

GROWTH SLOWS DOWN IN THE THIRD QUARTER

Seyfettin Gürsel*, Zümrüt İmamoğlu[†], ve Arda Aktaş[‡]

Executive Summary

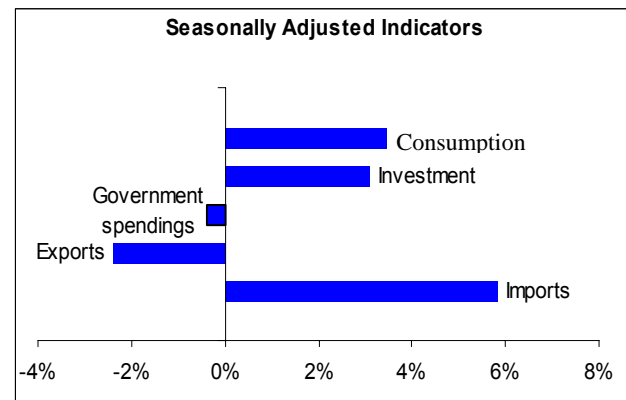
Last week Turkey's statistical institute TurkStat released its estimate of the GDP growth in the third quarter. The year-on-year real GDP growth turned out to be 5.5%, less than the market expectations which stood at around 7%. Seasonally adjusted real GDP growth was 1.1% on a quarter to quarter basis. In the second quarter real GDP had increased 3.5% quarterly.

Domestic demand continued to increase in the third quarter; however, the decrease in exports and the small decrease in the government expenditures contributed to the slowing down of the economy.

According to Betam's component by component analysis of seasonally adjusted real GDP, the largest contribution to growth came from private consumption expenditures, 2.4 percentage points. Private investment slowed down when compared to the second quarter and contributed 0.6 percentage points to the change in real GDP while the inventory investments increased and contributed 0.7 percentage points.

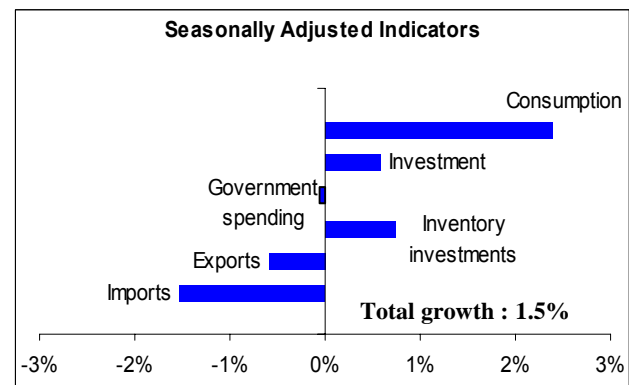
Exports decreased by 2.4% and imports increased by 5.8%. As a result the contribution of net exports to GDP growth was negative as Betam had predicted.¹ Net exports contributed -2.1 percentage points to the change in GDP.

Figure 1: GDP components: Change from the previous quarter



Source : TurkStat, Betam

Figure 2: Contributions to real GDP growth (2010 3rd Quarter)



Source : TurkStat, Betam

Private consumption accelerated while private investment slowed down

Figures 1 and 2 show the change and contribution of each component to the real GDP growth on a quarter to quarter basis. The sum of the contributions of the components is 1.5% which is different than that of

* Prof. Dr. Seyfettin Gürsel, Betam, Director
Seyfettin.gursel@bahcesehir.edu.tr

[†] Dr. Zümrüt İmamoğlu, Betam, Research Associate
zumrut.imamoğlu@bahcesehir.edu.tr

[‡] Arda, Betam, Research Assistant
arda.aktas@bahcesehir.edu.tr

¹ Betam Research Brief No:10/98.

Turkstat's report of 1.1% because Betam seasonally adjusts each component separately.²

The largest contribution to GDP came from private consumption. In the second quarter private consumption had contributed 1.3 percentage points to GDP growth. In the third quarter it added 2.4 percentage points.

Private investment continued increasing however its contribution in the third quarter was only 0.6 percentage point down from 1.0 percentage point in the second quarter. Inventory investment had decreased in the last quarter subtracting 1.0 percentage points but in the third quarter it added 0.7 percentage point to GDP growth.

Government expenditures decreased by 0.4 percent in the third quarter. The decrease was a result of the drop in construction expenditures in this quarter. In the second quarter the government had significantly increased its expenditures on construction and had contributed 1.2 percentage points to the change in GDP. In the third quarter the decrease in spending subtracted 0.1 percentage point from the change in GDP.

