



E-COMMERCE: RECENT TRENDS AND IMPACT ON LABOUR

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THE RISE OF E-COMMERCE



1.1. E-COMMERCE: WHAT'S IN THE NAME?

For the purpose of this working paper, e-commerce is defined as a business model in which the commerce activity is conducted over electronic networks and specifically over Internet. There are a number of types and forms under which e-commerce may be conducted, and there have been several categories proposed:

- depending on the **relationship between the parties** involved, e-commerce can be B2C – business to customer, B2B – business to business, C2C – customer to customer, B2A – business to administration etc.
- depending on the **type of the business** conducting the commerce activity, we can speak of **pure players**, selling only or primarily over Internet, selling platforms, which provide an online marketplace for external sellers, or of **omnichannel players**, which combine physical stores with online platforms.

The development of Internet and modern technologies has transformed the wholesale commerce to such an extent that most of the transnational flows of goods involve on-line platforms, reaching a situation in which e-commerce has become a function of B2B transnational commerce. It is therefore important to note that for the purpose of this report we will address the segment that is defined as B2C, or retail e-commerce, in which e-commerce is more than a function, it is a business model.

The rise of e-commerce is accompanied by many related phenomena, such as automation, digitalisation, artificial intelligence, big data analysis etc. Although in many cases the development of e-commerce has led to the implementation of other new technologies, the current research will try to make clear distinctions between e-commerce and other modern technological advances.

E-commerce is perceived as an accessible business model both for new companies and for established businesses. Starting an e-commerce operation might appear to be easier than a physical store, but succeeding in e-commerce is becoming increasingly more difficult, due to higher competition – reaching a competitive size in order to benefit from economies of scale is not only capital intensive, but also requires companies to have aggressive top-line expansion strategies which means running loss-making operations for certain periods of time.

The segment of the e-commerce market involving pure players is dominated by giant companies, such as Amazon, Alibaba, eBay etc. The development of these companies has followed some common patterns which will be described later in this paper. Although these players have reached a global presence, they do not dominate all markets. Many regional or national leaders have emerged in recent years, such as MercadoLibre in South America, Flipkart in India, JD.com in China and many others, but the “pure” e-commerce market approaches maturity in many segments and large companies have reached dominant and monopolistic positions in the market. Companies in dominant positions are prone to unfair commercial practices that impede smaller players to enter the market.

Large multinational companies from traditional retail, especially the publicly traded ones, have invested in e-commerce operations for at least two reasons: having on-line platforms makes them ready for a transition in case this business model becomes predominant in retail, while in

the same time the new on-line platforms or omnichannel solutions (Drives, pre-orders and pick up in stores etc.) are a good communication asset for corporate reporting and financial markets. In reality, for most of the traditional players, internally developed e-commerce branches were dedicated to dense urban areas and have remained marginal in the structure of their businesses, in many cases generating losses and negative cash flows. Traditional retailers are tolerant to losses incurred by their e-commerce branches and continue to invest in these operations due to perceived future profitability and the requirements of the competitive landscape.

The impact of the development of e-commerce on employment should therefore be analysed considering the two distinct business models involved: e-commerce by pure players and e-commerce as an extension of the traditional retail. We will therefore conduct our analysis considering this important distinction.

1.2. GLOBAL TRENDS IN E-COMMERCE DEVELOPMENT

There are many sources of data showing the surge of e-commerce activity in recent years. While the methodological aspects could be discussed, all these statistics show that e-commerce is expanding at impressive rates and all analysts seem to agree that this is a correct representation of the reality. Although we cannot deny the rise of e-commerce, we find it useful to make two general comments on the interpretation of the statistical data:

- First, it is important to understand what type of e-commerce operations are included in the presented statistics. As we have shown above, the distinction between B2B (wholesale), B2C (retail) and C2C (secondary market) e-commerce is very important and including all flows in the same statistics can lead to distorted results.
- Second, statistics on e-commerce do not make a distinction between sales of pure players and of traditional retailers through their on-line platforms. Making this distinction is important because it involves different logistics and value chains.

