

CHAPTER 13

CIVIL ENGINEERING PRACTICE

The aim of this chapter is to indicate who the principle employers are in each member country. Is it the private sector employer or public sector? In what fields of work are engineers employed on the whole? Where possible, members were asked to cite official statistics to demonstrate this.

The questions asked of members to obtain this information were:

In which sectors do civil engineers work in your country? Do you have figures to indicate the percentage of engineers in the following?

- *Private sector*: consulting, contracting, materials industry
- *Public sector*: local authorities and national authorities

COUNTRY	
Croatia	Civil engineers are employed in all sectors of Croatian economy. About 70 % of all engineers are currently employed in the private sector. The percentage of engineers working in public sector (local and national authorities, national water management companies, national power management companies, national highways and railways authorities) is estimated at 20 %.
Cyprus	Civil engineers work mostly in the building industry either as design engineers in private design offices or as construction engineers in construction companies or land development companies. Civil engineers are also engaged in the design and construction of highways, water works and waste water treatment works. The majority of the engineers work in the private sector and only a relatively small proportion work in the public sector. Although we have no exact figures, the percentage working in the public sector is between 10 to 15%.
Czech Republic	Civil engineers work in all sectors. The percentage of civil engineers in the Private Sector is approx. 75%, - in the Public Sector around 25%.
Estonia	Civil engineers work in both the private and the public sectors in Estonia. We do not have figures to indicate the percentage of engineers in private and public sectors, but there are a few engineers working as technical inspectors and officials of local and national authorities.
Finland	Results from a member survey carried out in 2002 indicate the following: - Private sector: consulting (28 %), contracting (16 %), materials industry (6 %), other (education, R&D, maintenance, property market, ITC, quality control, etc. 13 %) - Public sector: local authorities (16 %) and national authorities (21 %).
France	In the various fields of the construction sector, Civil Engineers are involved in : Buildings structures; Building finishings; Bridges and Structures; Earthworks; Foundations; Underground Works; Highways and other transport infrastructures; Electricity supply; Utilities : water supply, sewers and other

	<p>urban networks and also Facilities : the functioning and management of existing buildings.</p> <p>The Building sector involves around 1,000,000 workers, 7 % of these are managerial staff, of which 2/3 are Engineers.</p> <p>The Public Works sector involves around 250,000 workers, 9 % of them are managerial staff, of which 2/3 are Engineers.</p>
Germany	<p>Private sector: consulting, contracting, materials industry: approximately 80%</p> <p>Public sector: local authorities and national authorities: approximately 20%</p>
Hungary	Please complete this section.
Ireland	<p>Civil Engineers in Ireland are employed in all sectors including Information and Communications Technology.</p> <p>80% are employed in the private sector (consulting, contracting or material industry) whilst</p> <p>20% are employed in the public sector by local or national authorities.</p>
Italy	<p>Civil Engineers in Italy are distinguished from Architects, even though their professional duties are very similar.</p> <p>Among the Civil and Environmental Engineers not practising as free professionals, 26% are employed in private companies, whilst</p> <p>74% of civil and environmental engineers are employed in a public body.</p>
Lithuania	<p>The activities of Civil Engineering have a very broad spectrum, i.e. the design and execution of construction works, consultancy and expertise.</p> <p>The State sector still exists. However, there is a trend for the state sector to be turned more and more into private companies.</p>
Poland	<p>In Poland civil engineers work in both the Private Sector (i.e. consulting, contracting, materials industry) and the Public Sector: local authorities and national authorities.</p> <p>The percentage is considered to be:</p> <p>60 – 70%: Private sector</p> <p>30 – 40% : Public sector</p>
Portugal	<p>Civil engineers work in all sectors in Portugal.</p> <p>An estimate of the proportion in the private sector compared to the public sector would be:</p> <p>Around 80%: Private sector: consulting, contracting, materials industry.</p> <p>Around 20%: Public sector: local authorities and national authorities.</p>
Romania	<p>In Romania there is an evolution in the division between public and private sector employment for civil engineers.</p> <p>Big design institutes, belonging to various ministries or to city and district councils, which handled almost all the design activity before 1990, have reduced their size considerably in the period 2002-2003 and some have turned into private companies. Similarly, few of the big contracting companies retained their previous structure (notably those involved in public projects, like the Construction Company of the Ministry of Transportation)</p> <p>At present, there is an increasing trend towards small specialist companies, both in the consultancy and in the construction field. Thus of a total of 10,521 economic agents (firms) which reported in 1999 that their basic activity was in construction, 291 (2.8%) had over 250 employees; 1066 (10.1%) between 50 and 249 employees and 9,164 (87.1%) under 50 employees.</p>

	Local authorities usually employ their own engineers, although they may also require the services of private firms.																						
Russia	Please complete this section.																						
Slovak Republic	<p>Civil engineers cover a wide range of services. They work mainly in the construction sector but their services are practically required in all sectors.</p> <p>Civil engineers work mainly in the private sector, since more than 90% of enterprises in the Slovak building sector are private. Generally estimated, more than 70% of civil engineers work in the private sector and the percentage of civil engineers in the public sector is approximately 30%.</p>																						
Turkey	<p>Civil engineering implementation in Turkey covers a very wide range of applications. All areas of civil engineering are intensively realized.</p> <p>The Private sector (approximately 60%), presents a wide range of consultant-contractor-material industry distribution. These sub-areas can be undertaken individually and there can also be joint functions among them by civil engineers. The numerical distribution of the areas is hard to determine, as job descriptions in the private sector are not recorded in the required detail to respond.</p> <p>The number of civil engineers working in the public sector is approximately 40% of the total number of civil engineers. National authorities feature most of the civil engineers in the public sector, rather than local authorities.</p>																						
United Kingdom	<p>The proportion of engineers working in the public sector is quite low. There are no specific statistics available for civil engineers but on the basis of employment of registered engineers (all disciplines) by industrial sector (2002) the following picture emerges:</p> <table style="margin-left: 40px;"> <tr> <td>Manufacturing:</td> <td>39.5%</td> </tr> <tr> <td>Utilities:</td> <td>8.9%</td> </tr> <tr> <td>Construction:</td> <td>7.8%</td> </tr> <tr> <td>Wholesale and retail:</td> <td>0.4%</td> </tr> <tr> <td>Transport and communication:</td> <td>6.4%</td> </tr> <tr> <td>Financial and business:</td> <td>19.5%</td> </tr> <tr> <td>Public sector:</td> <td>9.7%</td> </tr> <tr> <td>Education:</td> <td>6.2%</td> </tr> <tr> <td>Agriculture:</td> <td>0.3%</td> </tr> <tr> <td>Mining:</td> <td>0.7%</td> </tr> <tr> <td>Other:</td> <td>0.7%</td> </tr> </table> <p>(Source: Engineering Council UK)</p>	Manufacturing:	39.5%	Utilities:	8.9%	Construction:	7.8%	Wholesale and retail:	0.4%	Transport and communication:	6.4%	Financial and business:	19.5%	Public sector:	9.7%	Education:	6.2%	Agriculture:	0.3%	Mining:	0.7%	Other:	0.7%
Manufacturing:	39.5%																						
Utilities:	8.9%																						
Construction:	7.8%																						
Wholesale and retail:	0.4%																						
Transport and communication:	6.4%																						
Financial and business:	19.5%																						
Public sector:	9.7%																						
Education:	6.2%																						
Agriculture:	0.3%																						
Mining:	0.7%																						
Other:	0.7%																						