

# ECONOMY AND FINANCE

THEME 2 - 17/2002

## NATIONAL ACCOUNTS

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# CANDIDATE COUNTRIES' NATIONAL ACCOUNTS BY INDUSTRY

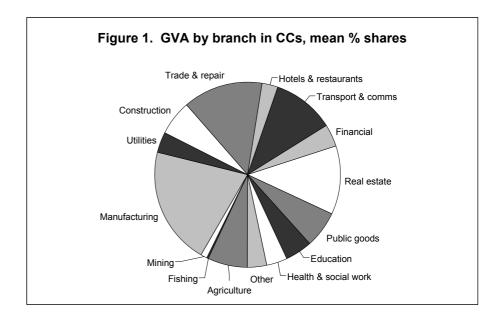
Following the development of National Accounts compilation in the Candidate Countries (CC), most are now able to show economic data broken down by industry at the detailed level of fifteen individual branches. This provides an invaluable insight into the structure and development of CC economies.

In this publication, the following variables are examined and broken down: Gross Value Added (GVA), employment, productivity (of labour) and remuneration (wages and salaries per employee).

The data are, however, not exhaustive. Whilst countries have made staunch efforts to supply data at the maximum detail possible, these tables do not form part of Eurostat's 'compulsory submission programme' and certain countries are not able to compile branch breakdowns for all aggregates. Mean averages of the available data are shown for indicative purposes only, may be calculated on the basis of several different years, and are not weighted according to the size of economies.

The figures show *manufacturing* to be the most important branch in the CC, providing the largest share of both GVA and employment in the CCs as a whole. It also played the largest part in the growth of the CC economies over the past five years with typical growth rates of around 20% in both GVA and productivity.

Productivity varies substantially across both branches and individual CCs with Cyprus and Slovenia demonstrating the highest national rates, and *utilities*, *real estate* and *financial* leading the branches.



#### Short and full codes for branches of industry

Agriculture (Agriculture, hunting and forestry); Fishing (Fishing); Mining (Mining and quarrying); Manufacturing (Manufacturing); Utilities (Electricity, gas and water supply), Construction (Construction); Trade & repair (Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods); Hotels & restaurants (Hotels & restaurants); Transport & comms (Transport, storage and communication); Financial (Financial intermediation); Real estate (Real estate, renting and business activities); Public goods (Public administration and defence; compulsory social security); Education (Education); Health & social work (Health and social work); Other (Other community, social, personal service activities, private households with employed persons and extra-territorial organizations and bodies).

#### **Gross Value Added**

The chart in Figure 1 examines the share of GVA for each branch in the CCs, as a simple average of the figures shown in Table 1. This broad overview immediately highlights that the *manufacturing* industry is the highest contributor to the CC economies, taking primary position in all but two of the countries. In

Cyprus, *real estate* and *trade & repair* provide the highest shares, with *trade & repair* taking first place in Latvia. Stark differences can be seen between countries in their reliance on the *agriculture* branch in their economies. While most of the countries' shares vary around the 3 – 5 per cent range, completely different figures can be observed in Bulgaria (14.5 %), Romania (15.8 %) and Turkey (14.2 %).