E-commerce has already reached a significant share of total retail globally, but it is not easy to estimate its degree of penetration. Table 1 shows the volume of e-commerce sales, growth rates and share of e-commerce in total retail according to a range of sources. Most of the Internet sources on e-commerce refer to data from statista.com, which show that the number of digital buyers worldwide is expected to reach 1.92 billion in 2019, accounting for a quarter of the world population, and the total value of global retail e-commerce sales will reach \$3.45T in 2019, a growth of 21% on an annual basis. The share of e-commerce sales as a percentage of total retail sales was estimated between 8.6% and 13.3% in 2018 and forecasts go up to 17.5% for 2020. Although statistics from Statista, Internet Retailer and eMarketer might be debatable as the source of information and the methodology are not transparent, they provide a view that is often accepted and promoted in the media.

Table 1. Statistics on global e-commerce

Data	Source	2014	2015	2016	2017	2018	2019	2020	2021
Volume of e-commerce sales, in \$trillion	Internet Retailer			2	2.43	2.86			
	Statista	1.34	1.55	1.85	2.3	2.84	3.45	4.13	4.88
	eMarketer		1.55	1.91	2.35	2.86	3.42	4.06	
Growth in sales of global e-commerce, %	Internet Retailer					18			
	Statista	26	26	26	25	23	21	19	18
	eMarketer			23	23	22	20	19	
E-commerce share of total global retail, %	Internet Retailer			13.3	15.2				
	Statista	7.4	8.6	10.2	11.9	13.7	15.5	17.5	
	eMarketer			8.6	10.2				

Sources: Internet Retailer, eMarketer, Statista

The difficulties to compile sound and representative statistics on e-commerce have led the United Nations Conference on Trade and Development in 2018 to establish a special Working Group on Measuring E-commerce and the Digital Economy¹. The results of the work of this Working Group will become available in 2020, as the first meeting is scheduled for the fall of 2019.

E-commerce penetration varies among countries, depending on the level of economic development, access to Internet, electronic payments, consumer preferences. Although it is difficult to estimate exact figures of e-commerce share of total commerce, due to sometimes vague definitions and lack of transparency, it is widely recognized that China is the leading country in terms of e-commerce penetration, followed by UK and South Korea. There is still an important potential for growth in China, where user penetration is below 60%, while in countries such as UK, South Korea, Sweden and Germany e-commerce approaches a state of maturity as user penetration is above 90%. Globally, e-commerce share as a percentage of total retail – for the B2C segment – is calculated at around 15%. However, this percentage does not reflect the situation in the majority of the countries, as it is dragged up by the high percentage in China. For most of the countries, including developed Western European countries, the indicator is below 10%.

Another important metrics for understanding the level of development of e-commerce in a given country is the Average Revenue per User (ARPU), or in other words the amount of money an average user spends on e-commerce per year. According to Statista, the expected ARPU for 2019 at global level is of around \$540. Among the countries analysed in our research (Table 2), the highest amount of money is expected to be spent by an average U.S. on-line shopper, above \$2000, while in U.K., South Korea and Denmark buyers would spend between \$1400 and \$1700

¹ According to the Terms of reference, “the objective of the WG is to contribute to and advance cooperation on measuring e-commerce and the digital economy and enhance the availability, quality, comparability, usability and relevance of statistics concerning e-commerce and the digital economy, with a view to supporting evidence-based policymaking, especially in developing countries.”

per year. Although the share of e-commerce appears high in Indonesia, at 8% of total retail, the ARPU is very low at only \$76.

The expected annual growth rate for the period 2019-2023, modelled by Statista, is of 8.9% globally, largely driven by expected development in China and India. Apart from China, the growth is expected to be below 8% per year in all the countries where e-commerce has already reached 8% of total retail. Notably, CAGR for 2019-2023 is of only 5.7% in U.K. and 4% in South Korea, indicator a slowdown of growth after a certain penetration rate – which is a normal development – and a suggestion of a level of maturity or saturation approaching. The examples of U.K. and South Korea are indeed very good for modelling and anticipating the further development of e-commerce in advanced economies. Although predicting the future is not the easiest of the jobs, we are tempted to believe that e-commerce will reach a level of structural saturation at around 25%-30% in advanced economies in the next decade².

Also, e-commerce as a business model is more adapted to certain products than to others. Fashion is the segment in which e-commerce penetration is the highest globally and in most of the countries, with some notable exceptions: in South Korea and Japan the largest e-commerce segment is Food & Personal Care, in U.S. and Argentina it is Toys, Hobby & DIY, while in a number of countries the biggest segment is Electronics & Media: Germany, Switzerland, Romania, South Africa, Mexico, Indonesia.

