862 | 301,87 | | |
| 1491 | na | 1553 | na | 1615 | 4,82 | 1677 | 7,78 | 1739 | 8,35 | 1801 | 24,83 | 1863 | na | | |
| 1492 | na | 1554 | na | 1616 | 5,26 | 1678 | 7,57 | 1740 | 10,96 | 1802 | 23,3 | 1864 | na | | |
| 1493 | na | 1555 | 1,5 | 1617 | 5,06 | 1679 | 8,39 | 1741 | 10,91 | 1803 | 28,15 | 1865 | na | | |
| 1494 | na | 1556 | 1,78 | 1618 | 3,99 | 1680 | 7,66 | 1742 | 10,65 | 1804 | 32,67 | 1866 | na | | |
| 1495 | na | 1557 | na | 1619 | 4,44 | 1681 | 7,51 | 1743 | 8,89 | 1805 | 41,5 | 1867 | 273,12 | | |
| 1496 | na | 1558 | na | 1620 | 4,63 | 1682 | 6,8 | 1744 | 8,01 | 1806 | 33,44 | 1868 | 273,39 | | |
| 1497 | na | 1559 | na | 1621 | 7,1 | 1683 | 7,79 | 1745 | 10,39 | 1807 | 42,64 | 1869 | 247,83 | | |
| 1498 | na | 1560 | na | 1622 | 7,34 | 1684 | 7,09 | 1746 | 7,33 | 1808 | 42,12 | 1870 | 280,93 | | |
| 1499 | na | 1561 | na | 1623 | na | 1685 | 7,44 | 1747 | 10,09 | 1809 | 43,75 | 1871 | 268,98 | | |
| 1500 | na | 1562 | na | 1624 | 6,88 | 1686 | 8,13 | 1748 | 10,91 | 1810 | 37,61 | 1872 | 287,5 | | |
| 1501 | na | 1563 | na | 1625 | 6,33 | 1687 | 7,68 | 1749 | 11,18 | 1811 | 58,32 | 1873 | 312,06 | | |
| 1502 | na | 1564 | na | 1626 | 4,2 | 1688 | 7,18 | 1750 | 9,89 | 1812 | 44,6 | 1874 | 285,07 | | |
| 1503 | na | 1565 | na | 1627 | 4,71 | 1689 | 7,29 | 1751 | 10,17 | 1813 | 44,8 | 1875 | 263,41 | | |
| 1504 | na | 1566 | na | 1628 | 4,49 | 1690 | 7,72 | 1752 | 9,23 | 1814 | 45,99 | 1876 | 254,88 | | |
| 1505 | na | 1567 | na | 1629 | 4,4 | 1691 | 9,55 | 1753 | 7,7 | 1815 | 45,93 | 1877 | 261,92 | | |
| 1506 | na | 1568 | na | 1630 | 4,47 | 1692 | 8,95 | 1754 | 7,88 | 1816 | 48,84 | 1878 | 239,57 | | |
| 1507 | na | 1569 | 1,86 | 1631 | 5,18 | 1693 | 7,42 | 1755 | 10,4 | 1817 | 50,03 | 1879 | 248,32 | | |
| 1508 | na | 1570 | 1,94 | 1632 | 5,51 | 1694 | na | 1756 | 10,47 | 1818 | 51,46 | 1880 | 249,66 | | |
| 1509 | na | 1571 | na | 1633 | 5,32 | 1695 | na | 1757 | 12,29 | 1819 | 67,05 | 1881 | na | | |
| 1510 | na | 1572 | na | 1634 | 5,36 | 1696 | 7,98 | 1758 | 12,24 | 1820 | 49,34 | 1882 | na | | |
| 1511 | na | 1573 | 2,06 | 1635 | 5,05 | 1697 | 7,22 | 1759 | 10,78 | 1821 | 51,81 | 1883 | na | | |
| 1512 | na | 1574 | 1,98 | 1636 | 5,31 | 1698 | 7,5 | 1760 | 11,05 | 1822 | 52,69 | 1884 | 222,74 | | |
| 1513 | na | 1575 | 1,99 | 1637 | 6,31 | 1699 | 7,37 | 1761 | 10,12 | 1823 | 53,32 | 1885 | 207,24 | | |
| 1514 | na | 1576 | na | 1638 | 6,36 | 1700 | 7,94 | 1762 | 12,35 | 1824 | 51,66 | 1886 | 231,55 | | |
| 1515 | na | 1577 | na | 1639 | 6,05 | 1701 | 6,95 | 1763 | 9,29 | 1825 | 51,97 | 1887 | 254,77 | | |
| 1516 | na | 1578 | na | 1640 | 5,19 | 1702 | 5,06 | 1764 | 9,62 | 1826 | 66,27 | 1888 | 245,81 | | |
| 1517 | na | 1579 | na | 1641 | 4,45 | 1703 | 4,99 | 1765 | 9,8 | 1827 | 73,05 | 1889 | 255,2 | | |
| 1518 | na | 1580 | na | 1642 | 4,29 | 1704 | 5,3 | 1766 | 9,81 | 1828 | 92,59 | 1890 | 264,52 | | |
| 1519 | na | 1581 | na | 1643 | 3,79 | 1705 | 7,46 | 1767 | 10,99 | 1829 | 85,67 | 1891 | 274,42 | | |
| 1520 | na | 1582 | na | 1644 | 4,04 | 1706 | 5,58 | 1768 | 12,09 | 1830 | 85,39 | 1892 | 245,79 | | |
| 1521 | na | 1583 | na | 1645 | 3,95 | 1707 | 5,5 | 1769 | 16,02 | 1831 | 110,42 | 1893 | 243,36 | | |
| 1522 | na | 1584 | na | 1646 | 4,19 | 1708 | na | 1770 | 19,12 | 1832 | 114,96 | 1894 | 223,02 | | |
| 1523 | na | 1585 | 2,36 | 1647 | 4,21 | 1709 | 5,69 | 1771 | 19 | 1833 | 115,25 | 1895 | 225,91 | | |
| 1524 | na | 1586 | 3,34 | 1648 | 4,78 | 1710 | 5,52 | 1772 | 18,64 | 1834 | 122,58 | 1896 | 219,7 | | |
| 1525 | na | 1587 | 3,53 | 1649 | 4,8 | 1711 | 7,34 | 1773 | 17,18 | 1835 | 135,22 | 1897 | 212,23 | | |
| 1526 | na | 1588 | 4,45 | 1650 | 4,31 | 1712 | 6,89 | 1774 | 17,12 | 1836 | 112,71 | 1898 | 211,35 | | |
| 1527 | 1,84 | 1589 | 3,09 | 1651 | na | 1713 | 6,43 | 1775 | 11,86 | 1837 | 193,28 | 1899 | 208,4 | | |
| 1528 | 1,89 | 1590 | 4,32 | 1652 | 4,41 | 1714 | 7,7 | 1776 | na | 1838 | 161,11 | 1900 | 210,72 | | |
| 1529 | na | 1591 | 3,31 | 1653 | 4,58 | 1715 | 7,44 | 1777 | na | 1839 | 150,02 | 1901 | 195,72 | | |
| 1530 | na | 1592 | 3,08 | 1654 | 4,51 | 1716 | 6,66 | 1778 | 20,69 | 1840 | 158,58 | 1902 | 197,37 | | |