Table 1. GVA by branch, percentage shares

| Branch               | BG <sup>1</sup> | CY   | CZ <sup>3</sup> | EE   | HU   | LT   | LV   | MT  | $PL^3$ | RO⁴  | SI   | SK   | TR    | Mean |
|----------------------|-----------------|------|-----------------|------|------|------|------|-----|--------|------|------|------|-------|------|
| Agriculture          | 14.5            | 3.6  | 3.9             | 6.1  | 4.1  | 7.5  | 4.1  | :   | 3.9    | 15.8 | 3.2  | 4.0  | 14.2  | 7.1  |
| Fishing              | :               | 0.2  | 0.0             | 0.3  | 0.0  | 0.0  | 0.4  | :   | 0.0    | 0.0  | 0.0  | 0.5  | 0.4   | 0.2  |
| Mining               | 1.7             | 0.3  | 1.5             | 1.1  | 0.3  | 1.0  | 0.1  | :   | 2.6    | 2.3  | 1.0  | 0.9  | 1.1   | 1.2  |
| Manufacturing        | 17.4            | 10.7 | 26.3            | 17.9 | 25.2 | 21.1 | 14.5 | :   | 21.1   | 25.1 | 27.2 | 24.0 | 19.1  | 20.8 |
| Utilities            | 5.0             | 2.1  | 4.0             | 3.3  | 3.8  | 4.1  | 3.9  | :   | 3.4    | 2.9  | 3.2  | 4.1  | 3.1   | 3.6  |
| Construction         | 3.6             | 7.1  | 7.4             | 5.8  | 4.6  | 6.1  | 6.8  | :   | 8.8    | 5.5  | 6.0  | 5.2  | 5.3   | 6.0  |
| Trade & repair       | 9.6             | 13.1 | 14.1            | 14.5 | 10.7 | 15.1 | 18.0 | :   | 20.6   | 12.0 | 11.3 | 15.8 | 15.7  | 14.2 |
| Hotels & restaurants | 2.4             | 9.5  | 1.8             | 1.3  | 1.8  | 1.4  | 1.2  | :   | 1.3    | 2.6  | 3.1  | 0.8  | 3.6   | 2.6  |
| Transport & comms    | 10.5            | 9.2  | 7.8             | 15.4 | 9.6  | 12.6 | 16.2 | :   | 6.8    | 10.1 | 7.9  | 11.2 | 14.6  | 11.0 |
| Financial            | 3.1             | 7.8  | 5.2             | 4.2  | 4.0  | 2.3  | 4.9  | :   | 2.2    | 1.9  | 4.4  | 4.2  | 3.8   | 4.0  |
| Real estate          | 17.3            | 13.9 | 12.4            | 11.1 | 16.5 | 8.3  | 10.5 | :   | 11.8   | 10.3 | 11.8 | 13.9 | 8.1   | 12.2 |
| Public goods         | 7.1             | 9.3  | 5.5             | 4.8  | 7.2  | 6.8  | 6.5  | :   | 5.0    | 3.9  | 5.7  | :    | :     | 6.2  |
| Education            | 4.1             | 5.1  | 3.6             | 5.6  | 4.7  | 6.8  | 5.4  | :   | 4.4    | 2.9  | 5.8  | :    | :     | 4.8  |
| Health & social work | 1.9             | 3.4  | 3.6             | 3.9  | 4.6  | 3.7  | 3.1  | :   | 4.0    | 2.3  | 5.5  | :    | :     | 3.6  |
| Other                | 1.9             | 4.7  | 2.9             | 4.7  | 3.0  | 3.2  | 4.3  | :   | 4.1    | 2.4  | 3.7  | :    | :     | 3.5  |
| Total GVA (bn euro)  | 11.5            | 9.2  | 47.3            | 4.9  | 43.9 | 11.1 | 6.8  | 3.3 | 126.8  | 20.5 | 17.2 | 19.0 | 208.6 | 40.8 |

#### **GVA** growth

Table 2 and figure 2 highlight the driving forces behind GVA growth in the CCs between 1995 and 2000, where data are available at constant prices. The highest growth rates, on average, were recorded in the service branches of *trade & repair* (29 %), *hotels & restaurants* (26 %) and *transport & comms* (27 %), with *other* also growing by a significant 30%. The CC average growth for *mining* is also high, but greatly affected by the exceptional growth of 127 % in the Lithuanian *mining* branch.

In terms of having an impact on the GVA growth rate, *manufacturing*, the largest branch in the CCs, grew substantially in most countries (22 % on average), only falling in Romania over the period. With an average 'contribution to growth' figure of 4.9 %, it was the strongest propellant of growth in the CCs, responsible for almost a third of the total growth. Growth in *trade* & *repair*, the second most sizeable industry, grew by an even greater 29 % and also contributed significantly to general growth. *Transport* & *comms* was the third highest contributor.