Although globally the user penetration rate is calculated above 51% – meaning that more than half of the population of the analysed countries have made at least one purchase on-line – the percentage is lower for any market segment regarded separately. In fact, worldwide user penetration rates vary from 7.4% for DIY, Garden & Pets to 33.3% for Apparel. It is expected that most dynamic segments in the next 5 years will be Furniture & Homeware, Toys & Baby, Apparel, Bags & Accessories, and Food & Beverages, all growing at more than 10% per year (see Table 3).

E-commerce has a disruptive effect through its potential to connect sellers and buyers from different countries. The cross-border e-commerce is annually analysed by International Post Corporation through a comprehensive survey among its members. In the latest analysis, it was found out that 38% of the parcels bought cross-border in 2018 were purchased from China. Overall, the most popular e-retailers for cross-border purchases were Amazon (23%), Alibaba (16%), eBay (14%) and Wish (10%)³.

² This prediction is not the result of an econometric model, but rather the intuition of the authors of the current report, and therefore it should be discussed and tested.

³ International Post Corporation. *Cross-border E-commerce Shopper Survey 2018*. Key findings: January 2019.

Table 2. Select metrics of e-commerce penetration and development

Country	E-commerce sales as a percentage of total retail, 2019 or latest available	User penetration 2019	User penetration 2023	Average revenue per user (ARPU)	Expected annual growth rate CAGR 2019-2023	Largest e-commerce segment
China	23.1%	58.4%	67.5%	866	11.0%	Fashion
United Kingdom	19.1%	94.8%	97.4%	1445	5.7%	Fashion
South Korea	16.0%	90.0%	94.2%	1484	4.0%	Food & Personal Care
Denmark	12.6%	74.9%	78.1%	1660	7.4%	Fashion
France	10.0%	77.4%	84.7%	985	7.7%	Fashion
the Netherlands	9.6%	86.9%	92.7%	1127	7.2%	Fashion
United States	9.0%	82.1%	90.8%	2028	7.8%	Toys, Hobby & DIY
Sweden	8.7%	91.6%	95.2%	1223	6.9%	Fashion
Indonesia	8.0%	54.6%	86.3%	76	10.3%	Electronics & Media
Romania	8.0%	53.7%	58.6%	268	10.1%	Electronics & Media
Germany	7.9%	90.2%	94.8%	1015	6.3%	Electronics & Media
Belgium	7.5%	71.6%	73.0%	770	7.0%	Fashion
Japan	7.4%	81.2%	86.5%	836	4.9%	Food & Personal Care
Australia	7.2%	80.8%	89.2%	1047	6.2%	Fashion
Poland	7.0%	64.1%	66.8%	407	11.5%	Fashion
Switzerland	7.0%	86.6%	92.7%	1149	6.6%	Electronics & Media
Russia	5.0%	56.3%	59.1%	230	7.5%	Fashion
Spain	4.8%	81.8%	90.3%	518	11.1%	Fashion
Italy	3.2%	62.2%	70.0%	516	10.4%	Fashion
Argentina	3.2%	78.0%	89.6%	98	10.1%	Toys, Hobby & DIY
Brazil	2.7%	66.4%	76.3%	113	2.0%	Fashion
India	2.2%	37.5%	46.2%	63	17.8%	Fashion
Mexico	1.7%	61.9%	69.7%	113	8.6%	Electronics & Media
South Africa	1.6%	59.7%	74.9%	95	9.9%	Electronics & Media
World	15.5%	51.0%	58.5%	540	8.9%	Fashion

Table 3. Level of development of e-commerce by market segment

	Average revenue per user (ARPU)	User penetration rate	Expected annual growth rate (CAGR 2019-2023)	Average revenue per capita
Worldwide				
Food & Beverages	60.2	24.5%	10.1%	14.7
Personal Care	93.9	19.0%	8.5%	17.8
Furniture & Homeware	318.0	9.7%	10.6%	30.8
Household Appliances	76.6	15.4%	8.5%	11.8
Toys & Baby	129.0	10.8%	10.2%	13.9
Sports & Outdoor	109.0	10.5%	8.9%	11.4
Hobby & Stationery	187.0	10.8%	9.0%	20.2
DIY, Garden & Pets	183.6	7.4%	8.4%	13.6
Consumer Electronics	193.9	23.7%	7.7%	46.0
Books, Movies, Music & Games	64.0	21.2%	2.2%	13.6
Apparel	159.5	33.3%	10.1%	53.1
Footwear	60.0	27.0%	8.3%	16.2
Bags & Accessories	66.6	18.6%	10.1%	12.4

