



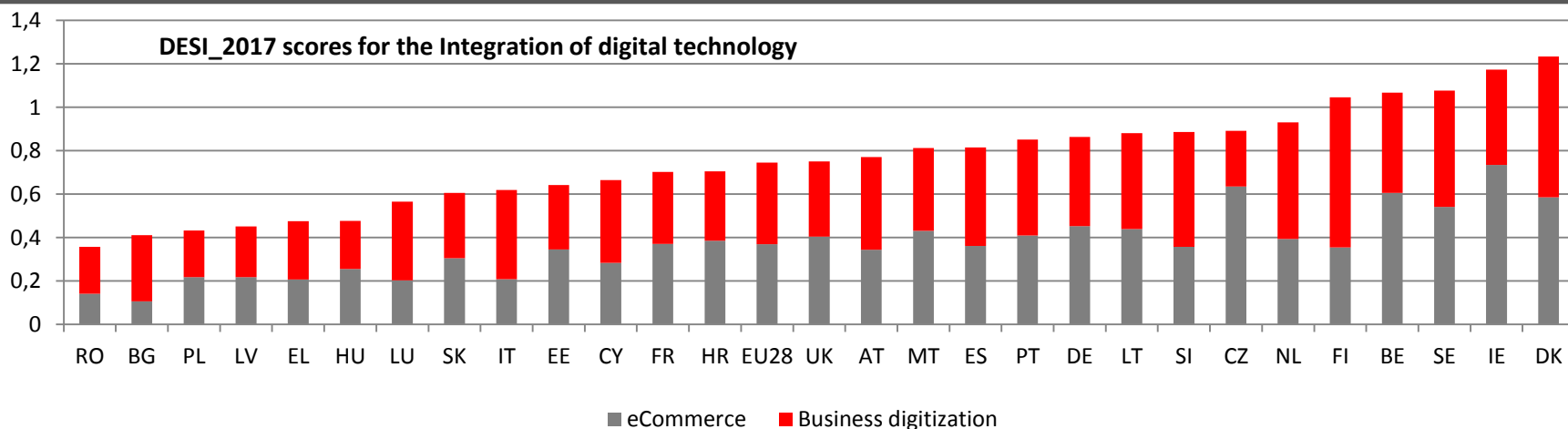
Integration of Digital Technology

On Integration of Digital Technology, Denmark scored highest, followed by Ireland, Sweden and Belgium. Romania, Bulgaria, Poland and Latvia scored lowest.

Integration of Digital Technology covers (a) 'business digitisation' and (b) 'eCommerce'. 'Business digitisation' has five indicators (as % of firms using): electronic information sharing, RFID, social media, eInvoices and cloud solutions. eCommerce has three indicators: the percentage of small and medium-sized enterprises (SMEs) selling online, eCommerce turnover as a percentage of total turnover of SMEs, and the percentage of SMEs selling online cross-border. This DESI dimension is used also to measure the Digital Transformation output in the DTM scoreboard.

In CZ and IE the driver is eCommerce, whereas the adoption of eBusiness technologies dominate BG, IT, FI and LU performance.

EU28	Value 2017	Value 2016
4a1 Electronic Information Sharing	36%	36%
% enterprises	2015	2015
4a2 RFID	3,9%	3,9%
% enterprises	2014	2014
4a3 Social Media	20% ↑	18%
% enterprises	2016	2015
4a4 eInvoices	18%	na
% enterprises	2016	2015
4a5 Cloud	13%	na
% enterprises	2016	2015
4b1 SMEs Selling Online	17% ↑	16%
% SMEs	2016	2015
4b2 eCommerce Turnover	9,4%	9,4%
% SME turnover	2016	2015
4b3 Selling Online Cross-border	7,5%	7,5%
% SMEs	2015	2015



Source: European Commission, Digital Scoreboard based on Eurostat Community survey ICT usage and e-commerce in enterprises

Merely a fifth of companies in the EU-28 is highly digitised, but the situation across countries is varied: while half of companies in Denmark are highly digitised, in Bulgaria and Romania it is less than one in ten