The main reason why the GDP growth in the third quarter was not as high as the growth in the second quarter was the decrease in imports. In the second quarter exports added 1.3 percentage points to the change in GDP but in the third quarter its contribution was negative and subtracted 0.6 percentage point.

Imports on the other hand accelerated. The second quarter contribution of imports to GDP growth was negative 0.8 percentage points. In the third quarter it subtracted 1.5 percentage points.

Economy is growing at a slower pace

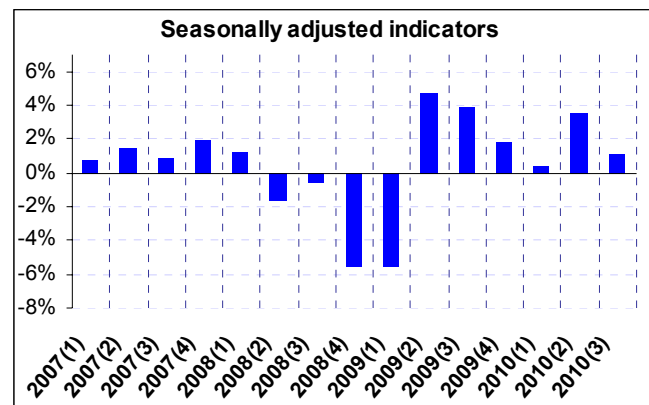
Figure 3 shows the quarter to quarter GDP growth rates. As Betam predicted in its previous research brief on growth, net exports switched back to negative contributions and government expenditures stalemated which led to a slow down in Turkey's real GDP growth in the third quarter.³

The fourth quarter growth rate will also depend on the contribution of exports and government expenditures. We expect the exports to increase in the

fourth quarter, mainly due to the strong October numbers, and contribute positively to the change in the GDP growth. Moreover, if the expected increase in the government expenditures holds true, we might see an increase in the growth rate.

However, it is the domestic demand and especially private consumption that drives the recovery of the economy after the crisis. If private consumption slows down in the coming quarters, this could slow down the Turkish economy considerably.

Figure 3: Quarter-on-quarter real GDP growth rate (TurkStat)



Source : TurkStat, Betam

² For details see Box1 in the appendix.

³ Betam Research Brief No:10/89

Box 1: Calculation of quarterly GDP growth and contributions.

Sub-components of GDP are grouped into 3 categories:

1. Final domestic demand consist of final consumption expenditure of resident households (Consumption), sum of government final consumption and investment expenditure (Government expenditure), investment expenditure of private sector (Investment)
2. Net foreign demand for goods and services represents the difference between exports and imports of goods and services.
3. Change in inventories (stocks) shows how stocks changes with compared to previous quarter (for details look Box 2)

In order to find quarterly GDP growth, the following formulation is used for all sub components of GDP separately:

Since X represents 'Change in GDP component'

Contribution of X to growth can be calculated as follows:

$$= (X_t - X_{t-1}) / GDP_{t-1}$$

Differences between the methodologies used by Betam and TurkStat in seasonally adjusting the real GDP

TurkStat seasonally adjusts and calendar day corrects total GDP series but not its components separately. However, each component of GDP may show different seasonal characteristics. Therefore, Betam eliminates the effects of seasonality and calendar day from the components separately and constructs the adjusted GDP series as the sum of the adjusted components. These two methodologies yield quantitatively different results and both of them are used frequently in the related literature.

Box 2: Change in inventories (stocks) and its contribution to growth

'Stock change' shows that how stocks change compared to previous period

$$\text{Stock change}_t = \text{Stock}_t - \text{Stock}_{t-1}$$

Therefore increase (decrease) in inventories is caused by increase (decrease) in the difference between two period rather than increase (decrease) in stocks.

However, TurkStat estimates the change in stocks is as residual between production and expenditure accounts. Moreover this sub-component also includes statistical discrepancy.

Let's say the difference between production and expenditure account ε_{t-1} , 'stock change' in time t is as follows:

$$\text{Stock change}_t = \text{Stock}_t - \text{Stock}_{t-1} + \varepsilon_{t-1}$$

Finally, contribution of change in 'Stock change' can be found as follows :

$$\text{Contribution of 'Stock change } t \\ = (\text{Stock}_t - \text{Stock}_{t-1}) / GDP_{t-1}$$

or

$$\text{Contribution of 'Stock change } t \\ = ((\text{Stock}_t - \text{Stock}_{t-1} + \varepsilon_t) \\ - (\text{Stock}_{t-1} - \text{Stock}_{t-2} + \varepsilon_{t-1})) / GSYH_{t-1}$$