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ESTUDIOS

≡ Vocational education
and training in
Spanish industry

Executive summary

Vocational education and training in Spanish industry

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The Estudios collection published by Fundación Bankia por la Formación Dual contains benchmark studies and research intended to further analysis, implementation and knowledge of conventional and dual vocational education and training (VET).

The opinions, analyses, interpretations and comments found in this document reflect solely the opinions of the respective authors and not those of the publishing institution.

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Executive summary

This report analyses the role that vocational education and training (VET) plays in determining value-generation processes and outcomes — particularly productivity — in industrial companies in Spain. Drawing on data from the 2016 Business Strategies Survey, a valuable source of information about the structure and dynamics of industrial companies in Spain, we have used a wide range of economic analysis methods to address a set of key questions: What is the value-generation process in industrial companies that employ staff with vocational qualifications? Are there differences between the value generated in industrial companies that make intensive use of VET and that generated in other industrial enterprises? Does VET make a contribution to productivity in industrial companies? And, if so, with what other value factors does it interact?

By answering these questions we aim to provide new evidence regarding the necessary, and undoubtedly urgent, increase in interconnection between the education system and employment, while at the same time suggesting strategic actions and public policies to address the challenge of enhancing value generation and industrial employment in Spain.

Analysis of the situation regarding VET in industrial firms leads to a number of important conclusions.

- Our first conclusion, therefore, is that training remains a challenge that industry has yet to address, as evidenced by the fact that around two thirds of people working in industry have no qualifications at all. Meanwhile, around one fifth of them have a vocational qualification and a further 15% are university graduates.
- A second significant conclusion is that as companies grow, so the number of employees with vocational or university qualifications likewise increases. In industrial SMEs (firms with 200 employees or fewer) the majority of workers (66.6%) do not hold a qualification. The breakdown by level of education also reveals that 20.4% of employees hold vocational qualifications and 13.1% hold higher qualifications. For their part, in large enterprises (with over 200

- employees) the breakdown reveals higher levels of education and training, although the number of staff without any qualifications remains significant (49.5%). In large industrial enterprises the proportions of employees with vocational or university qualifications stand at 29.5% and 21.0%, respectively.
- Thirdly, the data compiled also highlight that, when measured by percentage of companies, the breakdown of firms' human capital is clearly unequal. In around half of Spain's industrial companies, employees with vocational qualifications make up just 14.5% of the workforce. In contrast, in the 10% of firms at the upper end of the scale, the proportion of VET graduates rises to 58%. Similarly, in around half of Spain's industrial companies university graduates account for merely 11% of the workforce. Conversely, in the 10% of firms at the upper end of the scale, the proportion of university graduates stands at 32.7%.
- Fourthly, and from the perspective of employment and human resources, vocational qualifications are associated with greater job stability. The proportion of salaried staff on permanent, full-time contracts is higher in companies that employ people with vocational qualifications (83.7% of the total). VET is also associated with greater efforts to train employees. In firms that employ VET graduates, both internal expenditure per employee (€81.40) and external expenditure per employee (€106.60) are clearly higher than in companies without workers with vocational qualifications. This greater stability and emphasis on training also translates into higher salaries. Thus, in 2016, the average personnel cost per employee in these companies was just over €44,500, a figure 28.7% higher than among firms that did not employ VET graduates.
- Fifthly, and from the perspective of R&D and Innovation, it should be highlighted that companies that employ staff with vocational qualifications show a greater propensity to invest in R&D. In total, 30.2% of industrial firms carry out and/or subcontract R&D. Nearly one in five (19.8%) industrial firms in Spain has an innovation plan in place. This higher innovation intensity is clearly linked to these firms' greater capacity to develop collaborative networks: 13.6% partner with VET centres, 17.1% with suppliers and 20.4% with universities and research centres.
- And sixthly, VET is also associated with better business outcomes. Industrial firms with staff with vocational qualifications generate higher sales volumes (€63.5 million), create more gross value added (€13.9 million) and have more assets (€56.3 million) and employees (177.8 on average) than companies that do not employ people with vocational qualifications. This situation is repeated with productivity and exports. While productivity among industrial companies that employ people with vocational qualifications stands at €63,500 per employee and at €36.30 per hour worked, among firms that do not employ VET graduates it is significantly lower (€42,600 per employee and €24.20 per hour worked). As regards the capacity to place products on international markets,

60.8% of industrial companies with VET graduates on their workforce export their products (worth an average of €29.2 million). And 56.1% of industrial firms that employ people with vocational qualifications import products (worth an average of €16.3 million).

In terms of the role that VET plays in explaining the productivity of industrial companies in Spain, the results compiled also reveal significant new information:

- Employing staff with vocational qualifications raises industrial firms' productivity by 11.5% while employing people without qualifications lowers productivity by -18.2%.
- When compared with the results obtained for university qualifications (a 17.4% increase in productivity), it is noteworthy that there is a certain degree of complementariness between the two forms of education and training — the overall impact of VET plus university qualifications on productivity (18.3%) is greater than the effect of university qualifications by themselves.
- This suggests that the two training systems complement each other when it comes to productivity, probably due to combining effects in their educational approaches.

Finally, these findings have several implications for corporate strategy and public growth and enterprise-acceleration policies. The analysis conducted has highlighted the existence of new and multi-dimensional forces that explain business growth and dynamics in the 21st-century economy. VET should undoubtedly play a key role in the retraining and reskilling that is so vital to maximising employability. Firstly, companies should deeply transform their value-generation processes and their sources of efficiency and competitiveness. Secondly, employees, particularly those without qualifications or those in the middle tiers of the occupational scale, should acknowledge that they need to retrain if they are to adapt successfully to the technological and organisational changes taking place in the workplace. And finally, institutions should design and implement VET programmes that take into account all the new factors driving competitiveness and employability. In short, industrial renewal and more and better vocational education and training.



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