Table 4. Country of most recent purchase

Reporting country	Country of most recent purchase		
	1st	2nd	3rd
Australia	China 40%	US 21%	UK 14%
Belgium	Netherlands 33%	China 25%	France 21%
Brazil	China 62%	US 23%	Japan 3%
China	Japan 23%	US 14%	Hong Kong 12%
Denmark	China 31%	UK 18%	Germany 18%
France	China 43%	Germany 14%	UK 11%
Germany	China 43%	UK 12%	US 7%
India	US 26%	China 23%	Australia 8%
Indonesia	China 41%	US 10%	Singapore 10%
Italy	China 35%	UK 19%	Germany 19%
Japan	China 29%	US 29%	South Korea 12%
Mexico	US 43%	China 35%	Japan 4%
Netherlands	China 52%	Germany 19%	UK 7%
South Korea	US 48%	China 15%	Japan 13%
Spain	China 43%	UK 12%	Germany 8%
Sweden	China 32%	Germany 18%	UK 15%
Switzerland	Germany 40%	UK 12%	US 7%
UK	China 50%	US 19%	Germany 7%
United States	China 57%	UK 10%	Canada 6%

Source: International Post Corporation, Cross-Border E-commerce Shopper Survey 2019 Key findings

1.3. E-COMMERCE AND THE DATA-DRIVEN ECONOMY

E-commerce is a feature of the newly emerging data-driven economy. The accumulation of big data and the possibility of the monopolistic companies to use large amount of data is a global challenge, as it introduces the risk of enhancing the digital divide between advanced economies and economies in development that are lagging behind in technology. As international trade is increasingly conducted through Internet, governments are more inclined to develop holistic approaches to data management, Internet governance and trade policies. The development of e-commerce in the context of the data-driven economy is certainly presenting a range of opportunities, but also comes with an important number of challenges summarized in Table 5.

In January 2019, at the Davos Economic Forum, a number of participants have presented their intention to launch trade negotiations on e-commerce. The ITUC has suggested that the aim of these negotiations is in reality to broaden market access for digital companies such as Amazon, Alphabet (Google) and Facebook.

A central topic of trade negotiations on e-commerce would be data governance. As stated by the ITUC, *“the proposed changes would introduce direct disciplines on public regulation-making and bar governments from requiring companies to open local offices and to host servers on their territory. Without a local presence of companies, there is no entity to sue and the ability of domestic courts to enforce labour standards, as well as other rights, is fundamentally*

challenged⁴. More than the problem of the legal enforceability, the lack of local presence of companies makes workers' organizing and representation difficult in practice and creates a risk for electronic union blacklisting and anti-union policies. Without proper local management teams, the protection of workers' rights and the regulation of privacy and workplace surveillance could be seriously jeopardized⁵.

Table 5. Opportunities and risks related to the development of e-commerce and data-driven economy





Opportunities	Challenges
<ul style="list-style-type: none"> • Inclusive trade and development • Competitiveness of companies • Increase labour productivity • New sources of knowledge and innovation • Potential for lower consumer prices • Price transparency • Increased market access • Connects buyers and sellers cross-border to increase product access to a wider range of products • Increased flexibility • Potential to improve customer service • Reduced administrative and transaction costs 	<ul style="list-style-type: none"> • Risks related to privacy, security, ownership and the use of data • Concentration of market power by companies controlling data • Regulation of cross-border data flows • Taxation and legal enforceability • Capacity building for data analytics needed due to limited skills and technological capabilities • Protection of electronic payments • Protection of intellectual property • Communication and use of languages • Universal reachability of workers • De-humanisation of the customer relation • Impact on labour relations and working conditions

⁴ See "E-commerce" push at WTO threatens to undermine labour standards, International Trade Union Confederation, 25-01-2019, available at <https://www.ituc-csi.org/e-commerce-push-at-wto-undermines-workers>

⁵ In this respect, Sharan Burrow, General Secretary of the ITUC, said: "We must not allow for a future in which working people's ability to hold the giants of the digital economy accountable is limited by trade agreements. Our governments must have full power to regulate. We have seen how the Ubers and the Amazons of this world exploit current loopholes to deteriorate the conditions of working people. Rather than facilitating this type of irresponsible behaviour, governments should redouble their efforts to close down these loopholes. The only answer is a new social contract with a universal labour guarantee".