**Table 2: Silver Content in Akçe values for the 1469-1918 period**

| Year | Grams | Year | Grams | Year | Grams | Year | Grams | Year | Grams | Year | Grams | Year | Grams | Year | Grams |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1469 | 0,86 | 1531 | na | 1593 | 0,34 | 1655 | 0,28 | 1717 | 0,133 | 1779 | 0,0908 | 1841 | 0,0078 | 1903 | 0,00833 |
| 1470 | na | 1532 | na | 1594 | 0,34 | 1656 | 0,28 | 1718 | 0,133 | 1780 | 0,0833 | 1842 | 0,0078 | 1904 | 0,00833 |
| 1471 | 0,84 | 1533 | na | 1595 | 0,34 | 1657 | 0,28 | 1719 | 0,133 | 1781 | 0,0833 | 1843 | 0,0078 | 1905 | 0,00833 |
| 1472 | na | 1534 | na | 1596 | 0,23 | 1658 | 0,28 | 1720 | 0,132 | 1782 | 0,0833 | 1844 | 0,00833 | 1906 | 0,00833 |
| 1473 | 0,84 | 1535 | na | 1597 | 0,23 | 1659 | 0,23 | 1721 | 0,132 | 1783 | 0,0833 | 1845 | 0,00833 | 1907 | 0,00833 |
| 1474 | 0,84 | 1536 | na | 1598 | 0,23 | 1660 | 0,23 | 1722 | 0,132 | 1784 | 0,0833 | 1846 | 0,00833 | 1908 | 0,00833 |
| 1475 | na | 1537 | na | 1599 | 0,23 | 1661 | 0,23 | 1723 | 0,132 | 1785 | 0,0833 | 1847 | 0,00833 | 1909 | 0,00833 |
| 1476 | na | 1538 | na | 1600 | 0,29 | 1662 | 0,23 | 1724 | 0,132 | 1786 | 0,0833 | 1848 | 0,00833 | 1910 | 0,00833 |
| 1477 | na | 1539 | na | 1601 | 0,29 | 1663 | 0,23 | 1725 | 0,132 | 1787 | 0,0833 | 1849 | 0,00833 | 1911 | 0,00833 |
| 1478 | na | 1540 | na | 1602 | 0,29 | 1664 | 0,23 | 1726 | 0,132 | 1788 | 0,0783 | 1850 | 0,00833 | 1912 | 0,00833 |
| 1479 | na | 1541 | na | 1603 | 0,29 | 1665 | 0,23 | 1727 | 0,132 | 1789 | 0,0575 | 1851 | 0,00833 | 1913 | 0,00833 |
| 1480 | na | 1542 | na | 1604 | 0,29 | 1666 | 0,23 | 1728 | 0,132 | 1790 | 0,0575 | 1852 | 0,00833 | 1914 | 0,00833 |
| 1481 | na | 1543 | na | 1605 | 0,29 | 1667 | 0,23 | 1729 | 0,132 | 1791 | 0,0575 | 1853 | 0,00833 | 1915 | na |
| 1482 | na | 1544 | na | 1606 | 0,29 | 1668 | 0,23 | 1730 | 0,124 | 1792 | 0,0575 | 1854 | na | 1916 | na |
| 1483 | na | 1545 | na | 1607 | na | 1669 | 0,21 | 1731 | 0,124 | 1793 | 0,0575 | 1855 | 0,00833 | 1917 | na |
| 1484 | na | 1546 | na | 1608 | na | 1670 | 0,21 | 1732 | na | 1794 | na | 1856 | 0,00833 | 1918 | na |
| 1485 | na | 1547 | na | 1609 | na | 1671 | 0,21 | 1733 | na | 1795 | 0,0492 | 1857 | 0,00833 | | |
| 1486 | na | 1548 | na | 1610 | 0,29 | 1672 | 0,21 | 1734 | 0,124 | 1796 | 0,0492 | 1858 | 0,00833 | | |
| 1487 | na | 1549 | na | 1611 | 0,29 | 1673 | 0,21 | 1735 | 0,124 | 1797 | 0,0492 | 1859 | 0,00833 | | |
| 1488 | na | 1550 | na | 1612 | 0,29 | 1674 | 0,21 | 1736 | 0,124 | 1798 | 0,0492 | 1860 | 0,00833 | | |
| 1489 | 0,68 | 1551 | na | 1613 | 0,29 | 1675 | 0,21 | 1737 | 0,124 | 1799 | 0,0492 | 1861 | 0,00833 | | |
| 1490 | 0,68 | 1552 | na | 1614 | 0,29 | 1676 | 0,21 | 1738 | 0,124 | 1800 | na | 1862 | 0,00833 | | |
| 1491 | na | 1553 | na | 1615 | 0,29 | 1677 | 0,21 | 1739 | 0,124 | 1801 | 0,0492 | 1863 | na | | |
| 1492 | na | 1554 | na | 1616 | 0,29 | 1678 | 0,21 | 1740 | 0,121 | 1802 | 0,0492 | 1864 | na | | |
| 1493 | na | 1555 | 0,66 | 1617 | 0,29 | 1679 | 0,21 | 1741 | 0,121 | 1803 | 0,0492 | 1865 | na | | |
| 1494 | na | 1556 | 0,66 | 1618 | 0,28 | 1680 | 0,21 | 1742 | 0,121 | 1804 | 0,0492 | 1866 | na | | |
| 1495 | na | 1557 | na | 1619 | 0,28 | 1681 | 0,21 | 1743 | 0,121 | 1805 | 0,0492 | 1867 | 0,00833 | | |
| 1496 | na | 1558 | na | 1620 | 0,28 | 1682 | 0,21 | 1744 | 0,121 | 1806 | 0,0492 | 1868 | 0,00833 | | |
| 1497 | na | 1559 | na | 1621 | 0,28 | 1683 | 0,21 | 1745 | 0,121 | 1807 | 0,0492 | 1869 | 0,00833 | | |
| 1498 | na | 1560 | na | 1622 | 0,23 | 1684 | 0,21 | 1746 | 0,121 | 1808 | 0,0492 | 1870 | 0,00833 | | |
| 1499 | na | 1561 | na | 1623 | na | 1685 | 0,21 | 1747 | 0,121 | 1809 | 0,0368 | 1871 | 0,00833 | | |
| 1500 | na | 1562 | na | 1624 | 0,12 | 1686 | 0,21 | 1748 | 0,121 | 1810 | 0,0312 | 1872 | 0,00833 | | |
| 1501 | na | 1563 | na | 1625 | 0,28 | 1687 | 0,21 | 1749 | 0,121 | 1811 | 0,0312 | 1873 | 0,00833 | | |
| 1502 | na | 1564 | na | 1626 | 0,28 | 1688 | 0,21 | 1750 | 0,121 | 1812 | 0,0312 | 1874 | 0,00833 | | |
| 1503 | na | 1565 | na | 1627 | 0,28 | 1689 | 0,21 | 1751 | 0,121 | 1813 | 0,0312 | 1875 | 0,00833 | | |
| 1504 | na | 1566 | na | 1628 | 0,23 | 1690 | 0,13 | 1752 | 0,121 | 1814 | 0,0312 | 1876 | 0,00833 | | |
| 1505 | na | 1567 | na | 1629 | 0,23 | 1691 | 0,13 | 1753 | 0,121 | 1815 | 0,0312 | 1877 | 0,00833 | | |
| 1506 | na | 1568 | na | 1630 | 0,23 | 1692 | 0,13 | 1754 | 0,118 | 1816 | 0,0312 | 1878 | 0,00833 | | |
| 1507 | na | 1569 | 0,61 | 1631 | 0,23 | 1693 | 0,13 | 1755 | 0,118 | 1817 | 0,0312 | 1879 | 0,00833 | | |
| 1508 | na | 1570 | 0,61 | 1632 | 0,23 | 1694 | na | 1756 | 0,118 | 1818 | 0,0368 | 1880 | 0,00833 | | |
| 1509 | na | 1571 | na | 1633 | 0,2 | 1695 | na | 1757 | 0,095 | 1819 | 0,0368 | 1881 | na | | |
| 1510 | na | 1572 | na | 1634 | 0,2 | 1696 | 0,132 | 1758 | 0,095 | 1820 | 0,0246 | 1882 | na | | |
| 1511 | na | 1573 | 0,61 | 1635 | 0,18 | 1697 | 0,132 | 1759 | 0,095 | 1821 | 0,0246 | 1883 | na | | |
| 1512 | na | 1574 | 0,61 | 1636 | 0,18 | 1698 | 0,132 | 1760 | 0,095 | 1822 | 0,0193 | 1884 | 0,00833 | | |
| 1513 | na | 1575 | 0,61 | 1637 | 0,18 | 1699 | 0,132 | 1761 | 0,095 | 1823 | 0,0193 | 1885 | 0,00833 | | |
| 1514 | na | 1576 | na | 1638 | 0,18 | 1700 | 0,132 | 1762 | 0,095 | 1824 | 0,0193 | 1886 | 0,00833 | | |
| 1515 | na | 1577 | na | 1639 | 0,18 | 1701 | 0,132 | 1763 | 0,095 | 1825 | 0,0193 | 1887 | 0,00833 | | |
| 1516 | na | 1578 | na | 1640 | 0,16 | 1702 | 0,132 | 1764 | 0,095 | 1826 | 0,0193 | 1888 | 0,00833 | | |
| 1517 | na | 1579 | na | 1641 | 0,28 | 1703 | 0,132 | 1765 | 0,095 | 1827 | 0,0193 | 1889 | 0,00833 | | |
| 1518 | na | 1580 | na | 1642 | 0,28 | 1704 | 0,132 | 1766 | 0,0958 | 1828 | 0,0123 | 1890 | 0,00833 | | |
| 1519 | na | 1581 | na | 1643 | 0,28 | 1705 | 0,132 | 1767 | 0,0958 | 1829 | 0,006 | 1891 | 0,00833 | | |
| 1520 | na | 1582 | na | 1644 | 0,28 | 1706 | 0,132 | 1768 | 0,0958 | 1830 | 0,006 | 1892 | 0,00833 | | |
| 1521 | na | 1583 | na | 1645 | 0,28 | 1707 | 0,132 | 1769 | 0,0958 | 1831 | 0,0044 | 1893 | 0,00833 | | |
| 1522 | na | 1584 | na | 1646 | 0,28 | 1708 | na | 1770 | 0,0958 | 1832 | 0,0078 | 1894 | 0,00833 | | |
| 1523 | na | 1585 | 0,61 | 1647 | 0,28 | 1709 | 0,128 | 1771 | 0,0958 | 1833 | 0,0078 | 1895 | 0,00833 | | |
| 1524 | na | 1586 | 0,34 | 1648 | 0,28 | 1710 | 0,128 | 1772 | 0,0958 | 1834 | 0,0078 | 1896 | 0,00833 | | |
| 1525 | na | 1587 | 0,34 | 1649 | 0,28 | 1711 | 0,128 | 1773 | 0,0958 | 1835 | 0,0078 | 1897 | 0,00833 | | |
| 1526 | na | 1588 | 0,34 | 1650 | 0,28 | 1712 | 0,128 | 1774 | 0,0908 | 1836 | 0,0078 | 1898 | 0,00833 | | |
| 1527 | 0,66 | 1589 | 0,34 | 1651 | na | 1713 | 0,128 | 1775 | 0,0908 | 1837 | 0,0078 | 1899 | 0,00833 | | |
| 1528 | 0,66 | 1590 | 0,34 | 1652 | 0,28 | 1714 | 0,128 | 1776 | na | 1838 | 0,0078 | 1900 | 0,00833 | | |
| 1529 | na | 1591 | 0,34 | 1653 | 0,28 | 1715 | 0,128 | 1777 | na | 1839 | 0,0078 | 1901 | 0,00833 | | |
| 1530 | na | 1592 | 0,34 | 1654 | 0,28 | 1716 | 0,133 | 1778 | 0,0908 | 1840 | 0,0078 | 1902 | 0,00833 | | |

