RESULTS FACT SHEET

SET13: Composition of production by sector (GVA)

October 2013

RESULTS’ FACT SHEET

INDICATOR - SET13: COMPOSITION OF GROSS VALUE ADDED (GVA) PER SECTOR

DEFINITION- OBJECTIVE

This indicator records the composition of the Gross Value Added (GVA) per Prefecture/Region and production sector (primary, secondary, tertiary) and the importance of the transport industry as percentage in the total GVA. The composition of the GVA is a basic structural characteristic of a regional economy, directly affected among other things by the improvement of the transferring of products or the market accessibility.

RESULTS - ASSESSMENT

The composition of the Gross Value Added (GVA) per sector in Zone IV1 proves that in 2010 72,06% of the total GVA was produced by the tertiary sector. The secondary and primary sectors follow with 22.25% and 5.69% of the total GVA of Zone IV respectively. In 2010, the five Regions produced 47,70% of the total national product of the primary sector, 35,45% of the secondary and 24,42% of the tertiary sector. During the period 2008-2010, the total GVA of Zone IV was reduced by 4,87%, while the respective reduction for the country was 4,07%. In the primary sector, Zone IV marked a reduction of 3,64% during the period when the respective percentage of the country was 2,41%. The reduction of Zone IV in the secondary sector was close to the reduction of the country (-9,37% and to -9,17% respectively). In the tertiary sector, Zone IV marked a reduction of 3,44%, while the respective reduction of the country was 2,79%.

During the period 2005-2008, the average annual rate of change for the whole GVA in Zone IV was 2,04%, which is close to the average percentage of the Country (2,35%). In particular and in the separate sectors, the primary sector of Zone IV marked a higher reduction rate, in relation to the total of the Country (-12,53% and -11,86% respectively). On the contrary, the secondary sector in Zone IV marked an increase rate compared with the percentage of the Country (3,08% and 1,41% respectively).

1 Zone IV consists of the 5 following regions: East Macedonia & Thrace, Central Macedonia, West Macedonia, Thessaly, Epirus (http://observatory.egnatia.gr/02_indicators/02_5_impact_zones.htm)
The tertiary sector of Zone IV marked almost the same increase percentage in the total of the Country, namely an increase of 3,30% as opposed to 3,38% respectively. During the period 2008-2010, Zone IV marked a change rate of -4,87% of the total GVA, -3,64% for the primary sector, -9,37% for the secondary sector and -3,44% for the tertiary sector. The differences marked in relation to the average of the country are small and range between 0,3% (secondary sector) and -1,2% (primary sector).

In total and for the time period 2005-2010, the average annual rate of the GVA change in Zone IV was -0,78%, when during the same time period the national rate was -0,27%. During the same time period, the rates of change in Zone IV in the three production sectors were the following: primary -9,08%, secondary -2,10% and tertiary 0,55%, with the respective rates of the country being -8,20%, -3,19% and 0,87%.

The importance of the three sectors in the regional production and economy differs among the Regions. In 2010, in two Regions of Zone IV (Epirus and Thessaly), the primary sector percentage was twice as much as the respective national percentage (8,40% and 6,88% respectively in relation to 3,23% of the country), while in Central Macedonia Region, the percentage of the primary sector (4,68%) was higher than the average of the Country. In all Regions of Zone IV, the percentage of the secondary sector in the total product was higher than the respective national percentage. Indeed, it should be mentioned that West Macedonia Region marked the higher participation percentage of the secondary sector at a national level with 50,69%. In the tertiary sector, the highest percentage was recorded in the regions of Epirus (75,97%) and Central Macedonia (75,76%). However, none of the regions of Zone IV did not surpass the respective national percentage.

At a regional level, the change recorded during the period 2005-2008 has as follows: the total GVA rate in Central Macedonia Region was 2,50%, which was the highest in Zone IV. As regards the primary sector, there has been a reduction in all Regions, the highest of which was monitored in East Macedonia & Thrace (-14,69%), followed by the Regions of Epirus (-13,94%) and Thessaly (-13,05%). As regards the secondary sector, there has been an increase in all regions of Zone IV, from 0,41% in Epirus to 3,64% in East Macedonia & Thrace, while in the tertiary sector the percentage recorded ranges from 2,65% in Thessaly to 3,53% in Central Macedonia.