1.4. THE STRATEGIES AND FINANCIAL PERFORMANCE OF E-COMMERCE PURE PLAYERS

Most of the fast-growing e-commerce pure players have followed a similar development pattern, using common strategies for expansion. The main feature of their business strategy is aggressive growth of sales through low pricing with the aim to increase market share even at the expense of long periods of financial losses and negative cash flows. In many cases, these companies have sold goods at margins below their operational costs, a behaviour that might be described as dumping. The main features of the strategies used by main e-commerce players are:

	<p>Maximising aggressive growth, focusing on topline expansion – sales figures more important than profits, resulting in low wages, high turnover rates, inadequate working conditions; aggressive marketing and focus on volume rather than on margin leads to increased workload</p>
	<p>Maximising flexibility of the business models in order to adapt to seasonal fluctuations in demand at the expense of in-job security and worker protection</p>
	<p>Automation and robotization of processes especially in warehouses and fulfilment centers</p>
	<p>Anti-union management policies: mid-level managers are trained to counter any initiatives of worker organization</p>

The rapid expansion of pure e-commerce has not been accompanied with high levels of profitability. In fact, in order to sell their products and increase their market share, pure on-line players have adopted aggressive discount policies, which translated into lower margins and pressure on expenditures, including on labour-related ones. Although e-commerce has seen booming activity, many companies register net losses and continue to rely on financial markets and debt.

In order to analyse the profitability of the pure e-commerce players, it is important to understand their business model. While some of the companies operate as almost integrated retailers, owning the goods they sell, others are only serving as marketplaces and intermediate sales performed by other sellers. This distinction is very important as it distorts the profitability indicators and make direct comparisons impossible. The cases of Amazon and Alibaba are a very good illustration of this difference. According to their income statements from 2017, the retail segment of Amazon registered an operating margin of 2.9%, while the Alibaba Core Commerce segment reported an operating margin of 61.6%. The difference comes from the two distinct business models these companies have. While Amazon acts more like a traditional retailer and

handles most of the steps in the value chain⁶, Alibaba serves as an intermediary and pushes much of the responsibility for fulfilment and customer service to other retailers, thus capturing a much smaller part in the value chain and the associated revenues. This difference explains the completely distinct accounting treatment for the two companies. While Amazon recognizes the full price of goods sold as revenues, Alibaba only registers the fees it receives from other retailers that use its platform. Some analysts have adjusted the numbers in order to make comparisons possible and concluded that Alibaba sales register a lower net operating margin across the value chain, compared to Amazon, at least in 2017.⁷

It is also interesting to compare the profitability of Amazon and other large pure players with traditional retailers. While Amazon has managed to generate a net income of \$10 billion in 2018, the largest share of the income came from its cloud business Amazon Web Services. While the total operating income margin of Amazon in 2018 was 5.3% of net sales, the e-commerce segment has registered a margin of only 2.5%. The international e-commerce segment of Amazon continues to generate operational losses although it has reached \$65.9 billion in sales, an amount that is comparable to the annual sales of the Chinese giant JD.com, more than 6 times bigger than the sales of Rakuten and more than 12 times bigger than the revenues of Zalando. Overall, the e-commerce branch of Amazon has lower profitability rates than those generated by traditional retailers and this even in the context of a much-improved profitability in 2018 compared to previous years (see Table 7).

This current situation is the direct effect of Amazon's strategy of rapid growth through aggressive discounts and its focus on top-line expansion, or in other words increasing revenues at the expense of net profits. This strategy has allowed Amazon to register impressive growth rates of its net revenues and the price of its shares skyrocketed. In fact, the wealth of Jeff Bezos, whose net worth is estimated at \$148.5 billion, does not come from the profits made by his company, which has not generated more than \$20 billion since it came out, but from the value of Amazon stock. This development model had negative effects on retailers that were affected by the aggressive expansion of Amazon, but also on workers, as Amazon has promoted a low-cost and low-standard labour management in order to keep its prices low.

