

# ASSESSING THE SENIOR MANAGEMENT SUPPORT AND APPROACH TO BUSINESS DIGITISATION. THE CASE OF TOP FINISH AND SPANISH COMPANIES

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ABSTRACT: Business digitisation represents a milestone for companies' prospects, and senior management support is one of the key aspects for its successful implementation. However, this support through their discourse has been underexplored. This paper contributes in this direction, by taking the cases of the top Finish and Spanish companies listed in the OMXH 25 and IBEX 35 respectively, with Finland at the top of the list of European Union countries in terms of business digitisation and Spain in the average, as benchmarks for examining the letters of top managers in annual reports in relation to their support and drivers approach. The results show that yet in both countries a relevant part of top managers does not show this support, more pronounced in Spanish companies. In addition, the weight of each block of drivers to support business digitisation identified in the literature also differs between the two countries, with the top managers of Finish companies showing a more customer-driven approach, and in the case of Spain a more business-driven approach, whereas sustainability is the least mentioned driver in both cases, as an aspect to improve.

**KEY WORDS:** Business digitisation; Digital transformation; Senior management support; Drivers; sustainability; Industry 4.0.

### 1. INTRODUCTION

Business digitisation (BD), understood as the digital transformation of business, represents a milestone for companies in their continuity and future success (Bleicher & Stanley, 2016). BD is changing the competitive landscape across industries and prompting companies to rethink their business models (Iansity & Lakhani, 2014), and also involves major changes in our world.

Senior managers play a key role in the task of leading and supporting this digital transformation, and their communication is one of the essential aspects to guide and align their organisation in their strategic goals (Murray, 2013). However, as far as we know,

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the assessment of this communication in relation to BD support has been underexplored. This paper aims to contribute in this direction, taking as a reference in the context of the European Union (EU) two countries and their top companies listed in their main stock market indices: Finland as the first country in terms of BD according to the ranking in the European Commission's Digital Economy and Society Index (DESI) 2020, and Spain with a score similar to the EU average, and examining the discourse of top managers from the perspective of their support to BD, with two research questions as follows:

- RQ1) To which extent is senior management granting its support to BD in each country?
- RQ2) Under which drivers is senior management addressing this support in each country?

For this, in section 2 we review the concept of BD and appraise the top management support in this task, as well as their letters in the annual reports as a valuable source to convey this support. In section 3 we describe our sample and method. Next, we gather our results in section 4, with final conclusions and future research direction in section 5.

### 2. THEORICAL BACKGROUND

#### Business digitisation: The evolution of the concept

The concept of business digitisation, in correspondence with its primary meaning, was originally associated with the transmission of analogic to digital record content, which enables the conversion of paper records into file based digital information stored on computers (Lozic, 2019). However, this concept has evolved and nowadays it is often used interchangeably by academics and practitioners when actually referring to the digital transformation of business, which involves the adoption of digital technology and optimisation to obtain a series of business objectives, related to the own business performance or customer-related goals (Lozic, 2019). Besides, Industry 4.0, also known as the fourth industrial revolution, has extended its initial conception associated to production to this digital transformation of business beyond the smart factory (Ghobakhloo, 2020), integrating aspects such as marketing, interaction with customers or logistics (Liao et al., 2017). In fact, Industry 4.0, digital transformation of business and business digitalisation are frequently used synonymously. Thus, today, as conceived in this research, business digitisation encompasses other interrelated concepts such as digital transformation or Industry 4.0, and at the same time is the basis for new developments such as smart cities or smart transport (Lom et al., 2016; Tang & Veelenturf, 2019).

# Senior management support to business digitisation and their letters as a tool to convey this support

Senior management support is crucial in the success of any initiative (Young & Poon, 2013). In particular, in the development of any innovative project, such as BD, top

management must allocate the necessary resources (Cooper & Edgett, 2004), ensure the right coordination of efforts (Cooper & Zmud, 1990), and seek to identify public with the project as a priority for the company (Nah et al., 2001). As middle managers and staff perceive more support from top executives, they will respond with greater commitment and will be more likely to take further risks (Rodriguez et al., 2008). In this line, Sony & Naik (2018) identified the explicit support of senior management as one of the key aspects for the implementation of Industry 4.0.

Furthermore, communication, as a driver to inspire influence and achieve results (Murray, 2013), is one of the key tools for top managers to convey their support. As an initial step, top managers must recognise the strategic relevance of BD, understand how it changes business logic and its potential digital value drivers, and learn to implement it in the right direction (Bleicher & Stanley, 2016). Within top management communication, the literature appraises their letters as a key part of the annual reports (Hyland, 1998), being a valuable tool to convey their message to the entire company and stakeholders. They are voluntary, not subject to particular rules or constraints, permit top managers to direct attention to certain topics and share and interpret information and issues through their lenses (Amernic & Craig, 2006), and provide information on the identified challenges and opportunities for the company (Van Alstine & Barkemeyer, 2014).