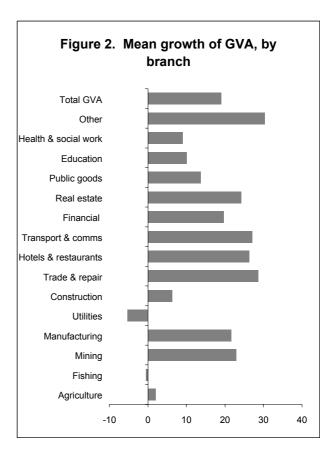


Table 2. GVA growth, percentage change, 1995 - 2000

Contribution to growth shown in italics

| Branch               | CY            | CZ              | EE       | LT            | LV             | PL <sup>3</sup> | RO⁴             | SI      | SK          | Mean    |
|----------------------|---------------|-----------------|----------|---------------|----------------|-----------------|-----------------|---------|-------------|---------|
| Agriculture          | -9 -0.4       | 19 0.9          | 0 0.0    | 12 1.4        | -6 -0.6        | 8 0.5           | -15 -3.2        | -2 -0.1 | 11 :        | 2 -0.2  |
| Fishing              | 49 0.1        | 2 0.0           | -12 -0.1 | -33 0.0       | -5 0.0         | -12 0.0         | -47 0.0         | 6 0.0   | 46 :        | -1 0.0  |
| Mining               | 42 0.1        | -15 -0.3        | 10 0.2   | 127 0.5       | 43 0.1         | -13 -0.5        | -21 -0.6        | 5 0.1   | 28 :        | 23 -0.1 |
| Manufacturing        | 4 0.5         | 13 3.3          | 46 8.8   | 19 <i>4.1</i> | 26 5.9         | 39 9.2          | -2 -0.5         | 27 7.6  | 23 :        | 22 4.9  |
| Utilities            | 34 0.7        | -5 -0.3         | -15 -0.6 | -25 -0.9      | -9 <i>-0.5</i> | 4 0.2           | -31 -1.2        | 9 0.2   | -9 <i>:</i> | -5 -0.3 |
| Construction         | -7 -0.6       | -46 <i>-4.0</i> | 44 2.8   | -7 -0.5       | 56 2.8         | 32 2.3          | -22 -1.5        | 52 2.6  | -45 :       | 6 0.5   |
| Trade & repair       | 17 2.4        | 42 4.8          | 28 4.1   | 21 3.8        | 66 7.5         | 29 5.9          | 7 0.6           | 19 2.2  | : :         | 29 3.9  |
| Hotels & restaurants | 34 3.0        | -43 -1.5        | 56 0.7   | 43 0.7        | 31 0.3         | 63 0.6          | 4 0.1           | 24 0.7  | : :         | 26 0.6  |
| Transport & comms    | 42 3.5        | 7 0.5           | 58 6.4   | 37 3.5        | 27 4.4         | 29 1.9          | -13 -1.1        | 21 1.7  | 36 :        | 27 2.6  |
| Financial            | 52 2.8        | 49 2.3          | 35 1.3   | 11 <i>0.4</i> | 9 0.5          | 59 0.6          | -32 -1.7        | 27 1.1  | -34 :       | 20 0.9  |
| Real estate          | 25 3.4        | 8 0.9           | 30 3.1   | 30 2.1        | 69 2.9         | 3 0.3           | 0 0.0           | 18 2.1  | 35 :        | 24 1.9  |
| Public goods         | 22 1.9        | : :             | 8 0.4    | 8 0.4         | 16 0.8         | 19 1.1          | -13 <i>-0.5</i> | 36 1.9  | : :         | 14 0.9  |
| Education            | 20 1.0        | : :             | 4 0.2    | 13 0.6        | 7 0.4          | 11 0.4          | -1 0.0          | 17 1.0  | : :         | 10 0.5  |
| Health & social work | 16 <i>0.5</i> | : <i>:</i>      | 12 0.5   | 15 <i>0.4</i> | -6 <i>-0.2</i> | -9 <i>-0.4</i>  | 12 0.2          | 24 1.2  | : :         | 9 0.3   |
| Other                | 43 1.7        | : :             | 25 1.1   | 34 0.9        | 52 1.8         | 5 0.2           | 26 0.4          | 27 0.9  | : :         | 30 1.0  |
| Total GVA            | 21            | 5               | 29       | 17            | 26             | 22              | -9              | 23      | 21          | 17      |

### **Employment**

In addition to GVA, the number of people employed in each branch also reveals a great deal about the structure and composition of a country's economy. Table 3 illustrates the percentage held by each branch in the CCs in 2000.