During the period 2008-2010, the highest GVA reduction percentage was recorded in the Region of Thessaly, which marked a reduction by 6,05%, while the lowest reduction was recorded in East Macedonia & Thrace by 3,04%. As regards the primary sector, there has been an increase in the Region of Epirus with 4,97%, while the remaining four Regions marked a reduction, with the highest percentage recorded in West Macedonia (-6,48%). As regards the secondary sector, all Regions marked a reduction, with the Region of Epirus presenting the highest reduction percentage.
In the tertiary sector, a reduction was marked in every region, with the highest percentage marked in the Region of Thessaly (-4,64%) and the lowest marked in the Regions of Epirus και (-1,48%) and East Macedonia & Thrace (-1,07%), namely the only Regions of Zone IV presenting a reduction lower than the total of the Zone and the country itself.

In total and for the time period 2005-2010, the highest GVA rate of change, was recorded in the region of Thessaly (-1,85%), followed by Central Macedonia (-0,70%) and Epirus (-0,66%). As regards the primary sector, a negative rate of change was recorded in all Regions of Zone IV. The highest reduction rate was recorded in East Macedonia & Thrace with -9,95%, followed by the remaining regions with rates ranging from -9,38% in Thessally to -6,83% in Epirus. As regards the secondary sector, there has been only one positive change rate in West Macedonia with 0,37%, while all the other regions marked negative rates, namely -5,00% in Epirus and -1,97% in East Macedonia & Thrace. Finally, in the tertiary sector, four out of five Regions marked a positive rate, the most important of which being recorded in East Macedonia & Thrace (1,63%), while the Region of Thessaly was the only one that marked a reduction close to -0,33%.

As regards the year 2010, the following rates were recorded: the prefectures of Pella, Imathia, Larissa, Karditsa and Preveza are strongly dependant upon the primary sector (GVA percentage in the primary sector 16,60%, 15,71%, 12,50%, 11,81%, and 11,22% per prefecture respectively), while the Prefectures of Thessaloniki and Kozani present the lowest rates (1,43% and 2,57% respectively). In the prefectures of Kozani (60,8%), Florina (51,1%) and Kilkis (32,2%) the highest rate was the result of the secondary sector, a percentage which was higher than the respective percentage of Zone IV and the percentage of the country. The Prefectures of Thesprotia and Grevena present the lowest participation percentages in the secondary sector (7,35% and 9,40% respectively). The opposite was recorded in the tertiary sector, as the Prefectures of Thesprotia and Grevena present higher rates (83,63% and 82,74% respectively), while the Prefectures of Florina (41,20%) and Kozani (36,63%) present the lowest rates, lower then 50% of the GVA total of the Prefecture.

During the period 2005-2008 the Prefectures of Thesprotia, Grevena and Rodopi marked higher annual average GVA rates with 5,62%, 4,93% and 3,47% respectively, which are significantly higher than the average of the country (2,35%) and Zone IV (2,04%). Negative percentages were only recorded in the Prefectures of Karditsa (-0,13%), Trikala (-0,37%), Drama (-0,41%) and Serres (-0,80%). As regards the primary sector, no Prefecture has had any GVA increase and the Prefectures of Karditsa, Halkidiki and Pieria marked the highest reductions with -24,15%, -21,03% and -20,12% respectively. As regards the secondary sector, there has been a great range of annual change rates from 23,72% in the Prefecture of Thesprotia to -5,25% in the prefecture
of Ionannina. In the tertiary sector, the annual rate of change was positive in all Prefectures, ranging from 1,21% in the Prefecture of Trikala to 5,08% in the Prefecture of Rodopi.

During the period 2008-2010, the average annual GVA rate was negative in all Prefectures, with the sole exception of the Municipality of Evros, where it remained stable (0,06%). The Prefectures of Xanthi and Arta marked the lower reduction rate with 0,68% and 1,02% respectively, while the Prefecture of Kilkis (-11,09%) and Grevena (-10,95%) marked the higher reduction rates. As regards the primary sector, there has been a great range of positive and negative rates. In particular, the highest increase was recorded in the Prefecture of Karditsa, (7,19%), Arta (6,79%) and Pieria (6,55%). On the other hand, the highest reduction was recorded in the Prefecture of Magnissia (-14,82%), Kilkis (-12,29%) and Evros (-10,7%). As regards the secondary sector, there has been an increase in the Prefecture of Pella by 1,32%, while all the other Prefectures marked negative values, ranging from -1,64% in Kozani to -42,79% in Grevena. As regards the tertiary sector, the Prefectures of Xanthi, Evros and Arta marked positive rates with 2,35%, 1,64% and 0,44% respectively, the rate of the Prefecture of Kilkis remained the same (0,07%), while all the others marked negative rates, the highest percentages being recorded in Magnissia (-5,88%), Florina (-5,74%) and Karditsa (-5,36%).