#### Potential drivers for business digitisation

A good number of works refer to the potential drivers to BD (i.e. Bleicher & Stanley, 2016; Tang & Veelenturf, 2019; Bonilla et al., 2018; Kiel et al., 2020; Oesterreich & Teuteberg, 2016; Stock & Seliger, 2016; Gabriel & Pessl, 2016), as a series of factors encouraging companies in this transformation (Horváth & Szabó, 2019), from which we identify three main approaches or blocks: business-related, customer-related, and sustainability-related ones. Within the first block, this digital transformation can be seen as a business opportunity for companies and as a tool to face future challenges by enhancing their competitiveness, efficiency, results or growth, or to improve their interactions. As for customers, it permits to offer them added value and better satisfy their needs, improving the product or service, offering more for less, more customised products or enhancing their experience. Finally, companies may become more sustainable with the help of digitalisation, for instance by reducing emissions or optimising the use of energy and resources.

#### 3. DATA AND METHOD

The European Commission monitors through its Digital Economy and Society Index (DESI) 2020 the overall digital performance and competitiveness of EU countries. Figure 1 shows the ranking of EU countries in business digitization.

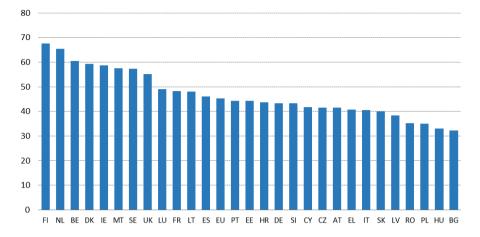


Figure 1. Integration of digital technologies, business digitisation index, 2020. Source: Digital Economy and Society Index (DESI) 2020, European Commission.

For our aim, we took both Finland and Spain as benchmarks to compare the support and motivations of the top managers of companies listed on their main stock index in December 2020 (OMXH 25 and IBEX 35). Finland (FI) is number one on this list, whereas Spain (ES) is by the average of the EU. We downloaded from each company website the annual reports released during the year 2020, aimed at fiscal year 2019, and extracted the introductory letters or statements issued by their Chief Executive Officers or Chairman. The final sample (Tables 1 and 2 in next section) consisted of the 25 companies from the Finish index plus 34 companies of the Spanish index, discarding one company since no annual report was found. Table 1 also includes the classification by industry according to the system adopted by the IBEX 35 (BME, 2019).

Next, to answer our RQ1, we carried out a detailed analysis of each letter through a close reading analytical technique (Amernic & Craig, 2006), with a qualitative and interpretive approach, identifying any content related to BD and evaluating its relevance, emphasis and leverage on the subject, to establish a categorisation with three levels as follows:

- Strong support, meaning explicit relevance, emphasis or leverage on BD
- Weak support, meaning weak relevance, no emphasis or anecdotal mention to BD.
- No support, meaning no mention to BD at all.

Moreover, to address our RQ2, we looked at the stated drivers or motivations mentioned by top managers in supporting BD to assess and compare them between the two countries, classifying them into the three main blocks identified in the previous section.

## 4. RESULTS AND DISCUSSION

In Tables 1 and 2, we gather the results of our assessment for Finland and Spain, comprehensive of the categorisation of the degree of support of each top manager, and the blocks of drivers addressed.

			BD approach			
		Support to	Customer	Business	Sustainability	
Industry	Company	BD	driven	driven	driven	
Oil & Energy	Fortum	NO				
	Neste Oil Oyj	STRONG	х	-	-	
Basic Mat. Industry &	Cargotec Oyj	STRONG	х	-	-	
Construction	Huhtamaki Oyj	STRONG	-	х	-	
	Kemira Oyj	NO				
	KONE Oyj	STRONG	х	-	х	
	Konecranes	STRONG	х	х	-	
	Metsa Board Oyj	NO				
	Metso Outotec	NO				
	Neles Oyj	STRONG	х	-	х	
	Nokian Renkaat	NO				
	Outokumpu Oyj	NO				
	Stora Enso Oyj	STRONG	х	х	-	
	UPM-Kymmene	NO				
	Valmet	STRONG	х	х	-	
	Wartsila	STRONG	х	х	х	
Consumer Goods	Kesko	WEAK	х	-	-	
	Orion Oyj	NO				
Financial Services	Nordea Bank	STRONG	х	-	X	
	Sampo Oyj	WEAK	х	-	-	
Technology &	Elisa Oyj	STRONG	х	X	X	
Telecommunications	Nokia Oyj	STRONG	х	x	х	
	Telia Company	STRONG	х	х	х	
	TietoEVRY	STRONG	х	х	-	
Real State Services	Kojamo	STRONG	X	X	-	

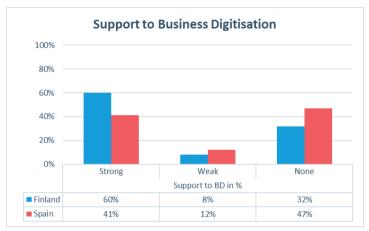
Table 1. Results	for comp	anies in	OMXH 25	Index	(Finland).