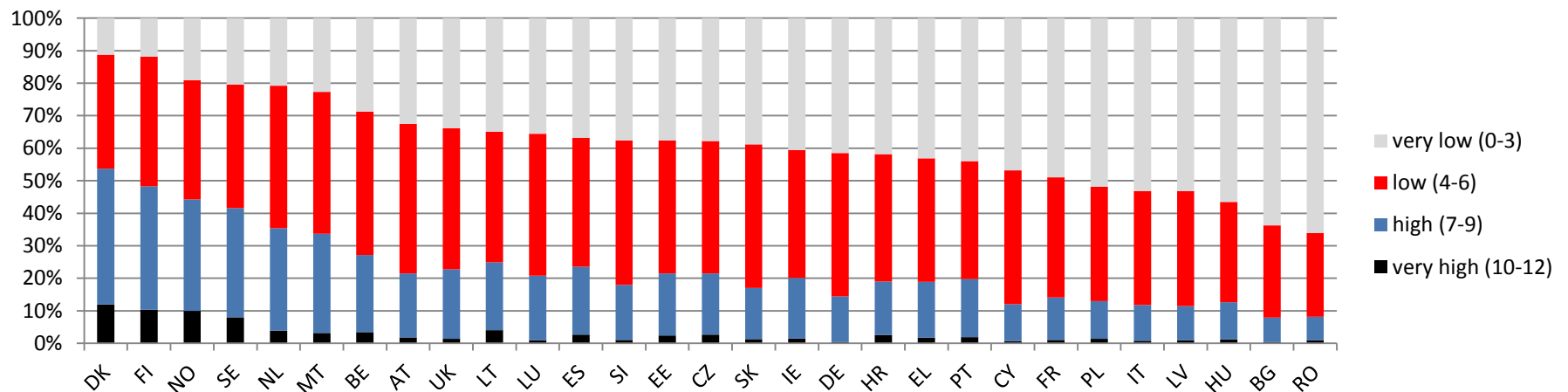
The Digital Intensity Index (DII) is a micro-based index that measures the availability at firm level of 12 different digital technologies: internet for at least 50 % of employed persons, recourse to ICT specialists, fast broadband (30 Mbps or above), mobile internet devices for at least 20 % of employed persons, a website, a website with sophisticated functions, social media, paying for advertising on the internet; the purchase of advanced cloud computing services; sending eInvoices, eCommerce turnover accounting for over 1 % of total turnover and business-to-consumer (B2C) web sales of over 10 % of total web sales. The value for the index therefore ranges from 0 to 12.

Only in three EU countries is the percentage of firms with a very high DII (i.e. possessing at least 10 out of the 12 monitored digital technologies) above 5 %: DK, SE and FI.

By contrast, in some countries such as RO, BG, HU, LV, IT, and PL the majority (more than 50%) of businesses have not yet invested heavily in digital technologies (i.e. has a very low DII), often having just a simple website and a couple of computers.

Source: Eurostat Community survey ICT usage and e-commerce in enterprises

Digital Intensity Index 2016 - % of enterprises by level



In the short term, **social media, eInvoices and mobile applications** are driving the **digital transformation** of European businesses. Also cloud computing shows high growth rates but only in large enterprises.

The table below shows the degree of penetration and speed of adoption of the different technologies monitored by the Digital Intensity Index. While some seem to be reaching saturation (e.g. having a simple website, access to ICT specialist skills and ERP), at least where large companies are concerned, for the majority there is still room for improvement.

Key indicators tracking digitization processes	Year	% of EU28 enterprises		Variation 2016 on 2015	
		Large	SMEs	Large	SMEs
Having a web site or homepage	2016	94%	77%	0%	2%
access to ICT specialist skills	2016	90%	64%	-1%	0%
Website has some interactive functionalities	2016	73%	57%	0%	2%
Use any social media	2016	68%	44%	5%	6%
>50% of the persons employed use computers & Internet	2016	48%	39%	0%	1%
have ERP software package to share information	2015	80%	34%	not available in 2016	
use Customer Relationship Management (CRM)	2015	62%	32%	not available in 2016	
fastest broadband connection is at least 30 Mb/s	2016	62%	31%	8%	5%
>20% of workers with portable devices for business use	2016	36%	30%	4%	3%
Pay to advertise on the internet	2016	34%	25%	not comparable with 2015	
selling online (at least 1% of turnover)	2016	38%	17%	0%	1%
sending eInvoices suitable for automated processing	2016	38%	17%	* 3%	4%
share electronically supply chain management data	2015	47%	16%	not available in 2016	
Buy medium-high Cloud Computing services	2016	29%	13%	** 5%	1%
Exploit B2C eCommerce	2016	9%	7%	(x) 0%	1%
(x) Enterprises where web sales are more than 1% of total turnover and B2C web sales more than 10% of the web sales					
* Estimated using 20 countries collecting the optional indicator in 2015					
** Estimated using 17 countries collecting the optional indicator in 2015					