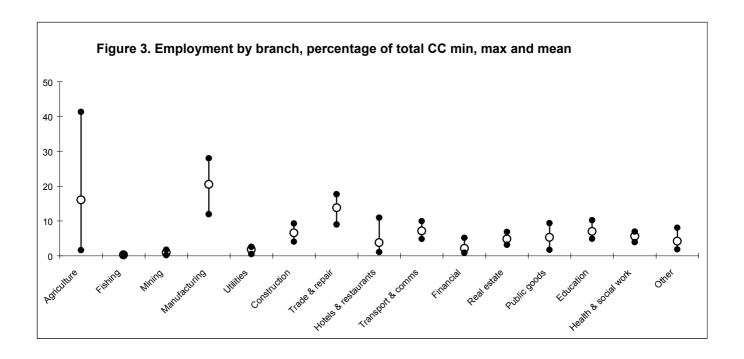
Manufacturing was the largest employer of labour in four of the CCs (Czech Republic, Estonia, Malta and Slovenia) and the second largest in all the others for

whom data were available. On average, 20.6 % of each countries' workforce were employed in this branch. *Agriculture* took primary place in four others, most emphatically in Romania (41.4 %), Bulgaria (26.7 %) and Poland (25.7 %), and 16.0 % on average. *Trade & repair* also employed significant quantities of labour, commanding the highest share in Cyprus and Latvia (17.7 % and 16.8 % of the workforce respectively), and was in the highest three employing branches for all other CCs.

Table 3. Employment by branch, 2000 Percentage shares

| Branch                   | BG <sup>1</sup> | CY   | CZ   | EE   | HU <sup>3</sup> | LT   | LV   | MT   | PL <sup>3</sup> | RO <sup>2</sup> | SI   | SK  | TR | Mean |
|--------------------------|-----------------|------|------|------|-----------------|------|------|------|-----------------|-----------------|------|-----|----|------|
| Agriculture              | 26.7            | 8.6  | 5.0  | 6.9  | :               | 19.6 | 14.7 | 1.6  | 25.7            | 41.4            | 10.2 | :   | :  | 16.0 |
| Fishing                  | :               | 0.5  | 0.1  | 0.5  | :               | 0.1  | 0.6  | 0.3  | 0.1             | :               | 0.0  | :   | :  | 0.3  |
| Mining                   | 1.3             | 0.2  | 1.5  | 1.3  | :               | 0.2  | 0.2  | 0.5  | 1.8             | 1.6             | 0.7  | :   | :  | 0.9  |
| Manufacturing            | 19.8            | 11.9 | 27.1 | 22.6 | :               | 17.7 | 16.2 | 23.9 | 18.9            | 19.6            | 28.0 | :   | :  | 20.6 |
| Utilities                | 2.0             | 0.5  | 1.6  | 2.6  | :               | 2.4  | 1.7  | 2.3  | 1.7             | 2.0             | 1.3  | :   | :  | 1.8  |
| Construction             | 4.1             | 8.1  | 9.3  | 7.0  | :               | 6.1  | 6.3  | 7.6  | 6.0             | 4.1             | 7.5  | :   | :  | 6.6  |
| Trade & repair           | 12.0            | 17.7 | 13.0 | 13.9 | :               | 14.7 | 16.8 | 14.1 | 13.9            | 9.0             | 13.0 | :   | :  | 13.8 |
| Hotels & restaurants     | 2.6             | 11.0 | 3.3  | 3.5  | :               | 1.8  | 2.5  | 6.7  | 1.4             | 1.1             | 4.1  | :   | :  | 3.8  |
| Transport & comms        | 7.6             | 7.3  | 7.9  | 9.9  | :               | 6.3  | 8.2  | 8.2  | 5.6             | 4.9             | 5.7  | :   | :  | 7.2  |
| Financial                | 1.1             | 5.2  | 2.1  | 1.3  | :               | 1.0  | 1.6  | 3.8  | 2.1             | 0.9             | 2.3  | :   | :  | 2.1  |
| Real estate              | 4.1             | 4.8  | 5.6  | 6.9  | :               | 3.2  | 5.5  | 3.9  | 5.0             | 3.1             | 6.3  | :   | :  | 4.8  |
| Public goods             | 3.0             | 7.1  | 7.2  | 6.0  | :               | 4.5  | 6.1  | 9.4  | 3.0             | 1.7             | 4.9  | :   | :  | 5.3  |
| Education                | 7.3             | 5.3  | 6.3  | 7.7  | :               | 10.2 | 8.4  | 7.8  | 5.9             | 4.9             | 6.1  | :   | :  | 7.0  |
| Health & social work     | 5.1             | 3.9  | 6.1  | 4.9  | :               | 7.0  | 5.7  | 6.8  | 6.5             | 4.0             | 6.1  | :   | :  | 5.6  |
| Other                    | 3.1             | 8.0  | 3.8  | 5.1  | :               | 5.1  | 5.6  | 3.2  | 2.5             | 1.9             | 3.8  | :   | :  | 4.2  |
| Total (Mio. inhabitants) | 2.9             | 0.3  | 4.7  | 0.6  | 3.8             | 1.6  | 1.0  | 0.1  | 15.4            | 8.6             | 0.9  | 2.1 | :  | 3.5  |