**Table 3: CPI Silver Grams values for the 1469-1918 period**

| Year | Sgrams | Year | Sgrams | Year | Sgrams | Year | Sgrams | Year | Sgrams | Year | Sgrams | Year | Sgrams | Year | Sgrams |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1469 | 1 | 1531 | na | 1593 | 1,34 | 1655 | 1,47 | 1717 | 1,08 | 1779 | 2,01 | 1841 | 1,61 | 1903 | 2 |
| 1470 | na | 1532 | na | 1594 | 1,54 | 1656 | 1,56 | 1718 | 1,04 | 1780 | 1,83 | 1842 | 1,72 | 1904 | 2,01 |
| 1471 | 1,12 | 1533 | na | 1595 | 1,64 | 1657 | 2,02 | 1719 | 1,06 | 1781 | 1,68 | 1843 | 1,75 | 1905 | 2,12 |
| 1472 | na | 1534 | na | 1596 | 1,36 | 1658 | 1,84 | 1720 | 1,12 | 1782 | 1,46 | 1844 | 1,63 | 1906 | 2,12 |
| 1473 | 1,43 | 1535 | na | 1597 | 1,63 | 1659 | 1,39 | 1721 | 1,06 | 1783 | 1,53 | 1845 | 1,66 | 1907 | 2,27 |
| 1474 | 1,13 | 1536 | na | 1598 | 1,59 | 1660 | 1,63 | 1722 | 1 | 1784 | 1,47 | 1846 | 1,76 | 1908 | 2,45 |
| 1475 | na | 1537 | na | 1599 | 1,26 | 1661 | 1,96 | 1723 | 0,97 | 1785 | 1,66 | 1847 | 1,57 | 1909 | 2,5 |
| 1476 | na | 1538 | na | 1600 | 1,6 | 1662 | 1,58 | 1724 | 1,02 | 1786 | 1,85 | 1848 | 2,12 | 1910 | 2,54 |
| 1477 | na | 1539 | na | 1601 | 1,48 | 1663 | 1,39 | 1725 | 1,09 | 1787 | 1,49 | 1849 | 1,78 | 1911 | 2,75 |
| 1478 | na | 1540 | na | 1602 | 1,48 | 1664 | 1,37 | 1726 | 1,05 | 1788 | 1,45 | 1850 | 1,57 | 1912 | 2,96 |
| 1479 | na | 1541 | na | 1603 | 1,56 | 1665 | 1,33 | 1727 | 0,95 | 1789 | 1,41 | 1851 | 1,68 | 1913 | 2,97 |
| 1480 | na | 1542 | na | 1604 | 2,33 | 1666 | 1,43 | 1728 | 1,15 | 1790 | 1,79 | 1852 | 1,67 | 1914 | 2,97 |
| 1481 | na | 1543 | na | 1605 | 2,12 | 1667 | 1,61 | 1729 | 1,23 | 1791 | 1,48 | 1853 | 1,8 | 1915 | na |
| 1482 | na | 1544 | na | 1606 | 2,09 | 1668 | 1,72 | 1730 | 0,89 | 1792 | 1,47 | 1854 | na | 1916 | na |
| 1483 | na | 1545 | na | 1607 | na | 1669 | 1,54 | 1731 | 1,15 | 1793 | 1,65 | 1855 | 2,33 | 1917 | na |
| 1484 | na | 1546 | na | 1608 | na | 1670 | 1,5 | 1732 | na | 1794 | na | 1856 | 2,99 | 1918 | na |
| 1485 | na | 1547 | na | 1609 | na | 1671 | 1,45 | 1733 | na | 1795 | 1,34 | 1857 | 2,96 | | |
| 1486 | na | 1548 | na | 1610 | 1,48 | 1672 | 1,59 | 1734 | 0,97 | 1796 | 1,38 | 1858 | 3,13 | | |
| 1487 | na | 1549 | na | 1611 | 1,37 | 1673 | 1,48 | 1735 | 0,97 | 1797 | 1,63 | 1859 | 2,74 | | |
| 1488 | na | 1550 | na | 1612 | 1,37 | 1674 | 1,6 | 1736 | 1,14 | 1798 | 1,37 | 1860 | 2,72 | | |
| 1489 | 1,02 | 1551 | na | 1613 | 1,35 | 1675 | 1,75 | 1737 | 1,17 | 1799 | 1,36 | 1861 | 3,24 | | |
| 1490 | 0,85 | 1552 | na | 1614 | 1,39 | 1676 | 1,87 | 1738 | 1,28 | 1800 | na | 1862 | 2,91 | | |
| 1491 | na | 1553 | na | 1615 | 1,61 | 1677 | 1,86 | 1739 | 1,2 | 1801 | 1,41 | 1863 | na | | |
| 1492 | na | 1554 | na | 1616 | 1,75 | 1678 | 1,81 | 1740 | 1,53 | 1802 | 1,33 | 1864 | na | | |
| 1493 | na | 1555 | 1,14 | 1617 | 1,69 | 1679 | 2,01 | 1741 | 1,53 | 1803 | 1,6 | 1865 | na | | |
| 1494 | na | 1556 | 1,35 | 1618 | 1,29 | 1680 | 1,84 | 1742 | 1,49 | 1804 | 1,86 | 1866 | na | | |
| 1495 | na | 1557 | na | 1619 | 1,43 | 1681 | 1,8 | 1743 | 1,24 | 1805 | 2,36 | 1867 | 2,63 | | |
| 1496 | na | 1558 | na | 1620 | 1,49 | 1682 | 1,63 | 1744 | 1,12 | 1806 | 1,9 | 1868 | 2,64 | | |
| 1497 | na | 1559 | na | 1621 | 2,29 | 1683 | 1,87 | 1745 | 1,45 | 1807 | 2,43 | 1869 | 2,39 | | |
| 1498 | na | 1560 | na | 1622 | 1,91 | 1684 | 1,7 | 1746 | 1,03 | 1808 | 2,4 | 1870 | 2,71 | | |
| 1499 | na | 1561 | na | 1623 | na | 1685 | 1,78 | 1747 | 1,41 | 1809 | 1,86 | 1871 | 2,59 | | |
| 1500 | na | 1562 | na | 1624 | 0,93 | 1686 | 1,95 | 1748 | 1,53 | 1810 | 1,36 | 1872 | 2,77 | | |
| 1501 | na | 1563 | na | 1625 | 2,04 | 1687 | 1,84 | 1749 | 1,56 | 1811 | 2,1 | 1873 | 3,01 | | |
| 1502 | na | 1564 | na | 1626 | 1,36 | 1688 | 1,72 | 1750 | 1,38 | 1812 | 1,61 | 1874 | 2,75 | | |
| 1503 | na | 1565 | na | 1627 | 1,52 | 1689 | 1,75 | 1751 | 1,42 | 1813 | 1,62 | 1875 | 2,54 | | |
| 1504 | na | 1566 | na | 1628 | 1,17 | 1690 | 1,16 | 1752 | 1,29 | 1814 | 1,66 | 1876 | 2,46 | | |
| 1505 | na | 1567 | na | 1629 | 1,15 | 1691 | 1,44 | 1753 | 1,08 | 1815 | 1,66 | 1877 | 2,53 | | |
| 1506 | na | 1568 | na | 1630 | 1,16 | 1692 | 1,35 | 1754 | 1,08 | 1816 | 1,76 | 1878 | 2,31 | | |
| 1507 | na | 1569 | 1,32 | 1631 | 1,35 | 1693 | 1,12 | 1755 | 1,42 | 1817 | 1,8 | 1879 | 2,4 | | |
| 1508 | na | 1570 | 1,37 | 1632 | 1,43 | 1694 | na | 1756 | 1,43 | 1818 | 2,19 | 1880 | 2,41 | | |
| 1509 | na | 1571 | na | 1633 | 1,22 | 1695 | na | 1757 | 1,35 | 1819 | 2,86 | 1881 | na | | |
| 1510 | na | 1572 | na | 1634 | 1,23 | 1696 | 1,22 | 1758 | 1,35 | 1820 | 1,4 | 1882 | na | | |
| 1511 | na | 1573 | 1,46 | 1635 | 1,05 | 1697 | 1,1 | 1759 | 1,19 | 1821 | 1,47 | 1883 | na | | |
| 1512 | na | 1574 | 1,4 | 1636 | 1,11 | 1698 | 1,14 | 1760 | 1,21 | 1822 | 1,18 | 1884 | 2,15 | | |
| 1513 | na | 1575 | 1,41 | 1637 | 1,31 | 1699 | 1,12 | 1761 | 1,11 | 1823 | 1,19 | 1885 | 2 | | |
| 1514 | na | 1576 | na | 1638 | 1,32 | 1700 | 1,21 | 1762 | 1,36 | 1824 | 1,16 | 1886 | 2,23 | | |
| 1515 | na | 1577 | na | 1639 | 1,26 | 1701 | 1,06 | 1763 | 1,02 | 1825 | 1,16 | 1887 | 2,46 | | |
| 1516 | na | 1578 | na | 1640 | 0,97 | 1702 | 0,77 | 1764 | 1,06 | 1826 | 1,48 | 1888 | 2,37 | | |
| 1517 | na | 1579 | na | 1641 | 1,44 | 1703 | 0,76 | 1765 | 1,08 | 1827 | 1,63 | 1889 | 2,46 | | |
| 1518 | na | 1580 | na | 1642 | 1,39 | 1704 | 0,81 | 1766 | 1,09 | 1828 | 1,31 | 1890 | 2,55 | | |
| 1519 | na | 1581 | na | 1643 | 1,23 | 1705 | 1,14 | 1767 | 1,22 | 1829 | 0,59 | 1891 | 2,65 | | |
| 1520 | na | 1582 | na | 1644 | 1,3 | 1706 | 0,85 | 1768 | 1,34 | 1830 | 0,59 | 1892 | 2,37 | | |
| 1521 | na | 1583 | na | 1645 | 1,28 | 1707 | 0,84 | 1769 | 1,78 | 1831 | 0,56 | 1893 | 2,35 | | |
| 1522 | na | 1584 | na | 1646 | 1,35 | 1708 | na | 1770 | 2,12 | 1832 | 1,04 | 1894 | 2,15 | | |
| 1523 | na | 1585 | 1,67 | 1647 | 1,36 | 1709 | 0,85 | 1771 | 2,11 | 1833 | 1,04 | 1895 | 2,18 | | |
| 1524 | na | 1586 | 1,32 | 1648 | 1,54 | 1710 | 0,82 | 1772 | 2,07 | 1834 | 1,11 | 1896 | 2,12 | | |
| 1525 | na | 1587 | 1,4 | 1649 | 1,55 | 1711 | 1,09 | 1773 | 1,91 | 1835 | 1,23 | 1897 | 2,05 | | |
| 1526 | na | 1588 | 1,76 | 1650 | 1,39 | 1712 | 1,02 | 1774 | 1,8 | 1836 | 1,02 | 1898 | 2,04 | | |
| 1527 | 1,4 | 1589 | 1,22 | 1651 | na | 1713 | 0,95 | 1775 | 1,25 | 1837 | 1,75 | 1899 | 2,01 | | |
| 1528 | 1,43 | 1590 | 1,71 | 1652 | 1,42 | 1714 | 1,14 | 1776 | na | 1838 | 1,46 | 1900 | 2,03 | | |
| 1529 | na | 1591 | 1,31 | 1653 | 1,48 | 1715 | 1,11 | 1777 | na | 1839 | 1,36 | 1901 | 1,89 | | |
| 1530 | na | 1592 | 1,22 | 1654 | 1,46 | 1716 | 1,02 | 1778 | 2,18 | 1840 | 1,44 | 1902 | 1,9 | | |

