

Technology extension services

Government-funded programs provide technology extension services to small and medium enterprises (SMEs). The main aim is not to develop new technology but rather to expand the diffusion and adoption of already existing technology, and to contribute to increasing the absorptive capacity of targeted firms. Technology extension services usually comprise an assessment of the state of the firm's operation, followed by the proposal of an improvement plan and assistance in its implementation.

Technology extension services are normally offered by a network of field engineers based in local offices and who proactively reach out to companies in their area. The service is initiated either by firms that seek help from the program or by field agents who visit constituent firms in the region and inform managers of improvements that can be made in their companies.

The first stages of review and diagnosis are generally free of charge, while more intensive projects often require co-financing by the firm, although at lower than market prices for consulting services. Technology extension services are offered individually to interested companies, but sometimes they may also be provided simultaneously to groups of companies with common needs.

Frequently used technology extension services include the following:

- Providing information on opportunities for improvement in existing technologies, best practices, international trends, relevant regulations, business networks, etc.
- Benchmarking companies in their industries at national and international levels to identify areas for improvement.
- Technical assistance and consulting in areas like quality management and certification, management of environmental impacts and energy use, human resource development, strategic management, etc.
- Training of plant and administrative staff in the effective use of more advanced technologies than those previously used by the company.
- Joint projects between companies and public research institutes to solve specific problems related to the company's products or processes.

Governments of both developed and developing countries have long used technology extension services. On some occasions they have been used to support industrial sectors with relatively low competitiveness, or to promote the restructuring and diversification of industries in crisis. One of the first examples can be traced back to Ireland during the middle of the nineteenth century, where government-funded agricultural advisors helped Irish potato farmers diversify into different food crops following the potato famine. More recently, many countries have used technology extension programs across a wide range of industries, often targeting SMEs (Shapira et al., 2011).

Technology extension services are particularly important in low income countries where geographically dispersed firms operate far from international best practices in their industries. In some of the poorest countries, investment in agricultural technology extension may be one of the best ways to stimulate economic activity, in addition to providing greater food security. Technology extension can also be used to deal with escalating natural resource problems, including climate change. For example, extension programs can be designed to convince farmers to use more water-efficient irrigation methods and/or shift to more water-efficient crops.

References

- Shapira, P., J. Youtie, L. Kay. (2011), “Building capabilities for innovation in SMEs: A cross-country comparison of technology extension policies and programmes,” International Journal of Innovation and Regional Development 3: 254-272.
- Swanson, B.E., Rajalahti, R. (2010), “Strengthening agricultural extension and advisory systems: Procedures for assessing, transforming, and evaluating extension systems”, Agriculture and Rural Development Discussion Paper 45, World Bank. http://siteresources.worldbank.org/INTARD/Resources/Stren_combined_web.pdf [1]

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