



Summary

Knowledge sources and collaboration in the case of innovation

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This "theme dossier" bundles information on innovation and its relation to internal and external knowledge sources in general, and its relation to the external strategic forms of collaboration of companies and organizations in particular..

The different types of innovation often occur together: innovation of products and services, process innovation, technological innovation, changes in organizational structure and in personnel policy. 61.3% of companies and organizations implemented at least 2 different types of innovation.

There are differences among sectors with respect to innovation – relatively speaking, a greater number of government, education and social profit are innovative, while fewer companies are innovative in the construction sector – but these differences usually fade when the size of the companies and organizations is taken into account. A greater number of large companies and organizations are innovative than small companies.

The immediate external environment is most often called upon as knowledge source for innovation. 88.6% of companies and organizations appeal to nearby external sources outside the knowledge centres when innovating: customers, suppliers, other companies, or (management) consultants. Almost as many companies make use of internal sources: personnel in general and the R&D department if present, i.e. 82.0%. Professional and network organizations are in third place with 47.1%, followed by public (government) bodies with 28.6%. Finally, 21.7% of companies make use of the expertise of traditional knowledge centres such as universities, colleges, sector (cluster) related research centres and competence poles. The traditional knowledge centres are used by the least number of companies as a source of knowledge for innovation. The larger the company, the more use is made of internal and external knowledge sources. A greater number of knowledge sources increases the types of innovation implemented.

The same trend can be seen with respect to forms of collaboration. The immediate external environment of suppliers (48.2%), other companies (27.3%), (management) consultants (25.3%) are more often engaged in forms of collaboration with companies and organizations than the knowledge centres at colleges and universities (15.3%), and other research centres, competence poles, sector clusters or government centres (17.2%). The various forms of collaboration appear more often in large companies and the differences according to sector are largely the result of the differences in average company size within the sectors. The more types of collaboration present in a company, the greater the likelihood of innovations. There is also a

positive correlation between using forms of collaboration and using these contacts as a source of knowledge for innovations.

All forms of cooperation increase the likelihood of the various types of innovation. Collaboration with the traditional knowledge centres at colleges and universities, other research centres, competence poles, sector clusters or government centres has a relatively greater reinforcing effect on the various types of innovation. The forms of cooperation not linked to knowledge centres occur in more companies and organizations, but the number of companies with innovations is smaller in this case, except for the category of companies with 200 or more employees. For this group of the largest companies, little or no significant correlation was found between the nature of the cooperation with respect to the presence or absence of traditional knowledge centres and the various types of innovation. For these large companies, however, more than two thirds of companies have their own R&D departments and almost all of these have implemented at least one type of innovation.

In summary, we can conclude that in the area of innovation in companies and organizations, the forms of collaboration with traditional knowledge centres occurs relatively less often than other forms of collaboration, but there is a greater effect on innovation, certainly in the case of SMEs.

Gert Verdonck (2011), Themadossier IOA 2011. Kennisbronnen en samenwerking bij innovatie. StIA/SERV, Brussels, December 2011