## Table 4: Inflation Results Based on the CPI

| SAMPLE | PANEL A: 1586 - 1913 | | | | | | PANEL B: 1586 – 1699 (Slow Down Period) | | | | PANEL C: 1700 – 1792 (Recession Period) | | | | PANEL D: 1793 – 1913 (Break Up Period) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | I | II | III | IV | I | II | III | IV | V |
| constant | 0.024** | 0.015 | | | 0.020** | 0.023** | 0.024* | -0.020 | | 0.025 | 0.013 | 0.016 | | 0.001 | 0.027** | 0.024* | | 0.027* | 0.025* |
| | (2.651) | (1.397) | | | (2.148) | (2.498) | (1.771) | (-1.042) | | (1.835) | (0.686) | (0.721) | | (0.032) | (2.140) | (1.769) | | (1.949) | (1.832) |
| $\pi_{t-1}$ | -0.259** | -0.267** | -0.262** | -0.372** | -0.256** | -0.261** | -0.072 | -0.097 | -0.089 | -0.071 | -0.240* | -0.236* | -0.395** | -0.217* | -0.497** | -0.501** | -0.614** | -0.493** | -0.502** |
| | (-3.603) | (-3.778) | (-3.602) | (-4.749) | (-3.619) | (-3.625) | (-0.614) | (-0.860) | (-0.625) | (-0.596) | (-1.815) | (-1.799) | (-3.159) | (-1.662) | (-4.173) | (-4.239) | (-4.704) | (-4.024) | (-4.214) |
| $\pi_{t-2}$ | -0.110* | -0.113* | -0.112* | -0.217** | -0.105* | -0.111* | -0.079 | -0.102 | -0.113 | -0.078 | -0.142 | -0.140 | -0.247** | -0.068 | -0.126 | -0.119 | -0.298** | -0.125 | -0.129 |
| | (-1.741) | (-1.804) | (-1.759) | (-3.230) | (-1.691) | (-1.756) | (-0.671) | (-0.942) | (-0.843) | (-0657) | (-1.251) | (-1.237) | (-2.412) | (-0.597) | (-1.168) | (-1.111) | (-2.449) | (-1.170) | (-1.193) |
| $\pi_{t-3}$ | -0.081 | -0.079 | -0.083 | -0.146** | -0.090 | -0.082 | -0.210 | -0.198 | -0.208* | -0.209 | -0.102 | -0.093 | -0.141 | -0.122 | 0.091 | 0.106 | -0.039 | 0.088 | 0.091 |
| | (-1.148) | (-1.122) | (-1.175) | (-1.998) | (-1.288) | (-1.159) | (-1.553) | (-1.547) | (-1.687) | (-1.533) | (-0.744) | (-0.666) | (-0.968) | (-0.897) | (1.209) | (1.419) | (-0.448) | (1.147) | (1.199) |
| $\pi_{t-4}$ | 0.007 | 0.010 | 0.003 | -0.053 | 0.007 | 0.005 | -0.011 | 0.035 | -0.056 | -0.013 | -0.033 | -0.023 | -0.074 | -0.063 | 0.137* | 0.144* | 0.049 | 0.134 | 0.135 |
| | (0.117) | (0.165) | (0.049) | (-0.845) | (0.116) | (0.085) | (-0.112) | (0.355) | (-0.602) | (-0.121) | (-0.270) | (-0.175) | (-0.582) | (-0.525) | (1.678) | (1.772) | (0.522) | (1.623) | (1.642) |
| war | | 0.027 | | | | | | 0.074** | | | | -0.010 | | | | 0.040 | | | |
| | | (1.496) | | | | | | (2.670) | | | | (0.258) | | | | (1.339) | | | |
| slow down | | | 0.028** | | | | | | | | | | | | | | | | |
| | | | (1.963) | | | | | | | | | | | | | | | | |
| recession | | | 0.012 | | | | | | | | | | | | | | | | |
| | | | (0.667) | | | | | | | | | | | | | | | | |
| break up | | | 0.031** | | | | | | | | | | | | | | | | |
| | | | (2.345) | | | | | | | | | | | | | | | | |
| first | | | | | 0.046 | | | | | -0.003 | | | | 0.140** | | | | 0.010 | |
| | | | | | (1.148) | | | | | (-0.054) | | | | (2.634) | | | | (0.287) | |
| constitution | | | | | | 0.034** | | | | | | | | | | | | | 0.035* |
| | | | | | | (2.116) | | | | | | | | | | | | | (1.809) |
| MURAD III | | | | 0.025 | | | | | 0.044 | | | | | | | | | | |
| | | | | (0.338) | | | | | (0.496) | | | | | | | | | | |
| MEHMED III | | | | 0.048 | | | | | 0.038 | | | | | | | | | | |
| | | | | (0.904) | | | | | (0.884) | | | | | | | | | | |
| AHMED I | | | | 0.139** | | | | | 0.100 | | | | | | | | | | |
| | | | | (2.556) | | | | | (1.549) | | | | | | | | | | |
| MUSTAFA I | | | | -0.043 | | | | | -0.111 | | | | | | | | | | |
| | | | | (-0.232) | | | | | (-0.716) | | | | | | | | | | |
| OSMAN II | | | | 0.081 | | | | | 0.108 | | | | | | | | | | |
| | | | | (0.700) | | | | | (0.716) | | | | | | | | | | |
| MURAD IV | | | | 0.041* | | | | | 0.029 | | | | | | | | | | |
| | | | | (1.771) | | | | | (1.203) | | | | | | | | | | |
| IBRAHIM | | | | -0.059 | | | | | -0.044 | | | | | | | | | | |
| | | | | (-1.532) | | | | | (-1.264) | | | | | | | | | | |
| MEHMED IV | | | | 0.026 | | | | | 0.019 | | | | | | | | | | |
| | | | | (1.509) | | | | | (1.806) | | | | | | | | | | |
| SÜLEYMAN II | | | | -0.009 | | | | | 0.003 | | | | | | | | | | |
| | | | | (-0.363) | | | | | (1.132) | | | | | | | | | | |
| AHMED II | | | | 0.031 | | | | | 0.002 | | | | | | | | | | |
| | | | | (0.343) | | | | | (0.023) | | | | | | | | | | |
| MUSTAFA II | | | | -0.204** | | | | | 0.000 | | | | -0.208** | | | | | | |
| | | | | (-3.267) | | | | | (0.000) | | | | (-3.296) | | | | | | |
| AHMED III | | | | 0.006 | | | | | | | | | 0.006 | | | | | | |
| | | | | (0.239) | | | | | | | | | (0.260) | | | | | | |
| MAHMUD I | | | | 0.009 | | | | | | | | | 0.009 | | | | | | |
| | | | | (0.234) | | | | | | | | | (0.229) | | | | | | |
| OSMAN III | | | | 0.178** | | | | | | | | | 0.180** | | | | | | |
| | | | | (4.376) | | | | | | | | | (4.177) | | | | | | |
| MUSTAFA III | | | | 0.053 | | | | | | | | | 0.056 | | | | | | |
| | | | | (1.438) | | | | | | | | | (1.428) | | | | | | |
| ABDÜLHAMID I | | | | -0.054 | | | | | | | | | -0.055 | | | | | | |
| | | | | (-1.001) | | | | | | | | | (-1.023) | | | | | | |
| SELIM III | | | | 0.103 | | | | | | | | | 0.145* | | | | 0.019 | | |
| | | | | (1.618) | | | | | | | | | (1.822) | | | | (0.508) | | |
| MUSTAFA IV | | | | 0.160** | | | | | | | | | | | | | 0.127** | | |
| | | | | (2.477) | | | | | | | | | | | | | (2.698) | | |
| MAHMUD II | | | | 0.076** | | | | | | | | | | | | | 0.083** | | |
| | | | | (2.572) | | | | | | | | | | | | | (2.651) | | |
| ABDÜLMECID | | | | 0.018 | | | | | | | | | | | | | 0.009 | | |
| | | | | (0.659) | | | | | | | | | | | | | (0.339) | | |
| ABDÜLAZIZ | | | | 0.022 | | | | | | | | | | | | | 0.030 | | |
| | | | | (0.588) | | | | | | | | | | | | | (0.854) | | |
| MURAD V | | | | -0.066** | | | | | | | | | | | | | -0.108** | | |
| | | | | (-5.504) | | | | | | | | | | | | | (-5.623) | | |
| ABDÜLHAMID II | | | | -0.005 | | | | | | | | | | | | | -0.006 | | |
| | | | | (-0.398) | | | | | | | | | | | | | (-0.442) | | |
| MEHMET REŞAD V | | | | 0.077** | | | | | | | | | | | | | 0.085** | | |
| | | | | (5.328) | | | | | | | | | | | | | (4.772) | | |
| SSR | 4.361 | 4.322 | 4.346 | 3.801 | 4.316 | 4.353 | 1.313 | 1.208 | 1.203 | 1.313 | 1.722 | 1.720 | 1.401 | 1.624 | 1.108 | 1.099 | 0.982 | 1.107 | 1.099 |
| $R^2$ | 0.067 | 0.076 | 0.071 | 0.187 | 0.077 | 0.069 | 0.047 | 0.124 | 0.127 | 0.047 | 0.059 | 0.059 | 0.235 | 0.113 | 0.241 | 0.246 | .0326 | 0.241 | 0.246 |

t-ratios are reported in parentheses.
* 10% significance level.
** 5% significance level.