In total and for the period 2005-2010, both increase and reduction rates were marked in the Prefectures. The highest increase was recorded in the Prefecture of Evros by 1,10%, while the highest reduction was recorded in the Prefecture of Kilkis by 4,48%. As regards the primary sector, all Prefectures marked a negative rate of change, the Prefecture of Kilkis presenting the highest reduction (-14,89%) and the Prefecture of Thesprotia presenting the lowest reduction rate (-3,00%). As regards the secondary sector, most of the Prefectures marked negative change rates, with the Prefecture of Grevena presenting the highest reduction rate (-9,47%). The Prefectures that marked positive change rates were Arta (0,10%), Kozani (1,30%), Kavala (1,45%) and Pella (4,92%). Finally, in the tertiary sector, the highest increase was recorded in the Prefectures of Evros, Xanthi and Rodopi with 3,60%, 3,07% and 2,59% respectively, while the lowest reduction was recorded in the Prefectures of Kavala and Karditsa with 1,03% and 0,89% respectively.

In 2010, Central Macedonia and Thessaly produced almost 1/3 of the GVA. Central Macedonia produced 19,63% of the primary sector national product (which is the highest rate at a regional level), 15,61% and 12,86% of the national product of the secondary and tertiary sector respectively (the second higher percentage at a prefectural level, following the Prefecture of Attica). The Prefecture of Larissa produced 7,78% of the country’s rural product, while the Prefecture of Thessaloniki produced 10,17% of the total product of the secondary sector and 8,84% of the tertiary sector (the highest percentages in Zone IV).
The use of a location quotient proved that in 2010, four Regions of Zone IV specialized in the primary sector (Thessaly, East Macedonia & Thrace, Central Macedonia and Epirus). While one specialized in the secondary sector (West Macedonia). As regards the rest of the country, 3 Regions (Attiki, South Aegean and Ionian Islands) specialized in the tertiary sector, one Region (Sterea Ellada) specialized in the secondary sector, while the remaining regions specialized in the primary sector.

As regards transports, no conclusion could be drawn directly, as the information given by Eurostat involve commercial activities, vehicle - motorcycle repair and personal and household property, as well as hotels and restaurants, storage and communications (the latter up to 2004). In 2010, Zone IV produced 24,3% of the transport total national product. During the time period from 2008-2010, Zone IV marked a higher reduction rate than the rate of the country by 3% (-9,55% for Zone IV and -6,47% for Greece), while during the period 2005-2008 the average annual GVA rate in Zone IV was 2,49%, lower by 0,2% from the respective rate of the country. In total and for the period 2005-2010 the average annual rate in Zone IV was -2,51%, while the annual change rate at a national level was -1,08%. The region of Zone IV where it was found to be of greatest importance was Epirus, where the production exceeded 25,5% of the total product of the Region, as opposed 23% of Zone IV. Finally, West Macedonia produced 13,1% of the respective national product.
## COMMERCE, TRANSPORT, STORAGE GVA (COMMUNICATIONS UP TO 2004) PER REGION, 2010 (in €M)