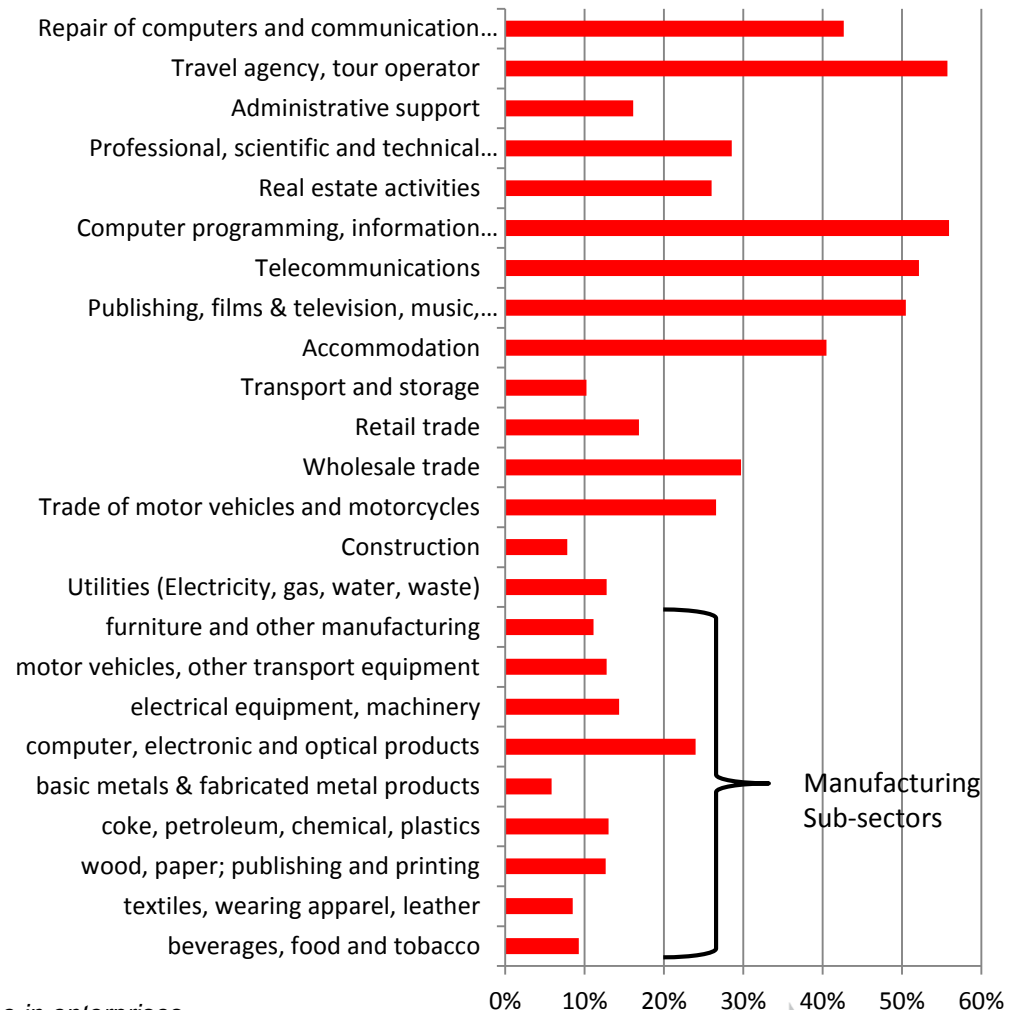
Source: Commission Services, based on Eurostat Community survey ICT usage and e-commerce in enterprises

The digitisation of economic sectors is progressing at different speeds, according to their own specific needs and starting points.

As can be expected, it is the different segments of the ICT sector (from telecoms to the manufacture of computers) that tend to be the most digitised sectors of the economy. However, other sectors such as accommodation, travel agencies, cultural industries (publishing, film&television, music) and the wholesale trade are also highly digitised.

The pattern of sectoral variability in digitisation is similar across EU countries with some positive exceptions of higher digitisation than expected if looking only at the countries and sectoral marginal averages: Information and Communication in CY, HU, PL, SI; Manufacturing in FI; Construction in DK; Trade in SI; Accommodation in IT, PT, SI; Real Estate in FR; Professional Services in BE, Travel Agencies in IT, PL.