## Table 5: Results Based on the Silver Content in Akçe

| SAMPLE | PANEL A: 1586 - 1913 | | | | | | PANEL B: 1586 – 1699 (Slow Down Period) | | | | PANEL C: 1700 – 1792 (Recession Period) | | | | PANEL D: 1793 – 1913 (Break Up Period) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | I | II | III | IV | I | II | III | IV | V |
| constant | -0.016** (-2.742) | -0.022** (-2.487) | | | -0.013** (-2.158) | -0.016** (-2.743) | -0.013 (-1.196) | -0.007 (-0.246) | | -0.009 (-0.835) | -0.009* (-1.957) | -0.015** (-1.973) | | -0.006 (-1.576) | -0.025** (-2.172) | -0.030** (-2.423) | | -0.023* (-1.944) | -0.027** (-2.172) |
| debasement$_{t-1}$ | 0.022 (0.156) | 0.024 (0.167) | 0.019 (0.135) | -0.053 (-0.374) | 0.016 (0.109) | 0.022 (0.151) | -0.101 (-1.144) | -0.108 (-1.114) | -0.199 (-1.307) | -0.113 (-1.243) | 0.087 (0.663) | 0.062 (0.517) | -0.285 (-1.404) | -0.033 (-0.439) | 0.074 (0.298) | 0.086 (0.356) | 0.002 (0.008) | 0.076 (0.306) | 0.071 (0.287) |
| debasement$_{t-2}$ | 0.105 (1.097) | 0.101 (1.083) | 0.102 (1.097) | 0.043 (0.421) | 0.108 (1.132) | 0.104 (1.091) | -0.005 (-0.234) | -0.007 (-0.379) | -0.105 (-1.078) | -0.002 (-0.114) | -0.051 (-1.514) | -0.071 (-1.624) | -0.389* (-1.645) | -0.022 (-1.162) | 0.193 (1.165) | 0.176 (1.136) | 0.148 (0.972) | 0.195 (1.167) | 0.192 (1.160) |
| debasement$_{t-3}$ | -0.127 (-0.960) | -0.126 (-0.978) | -0.129 (-0.975) | -0.188 (-1.330) | -0.123 (-0.932) | -0.127 (-0.964) | -0.017 (-0.974) | -0.017 (-0.967) | -0.112 (-1.274) | -0.013 (-0.809) | 0.007 (0.206) | -0.009 (-0.238) | -0.363 (-1.488) | 0.020 (0.594) | -0.219 (-1.179) | -0.184 (-1.185) | -0.265 (-1.418) | -0.218 (-1.170) | -0.221 (-1.190) |
| debasement$_{t-4}$ | -0.126 (-1.510) | -0.129 (-1.575) | -0.130 (-1.567) | -0.185* (-1.896) | -0.123 (-1.499) | -0.126 (-1.513) | -0.061 (-1.035) | -0.059 (-1.030) | -0.099 (-1.276) | -0.058 (-1.019) | -0.075 (-1.577) | -0.094* (-1.716) | -0.134 (-1.516) | -0.067 (-1.354) | -0.209 (-1.453) | -0.190 (-1.493) | -0.281 (-1.601) | -0.208 (-1.439) | -0.213 (-1.468) |
| war | | 0.018 (1.544) | | | | | | -0.011 (-0.382) | | | | 0.014* (1.766) | | | | 0.094** (2.053) | | | |
| slow down | | | -0.012 (-1.028) | | | | | | | | | | | | | | | | |
| recession | | | -0.011* (-1.821) | | | | | | | | | | | | | | | | |
| break up | | | -0.024** (-2.157) | | | | | | | | | | | | | | | | |
| first | | | | | -0.029 (-1.474) | | | | | -0.031 (-1.378) | | | | -0.057 (-1.235) | | | | -0.018 (-0.457) | |
| constitution | | | | | | 0.016** (2.743) | | | | | | | | | | | | | 0.027** (2.172) |
| MURAD III | | | | -0.022 (-1.017) | | | | | -0.012 (-0.914) | | | | | | | | | | |
| MEHMED III | | | | -0.029 (-0.614) | | | | | -0.029 (-0.584) | | | | | | | | | | |
| AHMED I | | | | 0.007 (0.957) | | | | | 0.004 (0.843) | | | | | | | | | | |
| MUSTAFA I | | | | -0.130** (-2.477) | | | | | -0.127** (-2.430) | | | | | | | | | | |
| OSMAN II | | | | 0.022 (1.143) | | | | | 0.019 (1.006) | | | | | | | | | | |
| MURAD IV | | | | -0.023 (-1.095) | | | | | -0.035* (-1.847) | | | | | | | | | | |
| IBRAHIM | | | | 0.068 (1.025) | | | | | 0.074 (0.998) | | | | | | | | | | |
| MEHMED IV | | | | -0.012* (-1.699) | | | | | -0.013* (-1.811) | | | | | | | | | | |
| SÜLEYMAN II | | | | -0.159 (-1.225) | | | | | -0.159 (-1.225) | | | | | | | | | | |
| AHMED II | | | | -0.032 (-0.639) | | | | | -0.067 (-1.237) | | | | | | | | | | |
| MUSTAFA II | | | | 0.000 (0.000) | | | | | 0.000 (0.000) | | | | 0.000 (0.000) | | | | | | |
| AHMED III | | | | -0.001 (-0.268) | | | | | | | | | 0.001 (0.054) | | | | | | |
| MAHMUD I | | | | -0.004* (-1.729) | | | | | | | | | -0.006** (-2.180) | | | | | | |
| OSMAN III | | | | -0.074 (-1.226) | | | | | | | | | -0.081 (-1.363) | | | | | | |
| MUSTAFA III | | | | -0.005 (-0.845) | | | | | | | | | -0.015* (-1.646) | | | | | | |
| ABDÜLHAMID I | | | | -0.018** (-2.147) | | | | | | | | | -0.022** (-2.329) | | | | | | |
| SELIM III | | | | -0.075 (-1.504) | | | | | | | | | -0.175** (-1.963) | | | | -0.043 (-1.059) | | |
| MUSTAFA IV | | | | 0.000 (0.000) | | | | | | | | | | | | | 0.000 (0.000) | | |
| MAHMUD II | | | | -0.082** (-2.450) | | | | | | | | | | | | | -0.083** (-2.232) | | |
| ABDÜLMECID | | | | 0.006 (1.348) | | | | | | | | | | | | | 0.006 (1.267) | | |
| ABDÜLAZIZ | | | | 0.000 (0.000) | | | | | | | | | | | | | 0.000 (0.000) | | |
| MURAD V | | | | 0.000 (0.000) | | | | | | | | | | | | | 0.000 (0.000) | | |
| ABDÜLHAMID II | | | | 0.000 (0.000) | | | | | | | | | | | | | 0.000 (0.000) | | |
| MEHMET REŞAD V | | | | 0.000 (0.000) | | | | | | | | | | | | | 0.000 (0.000) | | |
| SSR | 2.376 | 2.359 | 2.367 | 2.076 | 2.357 | 2.374 | 0.857 | 0.855 | 0.706 | 0.848 | 0.147 | 0.144 | 0.088 | 0.132 | 1.277 | 1.231 | 1.159 | 1.275 | 1.272 |
| $R^2$ | 0.047 | 0.054 | 0.051 | 0.168 | 0.055 | 0.048 | 0.015 | 0.018 | 0.189 | 0.026 | 0.011 | 0.031 | 0.403 | 0.116 | 0.131 | 0.163 | 0.210 | 0.133 | 0.134 |

t-ratios are reported in parentheses.
* 10% significance level.
** 5% significance level.