It is highly questionable whether the development model put in place by Amazon is sustainable in the long term if the e-commerce branch does not generate solid profitability across the board, not only in North America.

With a few exceptions, such as the Japanese Rakuten, most of the pure players have low profitability margins. The largest Chinese integrated pure player, JD.com, cumulated almost \$4.5 billion in net losses during the period 2014-2018. After a rather good period until 2016, the Argentinian company MercadoLibre has registered a marginal net profit of \$14 million in 2017 and a loss of \$37 million in 2018.

⁶ Amazon handles advertising, marketing, warehousing, delivery, payment processing and customer service.

⁷ A detailed comparison between the profitability of Amazon and Alibaba is available at: <https://www.quora.com/How-is-Alibaba-able-to-generate-such-high-profit-margin-as-compared-to-Amazon>

Table 6. Amazon profits by segments, in \$ million, 2018

	E-commerce			AWS	Total
	North America	International	Total e-commerce		
Net sales	141,366	65,866	207,232	25,655	232,887
Operating income	7,267	-2,142	5,125	7,296	12,421
% of net sales	5.1%	-3.3%	2.5%	28.4%	5.3%

Table 7. Amazon main financial indicators, 2014-2016.

	Assets	Liabilities	Shareholder Equity	Revenue	EBITDA	Net Income	EBITDA as % of revenues	Net income as % of revenues	Traditional retailers, 40 companies average, EBITDA	Traditional retailers, 40 companies average, EBITDA
2018	162,648	119,099	43,549	232,887	27,762	10,073	11.9%	4.3%		
2017	131,310	103,601	27,709	177,866	15,584	3,033	8.8%	1.7%	5.9%	1.9%
2016	83,402	64,117	19,285	135,987	12,302	2,371	9.0%	1.7%	6.3%	2.0%
2015	64,747	51,363	13,384	107,006	8,514	596	8.0%	0.6%	6.3%	2.2%
2014	54,505	43,764	10,741	88,988	4,924	-241	5.5%	-0.3%	6.4%	1.7%

The German company Zalando has managed to maintain both EBITDA and net income margin rates close to the traditional retail averages in recent years, although a relative degradation of incomes is visible in 2017-2018. Compared to these companies, Rakuten has been registering clearly exceptional results, cumulating more than \$3.5 billion in net profits over the last 5 years.

Among the smaller regional players many have been growing and acquiring market share while accumulating financial losses. The Romanian e-commerce leader emag.ro has cumulated almost \$20 million of net losses during the period 2014-2018, while in the same time its revenues rose by more than three times, its debt increased from \$13.6 million to almost \$60 million and the number of employees rose from a little over 1,000 to more than 2,700.⁸ The Polish leader allegro.pl lost \$32 million in 2017, in spite of its sales reaching \$435.2 million.⁹

⁸ For the financial results of emag.ro, see: <https://www.romanian-companies.eu/dante-international-sa-14399840>

⁹ See <https://aimgroup.com/2018/08/02/impressive-financial-results-of-allegro-pl-2>

Table 8. Financial results of pure e-commerce players

EBITDA as % of revenues					
	JD.com (China)	MercadoLibre (Argentina)	Zalando (Germany)	Rakuten (Japan)	Traditional retailers, 40 companies average
2018	0.6%	-1.7%	3.7%	22.0%	
2017	0.9%	8.0%	5.4%	21.6%	5.9%
2016	0.6%	24.9%	6.7%	18.9%	6.3%
2015	-2.1%	24.8%	4.1%	24.2%	6.3%
2014	-3.6%	26.0%	3.7%	23.2%	6.4%

Net income as % of revenues					
	JD.com (China)	MercadoLibre (Argentina)	Zalando (Germany)	Rakuten (Japan)	Traditional retailers, 40 companies average
2018	-0.5%	-2.6%	1.0%	12.9%	
2017	0.0%	1.2%	2.3%	11.7%	1.9%
2016	-1.5%	16.1%	3.3%	4.9%	2.0%
2015	-5.2%	16.3%	4.1%	6.2%	2.2%
2014	-11.3%	13.1%	2.1%	11.8%	1.7%

What next in e-commerce?

