

EUROPEAN WAY OF CLUSTERIZATION

N.Shyriaieva, A.Makarenko

In modern economies, there are dozens of different industry classifications, which are typically grouped into larger categories called sectors. According to the website clustercollaboration.com sectors consist of clusters. Each cluster refers to particular area in Europe and consists of companies in that region. There are 36 sectors in Europe which consists of 27 countries. Our goal is to define what sector is the most developed and internationally widespread in Europe. It's necessary because the original information on the website do not contain ranging of the sectors. And it's very important for investors, companies' management and entrepreneurs to understand what sectors take leading positions.

We calculated the values of factors as following.

- 1 Building of the table in the separate excel sheet for each sector. This table includes all clusters within the sector and information about these clusters such as sphere, country and Human Development Index (HDI) of the country.
- 2 Average HDI calculation.
- 3 The quantity of clusters calculation.
- 4 Calculated of the quantity of countries in the sector avoiding repeating.
- 5 Creation of the final table where all the factors were combined and total results were calculated by taking average of the considered factors.

This table represents the top-10 sectors and their total result.

Industry	Result, %
ICT	6,98135
Energy	4,97366
Agro-Food	4,85961
HealthCare/MedicalDevices	4,781
Environment/GreenTechnologies	4,71681
Biotechnology	4,06086

Creative	3,91778
Automotive	3,78036
Business&FinancialServices	3,34287
Construction (incl. equipment)	3,31931

In the result we obtained that ICT, Energy, Agro-Food, Health Care, Green Technologies occupy the first 5 position in our list.

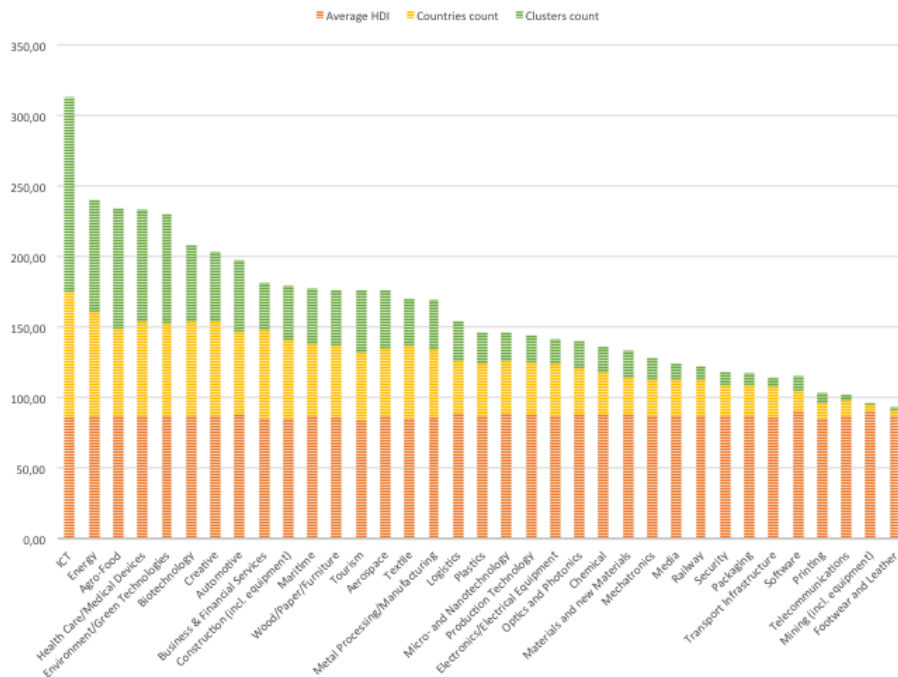


Diagram 1 – Range of sectors

By using forecasting techniques it's possible to get knowledge of the sector's future. For this purpose ICT sector was considered. Two types of approaches, econometric and end-use accounting, are used in the existing energy demand models. While the end-use energy accounting models with detailed sector representations produce more realistic projections compared with the econometric models, they still suffer from huge data deficiencies especially in developing countries. Most companies in agro-food sector use historical analysis, moving average and market research forecasting methods. Judgmental forecasts (e.g. Delphi method) and Time-Series Approach are widely used in health care.