## Table 6: Results Based on the CPI Silver Grams

| SAMPLE | PANEL A: 1586 - 1913 | | | | | | PANEL B: 1586 – 1699 (Slow Down Period) | | | | PANEL C: 1700 – 1792 (Recession Period) | | | | PANEL D: 1793 – 1913 (Break Up Period) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | I | II | III | IV | I | II | III | IV | V |
| constant | 0.005 | -0.010 | | | 0.003 | 0.003 | 0.014 | -0.024 | | 0.016 | -0.001 | -0.006 | | -0.007 | 0.003 | -0.005 | | -0.001 | -0.003 |
| | (0.456) | (-0.802) | | | (0.308) | (0.268) | (0.922) | (-1.015) | | (1.094) | (-0.073) | (-0.305) | | (-0.391) | (0.148) | (-0.242) | | (-0.057) | (-0.134) |
| fiscal | -0.295** | -0.304** | -0.296** | -0.374** | -0.293** | -0.299** | -0.432** | -0.435** | -0.564** | -0.428** | -0.282** | -0.294** | -0.389 | -0.254 | -0.239* | -0.235* | -0.272** | -0.236* | -0.249* |
| expansion$_{t-1}$ | (-3.826) | (-4.043) | (-3.849) | (-4.353) | (-3.802) | (-3.872) | (-4.958) | (-4.954) | (-5.151) | (-5.008) | (-2.049) | (-2.182) | (-2.993) | (-1.841) | (-1.876) | (-1.872) | (-2.203) | (-1.857) | (-1.955) |
| fiscal | -0.167** | -0.174** | -0.168** | -0.215** | -0.167** | -0.171** | -0.351** | -0.356** | -0.517** | -0.342** | -0.128 | -0.136 | -0.193 | -0.087 | -0.103 | -0.097 | -0.129 | -0.105 | -0.109 |
| expansion$_{t-2}$ | (-2.159) | (-2.295) | (-2.159) | (-2.602) | (-2.161) | (-2.194) | (-3.466) | (-3.575) | (-4.376) | (-3.460) | (-1.103) | (-1.169) | (-1.773) | (-0.708) | (-0.885) | (-0.861) | (-1.127) | (-0.911) | (-0.938) |
| fiscal | -0.178* | -0.178* | -0.178* | -0.225** | -0.182* | -0.182* | -0.243* | -0.234* | -0.387** | -0.234* | -0.108 | -0.126 | -0.129 | -0.119 | -0.202 | -0.167 | -0.261 | -0.212 | -0.207 |
| expansion$_{t-3}$ | (-1.819) | (-1.887) | (-1.803) | (-2.115) | (-1.841) | (-1.850) | (-1.714) | (-1.708) | (-3.014) | (-1.714) | (-0.750) | (-0.816) | (-0.869) | (-0.826) | (-1.307) | (-1.269) | (-1.538) | (-1.349) | (-1.333) |
| fiscal | -0.117* | -0.119* | -0.117* | -0.172** | -0.118* | -0.121** | -0.151 | -0.133 | -0.253** | -0.150 | -0.014 | -0.033 | -0.053 | -0.028 | -0.158* | -0.138* | -0.211** | -0.165* | -0.166* |
| expansion$_{t-4}$ | (-1.914) | (-1.975) | (-1.913) | (-2.724) | (-1.953) | (-1.973) | (-1.444) | (-1.228) | (-2.655) | (-1.439) | (-0.119) | (-0.262) | (-0.439) | (-0.243) | (-1.722) | (-1.677) | (-2.223) | (-1.809) | (-1.792) |
| war | | 0.045** | | | | | | 0.063** | | | | 0.016 | | | | 0.103* | | | |
| | | (2.234) | | | | | | (2.094) | | | | (0.404) | | | | (1.732) | | | |
| slow down | | | 0.011 | | | | | | | | | | | | | | | | |
| | | | (0.749) | | | | | | | | | | | | | | | | |
| recession | | | -0.001 | | | | | | | | | | | | | | | | |
| | | | (0.749) | | | | | | | | | | | | | | | | |
| break up | | | 0.002 | | | | | | | | | | | | | | | | |
| | | | (0.123) | | | | | | | | | | | | | | | | |
| first | | | | | 0.015 | | | | | -0.022 | | | | 0.069 | | | | 0.051 | |
| | | | | | (0.386) | | | | | (-0.365) | | | | (1.204) | | | | (0.795) | |
| constitution | | | | | | 0.066** | | | | | | | | | | | | | 0.070** |
| | | | | | | (3.399) | | | | | | | | | | | | | (2.530) |
| MURAD III | | | | 0.022 | | | | | 0.002 | | | | | | | | | | |
| | | | | (0.317) | | | | | (0.033) | | | | | | | | | | |
| MEHMED III | | | | 0.009 | | | | | 0.019 | | | | | | | | | | |
| | | | | (0.219) | | | | | (0.510) | | | | | | | | | | |
| AHMED I | | | | 0.141** | | | | | 0.195** | | | | | | | | | | |
| | | | | (2.334) | | | | | (3.383) | | | | | | | | | | |
| MUSTAFA I | | | | -0.191 | | | | | -0.099 | | | | | | | | | | |
| | | | | (-1.641) | | | | | (-0.773) | | | | | | | | | | |
| OSMAN II | | | | 0.109 | | | | | 0.069 | | | | | | | | | | |
| | | | | (1.150) | | | | | (0.647) | | | | | | | | | | |
| MURAD IV | | | | -0.009 | | | | | -0.021 | | | | | | | | | | |
| | | | | (-0.341) | | | | | | | | | | | | | | | |
| IBRAHIM | | | | 0.032 | | | | | (-0.727) | | | | | | | | | | |
| | | | | (0.658) | | | | | 0.038 | | | | | | | | | | |
| MEHMED IV | | | | 0.011 | | | | | (0.928) | | | | | | | | | | |
| | | | | (0.589) | | | | | 0.019 | | | | | | | | | | |
| SÜLEYMAN II | | | | -0.160 | | | | | (0.973) | | | | | | | | | | |
| | | | | (-1.504) | | | | | -0.166 | | | | | | | | | | |
| AHMED II | | | | -0.095 | | | | | (-1.499) | | | | | | | | | | |
| | | | | (-1.268) | | | | | -0.159** | | | | | | | | | | |
| MUSTAFA II | | | | -0.201** | | | | | (-2.701) | | | | | | | | | | |
| | | | | (-3.316) | | | | | 0.000 | | | | -0.206** | | | | | | |
| AHMED III | | | | 0.004 | | | | | (0.000) | | | | (-3.110) | | | | | | |
| | | | | (0.131) | | | | | | | | | 0.006 | | | | | | |
| MAHMUD I | | | | 0.009 | | | | | | | | | (0.238) | | | | | | |
| | | | | (0.236) | | | | | | | | | 0.003 | | | | | | |
| OSMAN III | | | | 0.079 | | | | | | | | | (0.079) | | | | | | |
| | | | | (1.289) | | | | | | | | | 0.101 | | | | | | |
| MUSTAFA III | | | | 0.049 | | | | | | | | | (1.595) | | | | | | |
| | | | | (1.314) | | | | | | | | | 0.043 | | | | | | |
| ABDÜLHAMID I | | | | -0.078 | | | | | | | | | (1.128) | | | | | | |
| | | | | (-1.468) | | | | | | | | | -0.074 | | | | | | |
| SELIM III | | | | 0.003 | | | | | | | | | (-1.326) | | | | | | |
| | | | | (0.055) | | | | | | | | | -0.004 | | | | 0.024 | | |
| MUSTAFA IV | | | | 0.197** | | | | | | | | | (-0.072) | | | | (0.263) | | |
| | | | | (2.786) | | | | | | | | | | | | | 0.208** | | |
| MAHMUD II | | | | -0.032 | | | | | | | | | | | | | (2.716) | | |
| | | | | (-0.659) | | | | | | | | | | | | | -0.033 | | |
| ABDÜLMECID | | | | 0.032 | | | | | | | | | | | | | (-0.659) | | |
| | | | | (1.236) | | | | | | | | | | | | | 0.034 | | |
| ABDÜLAZIZ | | | | 0.022 | | | | | | | | | | | | | (1.231) | | |
| | | | | (0.580) | | | | | | | | | | | | | 0.018 | | |
| MURAD V | | | | -0.049** | | | | | | | | | | | | | (0.452) | | |
| | | | | (-3.757) | | | | | | | | | | | | | -0.029 | | |
| ABDULHAMID II | | | | -0.006 | | | | | | | | | | | | | (-0.532) | | |
| | | | | (-0.462) | | | | | | | | | | | | | -0.005 | | |
| MEHMET | | | | 0.084** | | | | | | | | | | | | | (-0.402) | | |
| REŞAD V | | | | (4.761) | | | | | | | | | | | | | 0.078** | | |
| | | | | | | | | | | | | | | | | | (3.474) | | |
| SSR | 6.108 | 5.999 | 6.102 | 5.435 | 6.103 | 6.079 | 1.609 | 1.529 | 1.239 | 1.604 | 1.614 | 1.611 | 1.403 | 1.591 | 2.774 | 2.719 | 2.619 | 2.758 | 2.743 |
| $R^2$ | 0.09 | 0.116 | 0.101 | 0.199 | 0.100 | 0.104 | 0.184 | 0.224 | 0.371 | 0.186 | 0.074 | 0.076 | 0.195 | 0.087 | 0.095 | 0.113 | 0.146 | 0.100 | 0.105 |

t-ratios are reported in parentheses.
* 10% significance level.
** 5% significance level.

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# Supplement to "Inflation Dynamics and Its Sources in The Ottoman Empire: 1586-1913"

This supplementary material provides additional empirical evidence that is not reported in the original paper.