There was a general fall in employment in the CCs across the period 1995 to 2000, according to table 4. This was steepest in mining, a very small branch, but more significantly, employment fell in the two largest branches, *manufacturing* and *agriculture*, by 15 % and 13 % on average, respectively. In agriculture, Czech Republic, Estonia, Latvia, Lithuania and Slovenia all saw falls of around a fifth or more. Conversely, Poland and Romania saw greater numbers employed in *agriculture*, 3 % and 9 % more in 2000 than in 1995. All countries experienced marked declines in

*manufacturing* employment, ranging from falls of 7 % in Lithuania and Poland to 26 % in Bulgaria and Romania.

The most dynamic growth in employment was seen in the *real estate* and *public goods* branches, increasing by 15 % and 14 % respectively, though neither of these are particularly large employers in the CCs, compared to other branches. *Trade and repair*, which is a significant employer of labour, employed 7 % more people, on average, in 2000 compared to 1995.

Table 4. Employment growth, percentage change, 1995 - 2000

| Branch                   | BG <sup>1,5</sup> | CY  | CZ  | EE  | ΗU³ | LT  | LV  | MT | $PL^3$ | RO <sup>2</sup> | SI  | SK | TR | Mean |
|--------------------------|-------------------|-----|-----|-----|-----|-----|-----|----|--------|-----------------|-----|----|----|------|
| Agriculture              | -2                | -11 | -26 | -33 | :   | -20 | -19 | :  | 3      | 9               | -18 | :  | :  | -13  |
| Fishing                  | :                 | 27  | 21  | -48 | :   | -22 | 21  | :  | -22    | :               | 7   | :  | :  | -2   |
| Mining                   | -39               | -14 | -28 | -14 | :   | -15 | -35 | :  | -28    | -44             | -31 | :  | :  | -27  |
| Manufacturing            | -26               | -18 | -10 | -15 | :   | -7  | -13 | :  | -7     | -26             | -14 | :  | :  | -15  |
| Utilities                | 3                 | 7   | -24 | -1  | :   | -11 | 4   | :  | -8     | 1               | -6  | :  | :  | -4   |
| Construction             | -27               | -5  | -4  | 20  | :   | -16 | 16  | :  | 10     | -26             | 20  | :  | :  | -1   |
| Trade & repair           | 10                | 8   | -1  | 2   | :   | 10  | 19  | :  | 15     | -10             | 6   | :  | :  | 7    |
| Hotels & restaurants     | 2                 | 10  | 2   | 17  | :   | 44  | 11  | :  | 9      | -25             | 7   | :  | :  | 9    |
| Transport & comms        | -11               | 22  | -2  | -8  | :   | 6   | -7  | :  | 2      | -25             | 1   | :  | :  | -2   |
| Financial                | -25               | 27  | 9   | 15  | :   | -24 | 18  | :  | 24     | 4               | 11  | :  | :  | 7    |
| Real estate              | 18                | 20  | 8   | 30  | :   | 3   | 14  | :  | 37     | -16             | 19  | :  | :  | 15   |
| Public goods             | 22                | 17  | 13  | 2   | :   | 7   | 11  | :  | 20     | 12              | 24  | :  | :  | 14   |
| Education                | -16               | 20  | -3  | -16 | :   | 14  | -3  | :  | 7      | -3              | 11  | :  | :  | 1    |
| Health & social work     | -20               | 16  | 3   | -19 | :   | 8   | -9  | :  | -1     | 2               | 21  | :  | :  | 0    |
| Other                    | -11               | 27  | 4   | 3   | :   | -1  | 31  | :  | 19     | -18             | 19  | :  | :  | 8    |
| Total (Mio. inhabitants) | -10               | 6   | -5  | -7  | 4   | -4  | -1  | 0  | 4      | -9              | 0   | :  | :  | -2   |

#### **Productivity**

Productivity of labour is based on a simple calculation of GVA divided by employment (number of person), i.e. output per unit of labour. This allows a straightforward comparison to be made of data from economies of different sizes and structures. It should be noted that it is a very simplified measure, however, and that a more precise calculation would be based on 'hours worked' instead of number of persons, were this data widely available. Also, it does not allow for efficient use of resources or technological advancement.