<table>
<thead>
<tr>
<th>NUTS</th>
<th>REGION</th>
<th>Total GVA</th>
<th>2010</th>
<th>(%) NATIONAL</th>
<th>(%) of the Prefecture/ Region</th>
<th>(%) of Zone IV</th>
<th>ANNUAL CHANGE RATE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL11</td>
<td>East Macedonia &amp; Thrace</td>
<td>7.956,3</td>
<td>1,99</td>
<td>-3,04</td>
<td>-0,05</td>
<td>1.780,2</td>
<td>3,56</td>
</tr>
<tr>
<td>EL12</td>
<td>Central Macedonia</td>
<td>26.439,6</td>
<td>2,50</td>
<td>-5,30</td>
<td>-0,70</td>
<td>6.579,6</td>
<td>13,16</td>
</tr>
<tr>
<td>EL13</td>
<td>West Macedonia</td>
<td>4.640,5</td>
<td>2,45</td>
<td>-4,47</td>
<td>-0,37</td>
<td>582,8</td>
<td>1,17</td>
</tr>
<tr>
<td>EL14</td>
<td>Thessaly</td>
<td>9.440,0</td>
<td>1,05</td>
<td>-6,05</td>
<td>-1,85</td>
<td>2.101,5</td>
<td>4,20</td>
</tr>
<tr>
<td>EL21</td>
<td>Epirus</td>
<td>4.321,1</td>
<td>1,15</td>
<td>-3,30</td>
<td>-0,66</td>
<td>1.103,1</td>
<td>2,21</td>
</tr>
<tr>
<td>znIV</td>
<td>Zone IV</td>
<td>52.797,5</td>
<td>2,04</td>
<td>-4,87</td>
<td>-0,78</td>
<td>12.147,2</td>
<td>24,30</td>
</tr>
<tr>
<td>EL22</td>
<td>Ionian Islands</td>
<td>3.540,5</td>
<td>1,24</td>
<td>-6,75</td>
<td>-2,03</td>
<td>1.743,8</td>
<td>3,49</td>
</tr>
<tr>
<td>EL23</td>
<td>West Greece</td>
<td>9.074,6</td>
<td>0,28</td>
<td>-5,03</td>
<td>-1,88</td>
<td>2.243,7</td>
<td>4,49</td>
</tr>
<tr>
<td>EL24</td>
<td>Sterea Ellada</td>
<td>8.839,5</td>
<td>-0,32</td>
<td>-4,32</td>
<td>-1,94</td>
<td>1.877,1</td>
<td>3,76</td>
</tr>
<tr>
<td>EL25</td>
<td>Peloponnese</td>
<td>8.292,1</td>
<td>1,08</td>
<td>-4,15</td>
<td>-1,05</td>
<td>1.793,8</td>
<td>3,59</td>
</tr>
<tr>
<td>EL30</td>
<td>Attica</td>
<td>93.708,9</td>
<td>3,25</td>
<td>-3,31</td>
<td>0,58</td>
<td>22.500,1</td>
<td>45,02</td>
</tr>
<tr>
<td>EL41</td>
<td>North Aegean</td>
<td>2.772,5</td>
<td>2,90</td>
<td>-5,99</td>
<td>-0,75</td>
<td>822,1</td>
<td>1,64</td>
</tr>
<tr>
<td>EL42</td>
<td>South Aegean</td>
<td>6.569,7</td>
<td>2,62</td>
<td>-4,22</td>
<td>-0,17</td>
<td>3.454,8</td>
<td>6,91</td>
</tr>
<tr>
<td>EL43</td>
<td>Crete</td>
<td>9.627,4</td>
<td>1,46</td>
<td>-3,95</td>
<td>-0,74</td>
<td>3.397,9</td>
<td>6,80</td>
</tr>
<tr>
<td>EL</td>
<td>Greece</td>
<td>195.222,6</td>
<td>2,35</td>
<td>-4,07</td>
<td>-0,27</td>
<td>49.980,4</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Source: Eurostat 07/2013
METADATA

Sources

The data used to calculate the indicator were taken from the Eurostat database, July 2013.

Methodology

The GVA of Zone IV is the sum of the GVA of the Zone’s five regions (Epirus, West Macedonia, Central Macedonia, East Macedonia & Thrace, Thessaly). The annual GVA change rate occurs by application of the deflation formula to the constant GVA prices (year 2000). The constant prices have been calculated with the use of deflators calculated by Eurostat for each country. Eurostat has changed the classification of the financial activity (Nace Rev 1.1 changed to Nace Rev 2), on the basis of year 2005. A Location Quotient has been specifically used for every Region, which compares the participation percentage of the Region with the relative percentage of the country. Finally, it should be pointed out that issue Nace Rev 1.1 provided by Eurostat in 2013 mises the primary data concerning the Regions of Sterea Ellada and South Aegean. Consequently, these data resulted from the estimates concerning each Prefecture and were later checked as opposed to the respective figures as given in Nace Rev. 2.
EGNATIA ODOS OASERVATORY
SOCIOECONOMIC & SPATIAL PLANNING INDICATOR SET13:
GROSS VALUE ADDED BY SECTOR, BY REGION, 2010

The specialization of each region in a sector occurs by applying the Location Quotient, which compares the contribution of each sector in a region with the respective average of all the regions of the country.

The Location Quotient (LQ) of a sector "i", which contributes to the total GVA of a region r, with a percentage "Ye,ri", in a country with n regions is:

\[
LQ_i = \frac{Ye,ri}{Ye,r} \left( \sum_{i=1}^{n} Ye,ri \right)^{-1}
\]

LEGEND
DOMINANT SECTOR ACCORDING TO LOCATION QUOTIENT, 2010

- SERVICES
- INDUSTRY
- AGRICULTURE

EGNATIA MOTORWAY INTERCHANGES
EGNATIA MOTORWAY
EGNATIA MOTORWAY VERTICAL AXES
PANION MOTORWAY
KAVIN ROAD NETWORK
IMPACT ZONE IV