## Table S1: Inflation Results Based on the CPI

| SAMPLE | PANEL A: 1478 - 1913 | | | | | | PANEL B: 1586 – 1699 (Slow Down Period) | | | | PANEL C: 1700 – 1792 (Recession Period) | | | | PANEL D: 1793 – 1913 (Break Up Period) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | I | II | III | IV | I | II | III | IV | V |
| **constant** | 0.020** | 0.013 | | | 0.017* | 0.019** | 0.015 | -0.021 | | 0.016 | 0.011 | 0.008 | | 0.001 | 0.034** | 0.033** | | 0.032** | 0.032** |
| | (2.469) | (1.329) | | | (1.991) | (2.321) | (1.111) | (-1.109) | | (1.167) | (0.685) | (0.361) | | (0.074) | (2.711) | (2.503) | | (2.385) | (2.426) |
| $\pi_{t-1}$ | -0.219** | -0.225** | -0.222** | -0.262** | -0.217** | -0.221** | -0.085 | -0.107 | -0.067 | -0.084 | -0.196 | -0.199 | -0.295** | -0.180 | -0397** | -0.399** | -0.436** | 0.111** | -0.399** |
| | (-3.362) | (-3.470) | (-3.367) | (-3.844) | (-3.369) | (-3.378) | (-0.790) | (-1.019) | (-0.538) | (-0.756) | (-1.613) | (-1.640) | (-2.503) | (-1.509) | (-3.655) | (-3.698) | (-3.825) | (-3.520) | (-3.684) |
| **war** | | 0.021 | | | | | | 0.056** | | | | 0.012 | | | | 0.023 | | | |
| | | (1.228) | | | | | | (2.117) | | | | (0.339) | | | | (0.772) | | | |
| **rise** | | | -0.004 | | | | | | | | | | | | | | | | |
| | | | (-1.439) | | | | | | | | | | | | | | | | |
| **slow down** | | | 0.018 | | | | | | | | | | | | | | | | |
| | | | (1.281) | | | | | | | | | | | | | | | | |
| **recession** | | | 0.012 | | | | | | | | | | | | | | | | |
| | | | (0.697) | | | | | | | | | | | | | | | | |
| **break up** | | | 0.029** | | | | | | | | | | | | | | | | |
| | | | (2.446) | | | | | | | | | | | | | | | | |
| **first** | | | | | 0.042 | | | | | -0.007 | | | | 0.138** | | | | 0.023 | |
| | | | | | (1.067) | | | | | (-0.102) | | | | (2.598) | | | | (0.699) | |
| **constitution** | | | | | | 0.032** | | | | | | | | | | | | | 0.027 |
| | | | | | | (2.169) | | | | | | | | | | | | | (1.479) |
| **MURAD III** | | | | 0.027 | | | | | 0.022 | | | | | | | | | | |
| | | | | (0.432) | | | | | (0.286) | | | | | | | | | | |
| **MEHMED III** | | | | 0.029 | | | | | 0.023 | | | | | | | | | | |
| | | | | (0.595) | | | | | (0.525) | | | | | | | | | | |
| **AHMED I** | | | | 0.071 | | | | | 0.059 | | | | | | | | | | |
| | | | | (1.562) | | | | | (1.305) | | | | | | | | | | |
| **MUSTAFA I** | | | | -0.102 | | | | | -0.149 | | | | | | | | | | |
| | | | | (-0.554) | | | | | (-0.925) | | | | | | | | | | |
| **OSMAN II** | | | | 0.102 | | | | | 0.119 | | | | | | | | | | |
| | | | | (0.923) | | | | | (1.171) | | | | | | | | | | |
| **MURAD IV** | | | | -0.005 | | | | | -0.003 | | | | | | | | | | |
| | | | | (-0.128) | | | | | (-0.101) | | | | | | | | | | |
| **IBRAHIM** | | | | -0.038 | | | | | -0.029 | | | | | | | | | | |
| | | | | (-1.103) | | | | | (-0.892) | | | | | | | | | | |
| **MEHMED IV** | | | | 0.017 | | | | | 0.013 | | | | | | | | | | |
| | | | | (1.022) | | | | | (0.789) | | | | | | | | | | |
| **SÜLEYMAN II** | | | | -0.008 | | | | | -0.001 | | | | | | | | | | |
| | | | | (-0.229) | | | | | (-0.023) | | | | | | | | | | |
| **AHMED II** | | | | 0.005 | | | | | -0.009 | | | | | | | | | | |
| | | | | (0.046) | | | | | (-0.087) | | | | | | | | | | |
| **MUSTAFA II** | | | | -0.081 | | | | | 0.008 | | | | -0.127* | | | | | | |
| | | | | (-1.459) | | | | | (0.488) | | | | (-1.645) | | | | | | |
| **AHMED III** | | | | 0.014 | | | | | | | | | 0.014 | | | | | | |
| | | | | (0.499) | | | | | | | | | (0.524) | | | | | | |
| **MAHMUD I** | | | | 0.019 | | | | | | | | | 0.018 | | | | | | |
| | | | | (0.545) | | | | | | | | | (0.542) | | | | | | |
| **OSMAN III** | | | | 0.175** | | | | | | | | | 0.178** | | | | | | |
| | | | | (3.588) | | | | | | | | | (3.721) | | | | | | |
| **MUSTAFA III** | | | | 0.030 | | | | | | | | | 0.032 | | | | | | |
| | | | | (0.905) | | | | | | | | | (0.944) | | | | | | |
| **ABDÜLHAMID I** | | | | -0.059 | | | | | | | | | -0.059 | | | | | | |
| | | | | (-1.428) | | | | | | | | | (-1.441) | | | | | | |
| **SELIM III** | | | | 0.084* | | | | | | | | | 0.107 | | | | 0.086 | | |
| | | | | (1.725) | | | | | | | | | (1.081) | | | | (1.584) | | |
| **MUSTAFA IV** | | | | 0.119** | | | | | | | | | | | | | 0.121** | | |
| | | | | (2.494) | | | | | | | | | | | | | (6.215) | | |
| **MAHMUD II** | | | | 0.052* | | | | | | | | | | | | | 0.059** | | |
| | | | | (1.784) | | | | | | | | | | | | | (2.001) | | |
| **ABDÜLMECID** | | | | 0.010 | | | | | | | | | | | | | 0.013 | | |
| | | | | (0.422) | | | | | | | | | | | | | (0.503) | | |
| **ABDÜLAZIZ** | | | | 0.009 | | | | | | | | | | | | | 0.013 | | |
| | | | | (0.298) | | | | | | | | | | | | | (0.435) | | |
| **MURAD V** | | | | -0.054** | | | | | | | | | | | | | -0.067** | | |
| | | | | (-9.946) | | | | | | | | | | | | | (-7.478) | | |
| **ABDÜLHAMID II** | | | | 0.007 | | | | | | | | | | | | | 0.007 | | |
| | | | | (0.636) | | | | | | | | | | | | | (0.603) | | |
| **MEHMET REŞAD V** | | | | 0.052** | | | | | | | | | | | | | 0.061** | | |
| | | | | (3.691) | | | | | | | | | | | | | (4.065) | | |
| **SSR** | 5.194 | 5.166 | 5.178 | 4.788 | 5.154 | 5.187 | 1.760 | 1.689 | 1.661 | 1.759 | 1.918 | 1.916 | 1.676 | 1.813 | 1.411 | 1.408 | 1.310 | 1.407 | 1.406 |
| $R^2$ | 0.060 | 0.065 | 0.063 | 0.133 | 0.067 | 0.062 | 0.008 | 0.047 | 0.063 | 0.008 | 0.034 | 0.036 | 0.157 | 0.087 | 0.161 | 0.163 | 0.221 | 0.164 | 0.164 |

t-ratios are reported in parentheses.
* 10% significance level.
** 5% significance level.

## Table S2: Results Based on the Silver Content in Akçe

| SAMPLE | PANEL A: 1478 - 1913 | | | | | | PANEL B: 1586 – 1699 (Slow Down Period) | | | | PANEL C: 1700 – 1792 (Recession Period) | | | | PANEL D: 1793 – 1913 (Break Up Period) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | I | II | III | IV | I | II | III | IV | V |
| **constant** | -0.013** | -0.018** | | | -0.010** | -0.013** | -0.012 | -0.005 | | -0.009 | -0.009** | -0.014** | | -0.006* | -0.016* | -0.023** | | -0.014 | -0.017* |
| | (-2.569) | (-2.447) | | | (-1.979) | (-2.569) | (-1.261) | (-0.216) | | (-0.931) | (-2.149) | (-2.172) | | (-1.778) | (-1.652) | (-2.418) | | (-1.405) | (-1.654) |
| **debasement$_{t-1}$** | 0.029 | 0.029 | 0.028 | 0.003 | 0.024 | 0.029 | -0.038 | -0.041 | -0.044 | -0.045 | 0.073 | 0.048 | -0.113 | -0.039 | 0.110 | 0.127 | 0.060 | 0.112 | 0.109 |
| | (0.286) | (0.289) | (0.279) | (0.031) | (0.229) | (0.283) | (-0.969) | (-0.938) | (-0.761) | (-1.068) | (0.595) | (0.418) | (-0.756) | (-0.559) | (0.469) | (0.581) | (0.272) | (0.479) | (0.464) |
| **war** | | 0.013 | | | | | | -0.010 | | | | 0.013* | | | | 0.125 | | | |
| | | (1.297) | | | | | | (-0.399) | | | | (1.940) | | | | (1.360) | | | |
| **rise** | | | 0.000 | | | | | | | | | | | | | | | | |
| | | | (0.000) | | | | | | | | | | | | | | | | |
| **slow down** | | | -0.012 | | | | | | | | | | | | | | | | |
| | | | (-1.198) | | | | | | | | | | | | | | | | |
| **recession** | | | -0.009* | | | | | | | | | | | | | | | | |
| | | | (-1.948) | | | | | | | | | | | | | | | | |
| **break up** | | | -0.017 | | | | | | | | | | | | | | | | |
| | | | (-1.579) | | | | | | | | | | | | | | | | |
| **first** | | | | | -0.031 | | | | | -0.029 | | | | -0.057 | | | | -0.028 | |
| | | | | | (-1.626) | | | | | (-1.410) | | | | (-1.234) | | | | (-0.702) | |
| **constitution** | | | | | | 0.013** | | | | | | | | | | | | | 0.016* |
| | | | | | | (2.569) | | | | | | | | | | | | | (1.654) |
| **MURAD III** | | | | 0.001 | | | | | -0.003 | | | | | | | | | | |
| | | | | (0.031) | | | | | (-0.653) | | | | | | | | | | |
| **MEHMED III** | | | | -0.018 | | | | | -0.018 | | | | | | | | | | |
| | | | | (-0.351) | | | | | (-0.367) | | | | | | | | | | |
| **AHMED I** | | | | 0.000 | | | | | 0.000 | | | | | | | | | | |
| | | | | (0.000) | | | | | (0.000) | | | | | | | | | | |
| **MUSTAFA I** | | | | -0.127** | | | | | -0.127** | | | | | | | | | | |
| | | | | (-2.559) | | | | | (-2.546) | | | | | | | | | | |
| **OSMAN II** | | | | 0.023 | | | | | 0.023 | | | | | | | | | | |
| | | | | (1.278) | | | | | (1.248) | | | | | | | | | | |
| **MURAD IV** | | | | -0.032* | | | | | -0.030* | | | | | | | | | | |
| | | | | (-1.852) | | | | | (-1.764) | | | | | | | | | | |
| **IBRAHIM** | | | | 0.049 | | | | | 0.051 | | | | | | | | | | |
| | | | | (0.779) | | | | | (0.815) | | | | | | | | | | |
| **MEHMED IV** | | | | -0.008 | | | | | -0.008 | | | | | | | | | | |
| | | | | (-1.344) | | | | | (-1.417) | | | | | | | | | | |
| **SÜLEYMAN II** | | | | -0.159 | | | | | -0.159 | | | | | | | | | | |
| | | | | (-1.225) | | | | | (-1.225) | | | | | | | | | | |
| **AHMED II** | | | | 0.001 | | | | | -0.007 | | | | | | | | | | |
| | | | | (0.031) | | | | | (-0.655) | | | | | | | | | | |
| **MUSTAFA II** | | | | 0.000 | | | | | 0.000 | | | | 0.000 | | | | | | |
| | | | | (0.000) | | | | | (0.000) | | | | (0.000) | | | | | | |
| **AHMED III** | | | | -0.001 | | | | | | | | | -0.001 | | | | | | |
| | | | | (-0.433) | | | | | | | | | (-0.383) | | | | | | |
| **MAHMUD I** | | | | -0.002 | | | | | | | | | -0.003* | | | | | | |
| | | | | (-1.435) | | | | | | | | | (-1.657) | | | | | | |
| **OSMAN III** | | | | -0.072 | | | | | | | | | -0.073 | | | | | | |
| | | | | (-1.224) | | | | | | | | | (-1.247) | | | | | | |
| **MUSTAFA III** | | | | 0.001 | | | | | | | | | -0.001 | | | | | | |
| | | | | (0.410) | | | | | | | | | (-0.428) | | | | | | |
| **ABDÜLHAMID I** | | | | -0.018* | | | | | | | | | -0.019** | | | | | | |
| | | | | (-1.951) | | | | | | | | | (-2.108) | | | | | | |
| **SELIM III** | | | | -0.026 | | | | | | | | | -0.088 | | | | 0.000 | | |
| | | | | (-1.036) | | | | | | | | | (-1.183) | | | | (0.000) | | |
| **MUSTAFA IV** | | | | 0.000 | | | | | | | | | | | | | 0.000 | | |
| | | | | (0.000) | | | | | | | | | | | | | (0.000) | | |
| **MAHMUD II** | | | | -0.059* | | | | | | | | | | | | | -0.056* | | |
| | | | | (-1.708) | | | | | | | | | | | | | (-1.809) | | |
| **ABDÜLMECID** | | | | 0.004 | | | | | | | | | | | | | 0.003 | | |
| | | | | (1.020) | | | | | | | | | | | | | (0.938) | | |
| **ABDÜLAZIZ** | | | | 0.000 | | | | | | | | | | | | | 0.000 | | |
| | | | | (0.000) | | | | | | | | | | | | | (0.000) | | |
| **MURAD V** | | | | 0.000 | | | | | | | | | | | | | 0.000 | | |
| | | | | (0.000) | | | | | | | | | | | | | (0.000) | | |
| **ABDÜLHAMID II** | | | | 0.000 | | | | | | | | | | | | | 0.000 | | |
| | | | | (0.000) | | | | | | | | | | | | | (0.000) | | |
| **MEHMET REŞAD V** | | | | 0.000 | | | | | | | | | | | | | 0.000 | | |
| | | | | (0.000) | | | | | | | | | | | | | (0.000) | | |
| **SSR** | 2.537 | 2.525 | 2.533 | 2.306 | 2.513 | 2.536 | 0.903 | 0.901 | 0.770 | 0.894 | 0.155 | 0.152 | 0.118 | 0.139 | 1.457 | 1.369 | 1.392 | 1.452 | 1.455 |
| **$R^2$** | 0.001 | 0.006 | 0.002 | 0.092 | 0.011 | 0.002 | 0.003 | 0.006 | 0.150 | 0.013 | 0.005 | 0.024 | 0.239 | 0.108 | 0.012 | 0.071 | 0.057 | 0.015 | 0.013 |