Table 5 shows productivity measured in PPS, with very disparate figures across both branches and countries.

Cyprus displays the most productive figures, 41 thousand PPS of Gross Value Added per person overall and branch figures ranging from 17 thousand PPS in agriculture to 178 thousand PPS in utilities. Romania has the lowest overall productivity (8 thousand PPS), handicapped by a large and inefficient agricultural industry (3 thousand PPS).

The most productive branches, on average, are *utilities* (mean of 53 thousand PPS per person) and *real estate* (52 thousand PPS), though both of these figures are exaggerated by extreme results for Cyprus. The *financial* branch (45 thousand PPS) also features amongst the most productive in each country, taking first place in three CCs and second in two others. Only in Poland is it amongst the least productive branches.

Table 5. Productivity, 2000

Thousand PPS<sup>6</sup> per person employed, GVA / employment

| Branch               | BG <sup>1</sup> | CY  | CZ <sup>3</sup> | EE | HU <sup>3</sup> | LT | LV | MT | $PL^3$ | RO <sup>2,4</sup> | SI | SK | TR | Mean |
|----------------------|-----------------|-----|-----------------|----|-----------------|----|----|----|--------|-------------------|----|----|----|------|
| Agriculture          | 8               | 17  | 19              | 16 | :               | 6  | 4  | :  | 3      | 3                 | 10 | :  | :  | 10   |
| Fishing              | :               | 22  | 11              | 9  | :               | 8  | 9  | :  | 12     | :                 | 19 | :  | :  | 13   |
| Mining               | 20              | 62  | 24              | 16 | :               | 79 | 9  | :  | 27     | 10                | 47 | :  | :  | 33   |
| Manufacturing        | 14              | 37  | 24              | 14 | :               | 19 | 12 | :  | 20     | 9                 | 30 | :  | :  | 20   |
| Utilities            | 39              | 178 | 57              | 23 | :               | 27 | 31 | :  | 37     | 11                | 74 | :  | :  | 53   |
| Construction         | 14              | 36  | 20              | 15 | :               | 16 | 15 | :  | 27     | 10                | 25 | :  | :  | 20   |
| Trade & repair       | 12              | 31  | 26              | 19 | :               | 16 | 15 | :  | 27     | 10                | 27 | :  | :  | 20   |
| Hotels & restaurants | 14              | 36  | 13              | 7  | :               | 12 | 7  | :  | 17     | 18                | 24 | :  | :  | 16   |
| Transport & comms    | 21              | 53  | 25              | 28 | :               | 31 | 27 | :  | 22     | 16                | 44 | :  | :  | 30   |
| Financial            | 44              | 62  | 62              | 57 | :               | 37 | 42 | :  | 19     | 18                | 61 | :  | :  | 45   |
| Real estate          | 66              | 121 | 57              | 29 | :               | 41 | 26 | :  | 42     | 30                | 58 | :  | :  | 52   |
| Public goods         | 36              | 54  | 19              | 15 | :               | 24 | 14 | :  | 30     | 21                | 36 | :  | :  | 28   |
| Education            | 9               | 40  | 15              | 13 | :               | 10 | 9  | :  | 14     | 5                 | 30 | :  | :  | 16   |
| Health & social work | 6               | 36  | 15              | 14 | :               | 8  | 7  | :  | 11     | 5                 | 28 | :  | :  | 15   |
| Other                | 9               | 24  | 19              | 17 | :               | 10 | 11 | :  | 29     | 10                | 31 | :  | :  | 18   |
| Total                | 15              | 41  | 25              | 18 | 24              | 16 | 14 | 31 | 18     | 8                 | 31 | 25 | :  | 22   |

Table 6 shows the development of branch productivity between 1995 and 2000 using data at constant prices. It should be remembered that changes in productivity can be attributed to either GVA movement or variations in the level of employment.

All countries except Romania have benefited from increasing overall productivity, though by varying degrees. However, all CCs have seen productivity drop

in certain branches of their economy over the period. The branches which enjoyed the most dynamic growth in these years were the loosely-connected groupings of trade & repair, hotels & restaurants and transport & comms, and financial and real estate, which all increased between 24 % and 28 %, as an average of available data. The eclectic grouping of other also increased in productivity by 30 %.