Source: own elaboration from our assessment.

Table 2. Results for companies listed in IBEX 35 Index (Spain).

Industry				BD appro	ach
	Company	Support to BD	Customer driven	Business driven	Sustainability driven
Oil & Energy	Enagas	NO			
	Endesa	STRONG	х	х	х
	Iberdrola	NO			
	Naturgy	NO			
	Red Eléctrica	STRONG	х	х	х
	Repsol	NO			
Basic Mat. Industry &	Acciona	NO	•••••••••••••••••••••••••••••••••••••••	•	
Construction	Acerinox	STRONG	х	х	-
	Arcelormittal	NO			
	ACS	NO			
	CIE Automotive	NO			
	Ferrovial	WEAK	-	х	-
	Siemens Gamesa	WEAK	-	х	-
Consumer goods	Almirall	STRONG	X	X	-
	Grifols	NO			
	Inditex	STRONG	х	х	-
	Pharmamar	NO			
	Viscofan	NO			
Consumer services	Aena	WEAK	X	-	X
	IAG	STRONG	-	х	-
	Melia	STRONG	х	х	х
Financial services	B. Santander	STRONG	х	X	-
	B. Sabadell	STRONG	х	-	-
	Bankia	NO			
	Bankinter	STRONG	х	х	-
	BBVA	NO			
	Caixabank	STRONG	х	-	-
	Mapfre	WEAK	-	х	-
Technology & Telecommunications	Amadeus	NO	••••••		
	Cellnex	STRONG	-	х	-
	Indra	STRONG	-	х	х
	Telefonica	STRONG	-	х	х
Real State Services	I. Colonial	NO	••••••	••••••	
	Merlin	NO			

Source: own elaboration from our assessment.



In addition, we represent these results in Figures 2 and 3.

Figure 2. Support to business digitisation by country. Source: own elaboration from our assessment.

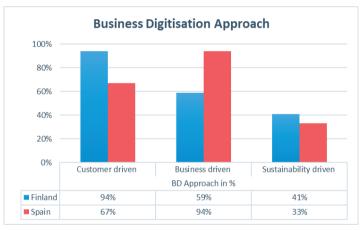


Figure 3. Business digitisation approach by country. Source: own elaboration from our assessment.

Relative to our RQ1, the top management support to BD is not so widespread. Even in Finland, at the top of the EU ranking in terms of BD, 40% of CEOs do not show strong support, and about one third of them do not even mention it. Regarding Spain, in the EU average, about 60% of companies do not show a strong support, and nearly half of them do not refer to it at all. Considering the leverage of business digitisation in the prospects of companies, the relevance of the communication of senior managers in this task, and that these firms are global top players, better positioned to lead this transformation, we observe that the percentage of companies with their top managers showing a strong support is relatively low. We argue that, in many cases, top managers are wasting the opportunity to align their company toward this strategic objective through their discourse (Murray, 2013), in addition to setting trends within their industry.

Besides, with caution due to the limitations of the sample, these results point to a certain correlation trend between the degree of development of business digitisation in the country and the support given by their top management to it, even though on average many of the Spanish companies are larger.

Moreover, regarding our RQ2, in terms of drivers or motivations exposed by top managers in their business digitisation approach, we note that in the case of Finland top managers are predominantly customer-driven, whereas in Spain they are prominently business-driven. Probably the top Finish companies with more advanced implementation have already extracted more potential in their business performance and are paying further attention to customers. In addition, and coincidentally in both countries, the focus on sustainability is less widespread compared to the other two blocks, even though this is a clear benefit identified in the literature (Gabriel & Pessl, 2016; Kiel et al., 2020), and thus it remains in the debt of these top managers.

#### 5. CONCLUSIONS

In this research, we have presented the digital transformation of companies as a milestone in their prospects and have appraised the importance of senior management support and its communication in the task of fostering this BD. In this direction, we have found that the communication of this support is more extended across the senior management of leading companies in Finland, where business digitisation is more spread, although even in this country it still exists room for improvement. Besides, the prominence of drivers towards this implementation differs between the Finish and the Spanish companies, but coinciding as an aspect for improvement the identification of sustainability as one of the key drivers.

Among the main limitations of this research, we underline that although most of the industries according to the adopted classification are represented in our sample, their representation is uneven and limited for each country, which may influence the overall results obtained. This limitation paves the way for our ongoing research, which aims to consider further companies not listed in these indices, as well as other countries and regions and its evolution over time, in order to further explore and settle the validity of the glimpsed trends identified.