t-ratios are reported in parentheses.
* 10% significance level.
** 5% significance level.

## Table S3: Results Based on the CPI Silver Grams

| SAMPLE | PANEL A: 1478 - 1913 | | | | | | PANEL B: 1586 – 1699 (Slow Down Period) | | | | PANEL C: 1700 – 1792 (Recession Period) | | | | PANEL D: 1793 – 1913 (Break Up Period) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | I | II | III | IV | I | II | III | IV | V |
| constant | 0.005 | -0.008 | | | 0.004 | 0.003 | 0.005 | -0.026 | | 0.009 | -0.001 | -0.010 | | -0.005 | 0.008 | 0.001 | | 0.007 | 0.005 |
| | (0.478) | (-0.648) | | | (0.422) | (0.339) | (0.376) | (-1.105) | | (0.604) | (-0.009) | (-0.510) | | (-0.321) | (0.449) | (0.014) | | (0.355) | (0.259) |
| fiscal expansion$_{t-1}$ | -0.257** | -0.263** | -0.257** | -0.272** | -0.256** | -0.259** | -0.364** | -0.369** | -0.348** | -0.363** | -0.224* | -0.239** | -0.302** | -0.202* | -0.179 | -0.178 | -0.199* | -0.177 | -0.182 |
| | (-3.935) | (-4.034) | (-3.921) | (-4.218) | (-3.915) | (-3.963) | (-5.107) | (-4.993) | (-4.536) | (-5.026) | (-1.857) | (-1.992) | (-2.595) | (-1.688) | (-1.544) | (-1.557) | (-1.779) | (-1.518) | (-1.577) |
| war | | 0.036* | | | | | | 0.049* | | | | 0.031 | | | | 0.131 | | | |
| | | (1.843) | | | | | | (1.660) | | | | (0.895) | | | | (1.436) | | | |
| rise | | | -0.004 | | | | | | | | | | | | | | | | |
| | | | (1.337) | | | | | | | | | | | | | | | | |
| slow down | | | 0.004 | | | | | | | | | | | | | | | | |
| | | | (0.295) | | | | | | | | | | | | | | | | |
| recession | | | -0.001 | | | | | | | | | | | | | | | | |
| | | | (-0.009) | | | | | | | | | | | | | | | | |
| break up | | | 0.009 | | | | | | | | | | | | | | | | |
| | | | (0.483) | | | | | | | | | | | | | | | | |
| first | | | | | 0.005 | | | | | -0.035 | | | | 0.073 | | | | 0.019 | |
| | | | | | (0.118) | | | | | (-0.534) | | | | (1.326) | | | | (0.327) | |
| constitution | | | | | | 0.050** | | | | | | | | | | | | | 0.045** |
| | | | | | | (3.185) | | | | | | | | | | | | | (2.054) |
| MURAD III | | | | 0.012 | | | | | 0.009 | | | | | | | | | | |
| | | | | (0.174) | | | | | (0.148) | | | | | | | | | | |
| MEHMED III | | | | 0.004 | | | | | 0.005 | | | | | | | | | | |
| | | | | (0.104) | | | | | (0.126) | | | | | | | | | | |
| AHMED I | | | | 0.072 | | | | | 0.076 | | | | | | | | | | |
| | | | | (1.565) | | | | | (1.636) | | | | | | | | | | |
| MUSTAFA I | | | | -0.234* | | | | | -0.215 | | | | | | | | | | |
| | | | | (-1.779) | | | | | (-1.515) | | | | | | | | | | |
| OSMAN II | | | | 0.123 | | | | | 0.116 | | | | | | | | | | |
| | | | | (1.206) | | | | | (1.081) | | | | | | | | | | |
| MURAD IV | | | | -0.028 | | | | | -0.026 | | | | | | | | | | |
| | | | | (-0.858) | | | | | (-0.826) | | | | | | | | | | |
| IBRAHIM | | | | 0.023 | | | | | 0.023 | | | | | | | | | | |
| | | | | (0.448) | | | | | (0.457) | | | | | | | | | | |
| MEHMED IV | | | | 0.007 | | | | | 0.008 | | | | | | | | | | |
| | | | | (0.356) | | | | | (0.399) | | | | | | | | | | |
| SÜLEYMAN II | | | | -0.164 | | | | | -0.166* | | | | | | | | | | |
| | | | | (-1.618) | | | | | (-1.672) | | | | | | | | | | |
| AHMED II | | | | -0.035 | | | | | -0.042 | | | | | | | | | | |
| | | | | (-0.479) | | | | | (-0.599) | | | | | | | | | | |
| MUSTAFA II | | | | -0.083 | | | | | -0.003 | | | | -0.127 | | | | | | |
| | | | | (-1.466) | | | | | (-0.893) | | | | (-1.625) | | | | | | |
| AHMED III | | | | 0.013 | | | | | | | | | 0.013 | | | | | | |
| | | | | (0.454) | | | | | | | | | (0.477) | | | | | | |
| MAHMUD I | | | | 0.015 | | | | | | | | | 0.015 | | | | | | |
| | | | | (0.454) | | | | | | | | | (0.447) | | | | | | |
| OSMAN III | | | | 0.099 | | | | | | | | | 0.103 | | | | | | |
| | | | | (1.273) | | | | | | | | | (1.288) | | | | | | |
| MUSTAFA III | | | | 0.028 | | | | | | | | | 0.029 | | | | | | |
| | | | | (0.824) | | | | | | | | | (0.850) | | | | | | |
| ABDÜLHAMID I | | | | -0.081* | | | | | | | | | -0.083* | | | | | | |
| | | | | (-1.949) | | | | | | | | | (-1.942) | | | | | | |
| SELIM III | | | | 0.051 | | | | | | | | | 0.003 | | | | 0.070 | | |
| | | | | (1.173) | | | | | | | | | (0.043) | | | | (1.295) | | |
| MUSTAFA IV | | | | 0.121** | | | | | | | | | | | | | 0.119** | | |
| | | | | (2.579) | | | | | | | | | | | | | (2.036) | | |
| MAHMUD II | | | | -0.023 | | | | | | | | | | | | | -0.021 | | |
| | | | | (-0.442) | | | | | | | | | | | | | (-0.422) | | |
| ABDÜLMECID | | | | 0.015 | | | | | | | | | | | | | 0.013 | | |
| | | | | (0.622) | | | | | | | | | | | | | (0.565) | | |
| ABDÜLAZIZ | | | | 0.009 | | | | | | | | | | | | | 0.008 | | |
| | | | | (0.304) | | | | | | | | | | | | | (0.245) | | |
| MURAD V | | | | -0.054** | | | | | | | | | | | | | -0.048** | | |
| | | | | (-9.458) | | | | | | | | | | | | | (-5.379) | | |
| ABDÜLHAMID II | | | | 0.007 | | | | | | | | | | | | | 0.007 | | |
| | | | | (0.627) | | | | | | | | | | | | | (0.636) | | |
| MEHMET REŞAD V | | | | 0.053** | | | | | | | | | | | | | 0.049** | | |
| | | | | (3.728) | | | | | | | | | | | | | (3.268) | | |
| SSR | 7.101 | 7.020 | 7.097 | 6.584 | 7.100 | 7.084 | 2.019 | 1.966 | 1.769 | 2.007 | 1.824 | 1.807 | 1.642 | 1.795 | 3.197 | 3.100 | 3.104 | 3.195 | 3.184 |
| $R^2$ | 0.069 | 0.081 | 0.070 | 0.138 | 0.070 | 0.072 | 0.165 | 0.187 | 0.269 | 0.170 | 0.045 | 0.053 | 0.140 | 0.140 | 0.032 | 0.062 | 0.061 | 0.033 | 0.036 |

t-ratios are reported in parentheses.
* 10% significance level.
** 5% significance level.