

# Executive Summary

## Labor shortages in knowledge-intensive occupations - Reactions of the demand and supply side

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## **Executive summary**

Knowledge-intensive activities are often of special importance for the innovative strength and the competitiveness of single firms and the overall economy. Above all, this applies to technical, digital or scientific professions, in which the demand for skilled labor sometimes noticeably exceeds the supply. The level of shortages of skilled labor differs by region and requested skill level, but companies perceive them as an obstacle for growth and innovation at a large scale. This conceptual study explores the relationship between labor shortages in knowledge-intensive occupations, the individual entrepreneurial choice, and strategic consequences for SMEs and economic policy.

### **Shortages make skilled workers more inclined to become self-employed**

The demand for business-related and knowledge-intensive services significantly increased over the last years. As a result, appropriately skilled workers tend to prefer self-employment to dependent employment at an above average rate. They expect excellent income prospects at a low entrepreneurial risk. Furthermore, self-employment allows to work autonomously in terms of time and content.

### **Outsourcing of knowledge-intensive activities can lower the innovative potential of SMEs**

Due to their personnel and financial constraints, SMEs working in less knowledge-intensive sectors can find it difficult to recruit and retain highly skilled staff for knowledge-intensive activities. However, if they want to maintain or even deepen their core competences within a dynamic and competitive environment, they are dependent on highly skilled labor. Outsourcing knowledge-intensive activities is only a strategically useful alternative, if it does not concern core competences. Otherwise, there is a risk of becoming dependent of third parties in an area crucial to the firms innovative strength and competitiveness.

### **As an alternative to outsourcing: Strengthen learning induced cooperation**

A promising alternative to outsourcing is the cooperation with other companies or start-ups, aiming for a bundled use of short skilled labor in knowledge-intensive occupations. As an outcome of a learning induced cooperation, new knowledge can be made available in SMEs in the long run.

## **Economic policy should raise awareness for lifelong learning**

From an economic policy perspective it is useful to raise awareness for professional and lifelong training in SMEs. The aim should be, to strengthen the core competences from within the company, while lowering the demand for skilled labor. Digital training platforms are useful here, as a cost-effective way to broaden the skills on information technology on a broad but targeted basis.