Table 6. Productivity growth 1995 - 2000 (constant prices), % over period

| Branch               | BG | CY | CZ  | EE  | HU | LT  | LV | МТ | $PL^3$ | RO <sup>2,4</sup> | SI  | SK | TR | Mean |
|----------------------|----|----|-----|-----|----|-----|----|----|--------|-------------------|-----|----|----|------|
| Agriculture          | :  | -9 | 19  | 0   | :  | 12  | -6 | :  | 8      | -10               | -2  | :  | :  | 2    |
| Fishing              | :  | 49 | 2   | -12 | :  | -33 | -5 | :  | -12    | :                 | 106 | :  | :  | 14   |
| Mining               | :  | 42 | -15 | 10  | :  | 127 | 43 | :  | -13    | -35               | 5   | :  | :  | 21   |
| Manufacturing        | :  | 4  | 13  | 46  | :  | 19  | 26 | :  | 39     | -15               | 27  | :  | :  | 20   |
| Utilities            | :  | 34 | -5  | -15 | :  | -25 | -9 | :  | 4      | -35               | 9   | :  | :  | -5   |
| Construction         | :  | -7 | -46 | 44  | :  | -7  | 56 | :  | 32     | -29               | 52  | :  | :  | 12   |
| Trade & repair       | :  | 17 | 42  | 28  | :  | 21  | 66 | :  | 29     | -1                | 19  | :  | :  | 28   |
| Hotels & restaurants | :  | 34 | -43 | 56  | :  | 43  | 31 | :  | 63     | -1                | 24  | :  | :  | 26   |
| Transport & comms    | :  | 42 | 7   | 58  | :  | 37  | 27 | :  | 29     | -21               | 21  | :  | :  | 25   |
| Financial            | :  | 52 | 49  | 35  | :  | 11  | 9  | :  | 59     | -34               | 27  | :  | :  | 26   |
| Real estate          | :  | 25 | 8   | 30  | :  | 30  | 69 | :  | 3      | 12                | 18  | :  | :  | 24   |
| Public goods         | :  | 22 | :   | 8   | :  | 8   | 16 | :  | 19     | -5                | 36  | :  | :  | 15   |
| Education            | :  | 20 | :   | 4   | :  | 13  | 7  | :  | 11     | -2                | 17  | :  | :  | 10   |
| Health & social work | :  | 16 | :   | 12  | :  | 15  | -6 | :  | -9     | 20                | 24  | :  | :  | 10   |
| Other                | :  | 43 |     | 25  | :  | 34  | 52 | :  | 5      | 21                | 27  | :  | :  | 30   |
| Total                | :  | 21 | 5   | 29  | :  | 17  | 26 | 35 | 22     | -10               | 23  | 21 | :  | 19   |

Table 7 brings together growth in productivity with the change over time of its constituent factors, GVA and employment, permitting an understanding of the high-level causes behind its development. Where GVA increases (in constant prices) and employment

decreases, productivity will increase, and vice versa. If both GVA and employment move in the same direction, the effect on productivity will depend on their relative variation.

Table 7. Mean CC growth, percentage change 1995 - 2000

|                      | ■GVA | ■ Emplo | oyment | □Productivity |  |
|----------------------|------|---------|--------|---------------|--|
| Agriculture          |      | 2       | -13    | 2             |  |
| Fishing              |      | -1      | -2     | 14            |  |
| Mining               |      | 23      | -27    | 21            |  |
| Manufacturing        |      | 22      | -15    | 20            |  |
| Utilities            |      | -5      | -4     | -5            |  |
| Construction         |      | 6       | -1     | 12            |  |
| Trade & repair       |      | 29      | 7      | 28            |  |
| Hotels & restaurants |      | 26      | 9      | 26            |  |
| Transport & comms    |      | 27      | -2     | 25            |  |
| Financial            |      | 20      | 7      | 26            |  |
| Real estate          |      | 24      | 15     | 24            |  |
| Public goods         |      | 14      | 14     | 15            |  |
| Education            |      | 10      | 1      | 10            |  |
| Health & social work |      | 9       | 0      | 10            |  |
| Other                |      | 30      | 8      | 30            |  |
| Total                |      | 17      | -2     | 19            |  |

#### Remuneration

Table 8 illustrates remuneration, calculated as 'wages and salaries per employee' in thousand PPS. As seen for productivity, there are wide variations across countries and, in particular, branches. On average, remuneration is highest in the *financial* and *public goods* branches, at 22 thousand PPS, but the highest paid branch is *mining* in Slovenia, at 41 thousand PPS. Slovenian employees are the best remunerated in all branches, except for *real estate* workers in Czech Republic, who earn an average of 28 thousand PPS each.