Percentage of EU enterprises with high (>6) Digital Intensity Index across economic sectors (2016)



Source: Eurostat Community survey ICT usage and e-commerce in enterprises

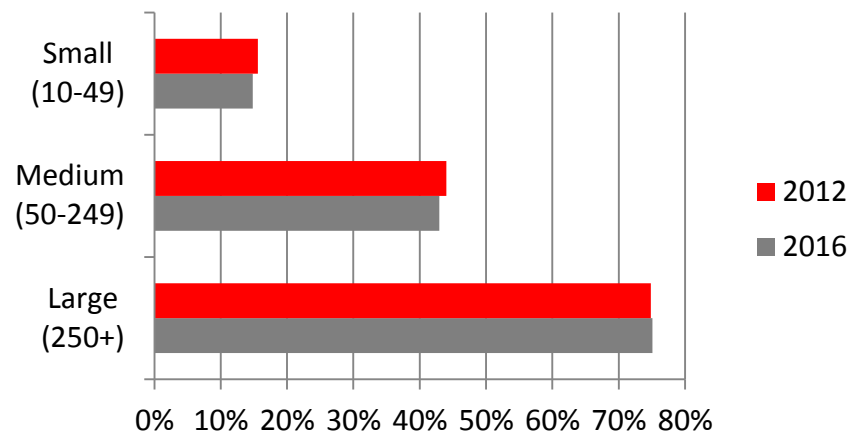
Size is a major factor facilitating the digital transformation of enterprises. SMEs are slowly closing the gap with large companies, and there are a lot of opportunities still to be exploited.

The adoption of digital technologies varies strongly with company size. Large enterprises have a scale advantage and more capacity to employ at least some IT/ICT specialists.

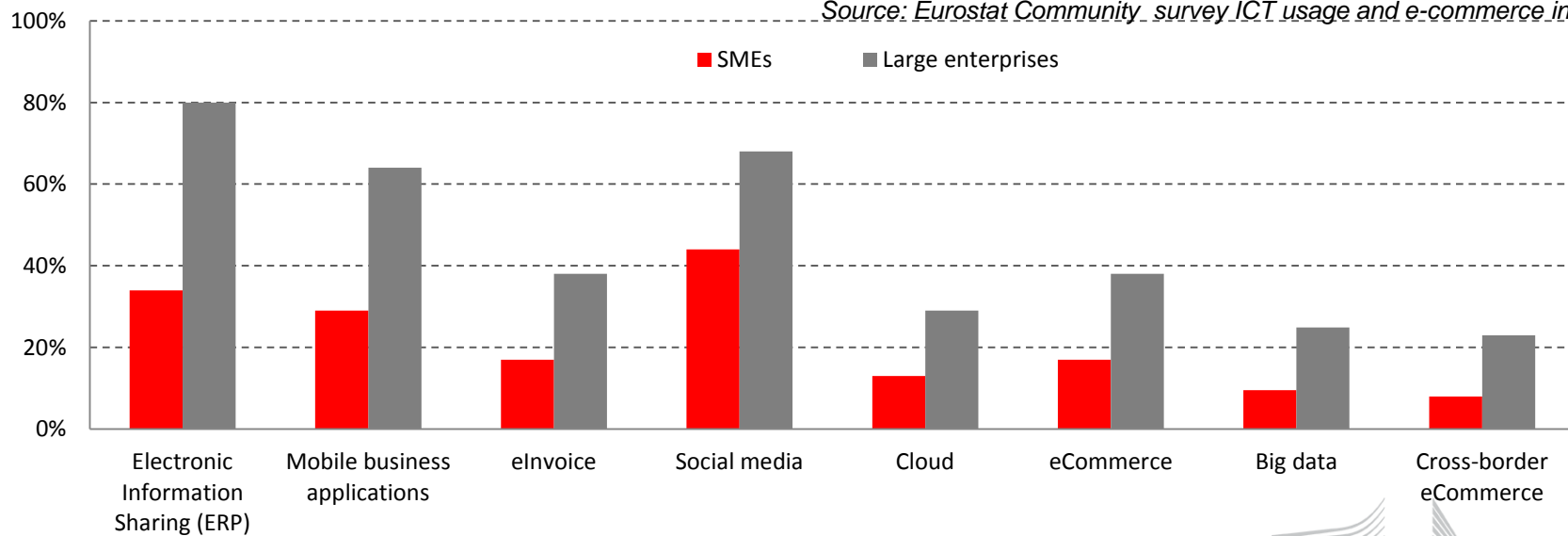
The result is that data sharing infrastructure such as ERP is much more common in large companies. However, SMEs are relatively active on social media (44 %) and the usage of mobile internet to allow employees to exploit business application is also becoming more common; there was an increase from 20 to 29% from 2012 to 2016, while for large enterprises it remained stable at 64% over the same period.

There are nevertheless a lot of technological opportunities still to be exploited by SMEs with big data, cross-border eCommerce, cloud services and automation.