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#### **CONFLICT OF INTERESTS**

We declare no conflict of interests.

## AUTHOR CONTRIBUTIONS

Beatriz Garcia-Ortega: Conceptualisation, formal analysis, methodology, coordination and supervision

Javier Galan-Cubillo: Data collection, formal analysis and issuance of original draft

Blanca de-Miguel-Molina: Formal analysis, validation, review & editing

#### REFERENCES

- Amernic, J., & Craig, R. (2006). *CEO-speak: The language of corporate leadership*. McGill-Queen's Press-MQUP.
- Bleicher, J., & Stanley, H. (2016). Digitization as a catalyst for business model innovation a threestep approach to facilitating economic success. *Journal of Business Management*, (12).
- BME (2019). *Clasificación sectorial bursátil: descripción general y especificaciones por subsector.* Spain, 2019. Accessed: June 18, 2020. https://www.bolsamadrid.es/docs/Acciones/sect.pdf
- Bonilla, S. H., Silva, H. R., Terra da Silva, M., Franco Gonçalves, R., & Sacomano, J. B. (2018). Industry 4.0 and sustainability implications: A scenario-based analysis of the impacts and challenges. *Sustainability*, 10(10), 3740.
- Cooper, R. G., & Edgett, S. J. (2004). Innovation performance and the role of senior management. Benchmarking innovation best practices. *Strategic Direction*, 20(5), 28–30.
- Cooper, R. B., & Zmud, R. W. (1990). Information technology implementation research: a technological diffusion approach. *Management science*, 36(2), 123–139.
- Gabriel, M., & Pessl, E. (2016). Industry 4.0 and sustainability impacts: Critical discussion of sustainability aspects with a special focus on future of work and ecological consequences. *Annals of the Faculty of Engineering Hunedoara*, 14(2), 131.
- Ghobakhloo, M. (2020). Industry 4.0, digitization, and opportunities for sustainability. *Journal of cleaner production*, 252, 119869.
- Horváth, D., & Szabó, R. Z. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities?. *Technological forecasting* and social change, 146, 119–132.
- Hyland, K. (1998). Persuasion and context: The pragmatics of academic metadiscourse. *Journal of pragmatics*, *30*(4), 437–455.
- Iansiti, M., & Lakhani, K. R. (2014). Digital ubiquity:: How connections, sensors, and data are revolutionizing business. *Harvard business review*, 92(11), 19.
- Kiel, D., Müller, J. M., Arnold, C., & Voigt, K. I. (2020). Sustainable industrial value creation: Benefits and challenges of industry 4.0. In *Digital Disruptive Innovation* (pp. 231–270).

- Liao, Y., Deschamps, F., Loures, E. D. F. R., & Ramos, L. F. P. (2017). Past, present and future of Industry 4.0-a systematic literature review and research agenda proposal. *International journal* of production research, 55(12), 3609–3629.
- Lom, M., Pribyl, O., & Svitek, M. (2016, May). Industry 4.0 as a part of smart cities. In 2016 Smart Cities Symposium Prague (SCSP) (pp. 1–6). IEEE.
- Lozic, J. (2019). Core concept of business transformation: from business digitization to business digital transformation. *Economic and Social Development: Book of Proceedings*, 159–167.
- Murray, K. (2013). The Language of Leaders: How top CEOs communicate to inspire, influence and achieve results. Kogan Page Publishers.
- Nah, F. F. H., Lau, J. L. S., & Kuang, J. (2001). Critical factors for successful implementation of enterprise systems. *Business process management journal*.
- Oesterreich, T. D., & Teuteberg, F. (2016). Understanding the implications of digitisation and automation in the context of Industry 4.0: A triangulation approach and elements of a research agenda for the construction industry. *Computers in industry*, 83, 121–139.
- Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, 86, 180–190.
- Rodríguez, N. G., Pérez, M. J. S., & Gutiérrez, J. A. T. (2008). Can a good organizational climate compensate for a lack of top management commitment to new product development?. *Journal* of Business Research, 61(2), 118–131.
- M. Sony and S. Naik, "Critical factors for the successful implementation of Industry 4.0: a review and future research direction," Prod. Plan. Control, vol. 31, no. 10, pp. 799–815, 2020.
- Tang, C. S., & Veelenturf, L. P. (2019). The strategic role of logistics in the industry 4.0 era. Transportation Research Part E: Logistics and Transportation Review, 129, 1–11.
- Van Alstine, J., & Barkemeyer, R. (2014). Business and development: Changing discourses in the extractive industries. *Resources Policy*, 40, 4–16.
- Young, R., & Poon, S. (2013). Top management support—almost always necessary and sometimes sufficient for success: Findings from a fuzzy set analysis. *International journal of project* management, 31(7), 943–957.