At the other end of the scale, *agriculture* and *fishing* employees are remunerated poorly compared to other branches, and in Latvia and Bulgaria receive just 6 or 7 thousand PPS. Staff in *hotels & restaurants* and *health & social work* also fare poorly, with averages across the CCs of 10 and 11 thousand PPS, respectively.

Table 8. Remuneration, 2000

Thousand PPS<sup>6</sup>

| Branch               | BG <sup>1</sup> | CZ <sup>3</sup> | EE | LT | LV⁴ | $PL^3$ | SI | Mean |
|----------------------|-----------------|-----------------|----|----|-----|--------|----|------|
| Agriculture          | 7               | 11              | 9  | 9  | 6   | 12     | 13 | 10   |
| Fishing              | :               | 12              | 6  | 6  | 7   | 11     | 14 | 9    |
| Mining               | 16              | 17              | 12 | 13 | 9   | 23     | 41 | 18   |
| Manufacturing        | 10              | 14              | 9  | 11 | 8   | 14     | 20 | 12   |
| Utilities            | 18              | 18              | 11 | 14 | 12  | 17     | 30 | 17   |
| Construction         | 11              | 14              | 10 | 13 | 8   | 15     | 17 | 13   |
| Trade & repair       | 8               | 14              | 12 | 12 | 6   | 12     | 19 | 12   |
| Hotels & restaurants | 11              | 10              | 4  | 11 | 5   | 13     | 17 | 10   |
| Transport & comms    | 13              | 14              | 12 | 14 | 12  | 15     | 25 | 15   |
| Financial            | 19              | 24              | 20 | 18 | 19  | 20     | 35 | 22   |
| Real estate          | 12              | 28              | 16 | 13 | 9   | 16     | 23 | 17   |
| Public goods         | 31              | 15              | 13 | 20 | 10  | 31     | 33 | 22   |
| Education            | 8               | 13              | 12 | 10 | 7   | 13     | 27 | 13   |
| Health & social work | 5               | 12              | 12 | 8  | 6   | 10     | 25 | 11   |
| Other                | 8               | 12              | 12 | 9  | 7   | 18     | 24 | 13   |
| Total                | 11              | 15              | 11 | 12 | 8   | 15     | 22 | 13   |

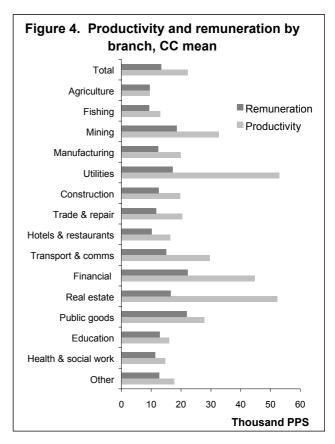


Figure 4 shows a comparison between productivity of labour and remuneration, as an average across the CCs. Except for *agriculture*, where productivity and remuneration both equal 10 thousand PPS, all branches return a higher level of GVA per unit of labour than is awarded in remuneration. It is in *real estate* and *utilities* where the disparity between the two variables is greatest, with each unit of labour generating three times as much in GVA as is received in remuneration. For the average CC economy (all branches), just over 1 ½ times as much GVA is produced than is remunerated.

#### ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

#### **Data quality**

These detailed branch data are not included in the submission programme required of Member States, and consequently there is not enough data available to make comparisons with EU Member States. Data for the Candidate Countries are, in many cases, provisional and subject to revision as methods and practice are developed.

All Candidate Countries are working towards ESA95 compliance but this is a long and difficult process. In particular, Turkey currently bases its accounts on SNA 1968 and Malta's data are derived from the national system of 1954, with some elements of SNA 1968. Therefore, all data in this publication should still be treated with an appropriate level of caution.

#### Notes for tables and graphs

- <sup>1</sup> Figures for branch b are included in branch a
- <sup>2</sup> Figures for branch b are included in branch o, p and q
- <sup>3</sup> Figures are for 1999, due to data availability
- <sup>4</sup> Figures are for 1998, due to data availability
- <sup>5</sup> Growth for period 1996 2000
- <sup>6</sup> The basis of the estimates in PPS are the 1999 European Comparison Programme (ECP) results published by OECD/Eurostat. GDP-level Purchasing Power Parities are used to calculate figures in PPS.



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