% of Enterprises employing ICT/IT specialists



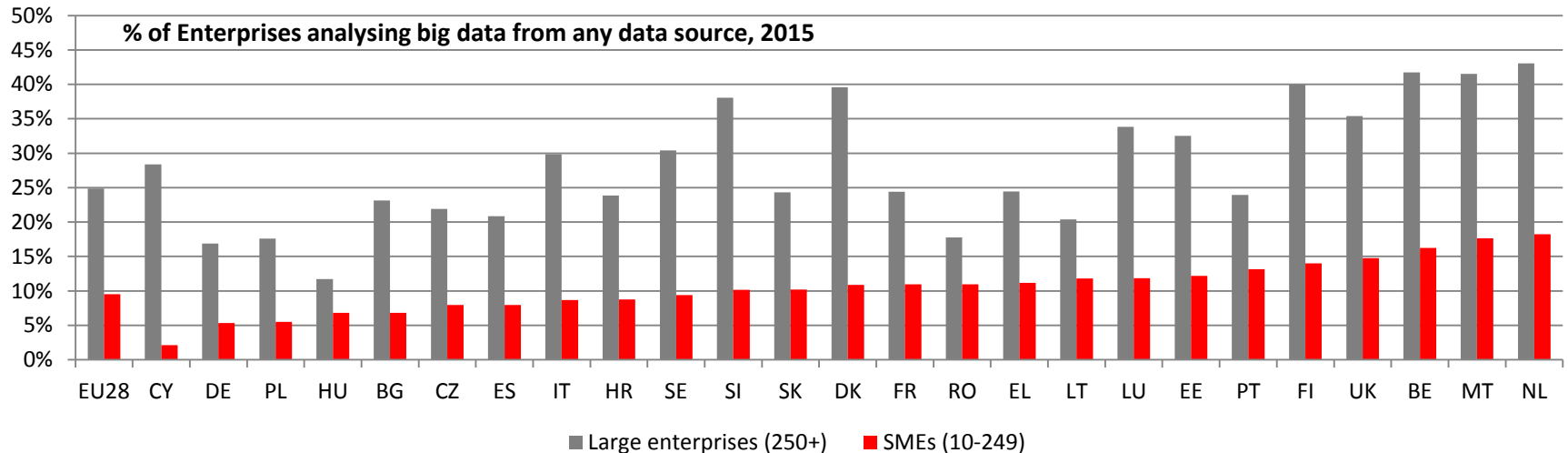
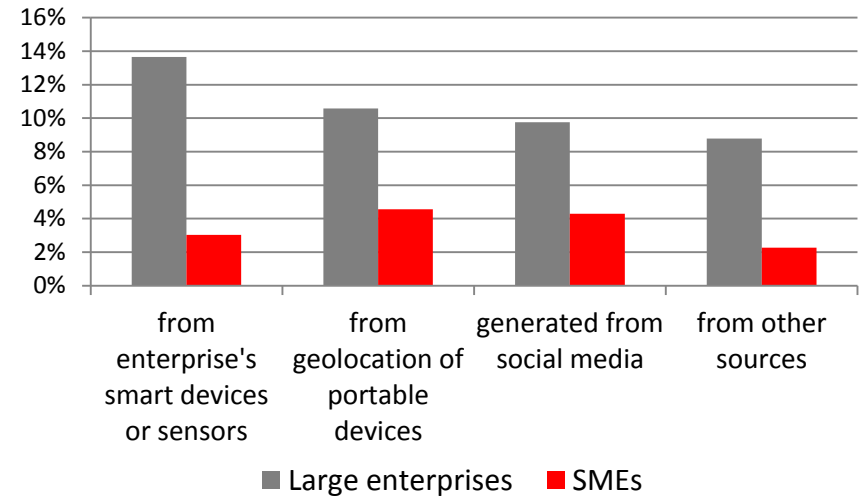
Source: Eurostat Community survey ICT usage and e-commerce in enterprises



Companies are **beginning to utilise big data** analytics to gain business insights

10% of SMEs and 25% of large enterprises report using some type of big data sources, showing that data driven business models are becoming a reality accessible to every entrepreneur. The most common in large enterprises are those coming from own internal processes and sectors like telecom, electricity, gas, water are in the lead. But data coming from geolocation and social media are more important and more often exploited by SMEs. SMEs from NL, MT, BE or UK seem ahead of those from other countries.

% of Enterprises analysing big data, by type of source



Source: Eurostat Community survey ICT usage and e-commerce in enterprises