Absolunet publishes on an annual basis a list of 10 main trends in the development of e-commerce¹⁰. The main trends underlined in the 2019 issue are as follow:

- *The rise of the ethical e-commerce*
- *The end of free returns*
- *Introduction of sales taxes*
- *Development of Progressive Web Apps, a hybrid between sites and apps which combine the upsides of each and does away with the limitations*
- *Social media gets transactional*
- *Retailers will hire their first AI employee*
- *The QR will be used more frequently in stores in order to integrate with customers' phones*
- *The Amazon-ification of major retailers, through development of their own marketplaces*
- *In-Car e-commerce: Shopping On The Go*
- *Product content syndication, under which the content is automatically pushed to multiple channels from a centralized point*

¹⁰ See <https://10ecommercetrends.com>

Table 9. Financial results of JD.com, MercadoLibre, Zalando and Rakuten

JD.com	Assets	Liabilities	Shareholder Equity	Revenue	EBITDA	Net Income	EBITDA as % of revenues	Net income as % of revenues
2018	30,422	21,569	8,853	67,198	428	-362	0.6%	-0.5%
2017	28,289	20,237	8,052	55,689	516	-23	0.9%	0.0%
2016	23,099	18,178	4,920	37,465	214	-548	0.6%	-1.5%
2015	13,147	8,411	4,736	27,986	-593	-1,448	-2.1%	-5.2%
2014	10,717	4,673	6,044	18,535	-669	-2,088	-3.6%	-11.3%

Mercado Libre	Assets	Liabilities	Shareholder Equity	Revenue	EBITDA	Net Income	EBITDA as % of revenues	Net income as % of revenues
2018	2,240	1,903	337	1,440	-24	-37	-1.7%	-2.6%
2017	1,673	1,347	326	1,217	97	14	8.0%	1.2%
2016	1,367	939	429	844	210	136	24.9%	16.1%
2015	1,004	664	339	652	162	106	24.8%	16.3%
2014	967	611	356	557	145	73	26.0%	13.1%

Zalando	Assets	Liabilities	Shareholder Equity	Revenue	EBITDA	Net Income	EBITDA as % of revenues	Net income as % of revenues
2018	3,230	1,680	1,550	5,390	199	51	3.7%	1.0%
2017	2,990	1,450	1,540	4,490	244	103	5.4%	2.3%
2016	2,570	1,160	1,410	3,640	243	121	6.7%	3.3%
2015	2,130	859	1,270	2,960	121	122	4.1%	4.1%
2014	1,790	663	1,130	2,210	82	47	3.7%	2.1%

Rakuten	Assets	Liabilities	Shareholder Equity	Revenue	EBITDA	Net Income	EBITDA as % of revenues	Net income as % of revenues
2018	65,464	58,546	6,903	9,817	2,164	1,268	22.0%	12.9%
2017	54,757	48,706	6,049	8,363	1,804	979	21.6%	11.7%
2016	39,696	33,812	5,883	6,741	1,277	331	18.9%	4.9%
2015	35,105	29,646	5,443	5,866	1,422	365	24.2%	6.2%
2014	30,846	27,259	3,533	5,016	1,164	592	23.2%	11.8%

1.5. RESPONSES OF TRADITIONAL RETAILERS

Traditional retailers are not absent from the development of e-commerce. After a period of price war against pure players, most of the traditional retail companies have developed e-commerce branches or hybrid solutions combining physical stores with e-commerce capabilities, generally called omni-channel commerce. These solutions could take different forms: order and pick up, drive, m-commerce, home delivery, proximity etc. From global Top 250 retailers, only 31 did not have a transactional website in 2015. Most of these companies are operators of supermarkets, hard discount stores, or convenience stores.

French retailers have been especially active in developing Drive supermarkets since many years already. Ahold Delhaize is piloting a rapid delivery system, Rappie in Rotterdam, in which orders can be placed via an application and deliveries are made within two hours. Carrefour is also pursuing the development of innovative services, such as home delivery in less than an hour in the Île-de-France region (livraisonexpress.carrefour.fr).

There has been a number of important recent developments that could have a significant impact on the interaction between e-commerce pure players and traditional commerce.

Amazon's acquisition of Whole Foods for \$13.7 billion was considered disruptive for the grocery retail market in U.S. and potentially in the world. It meant that the e-commerce giant acquired a significant brick-and-mortar platform – allowing the e-commerce giant to gain control of a large number of urban locations –, but also a big shopping database that could be useful for the expansion of its online grocery business and private label offerings.

Amazon has also opened a chain of highly automated convenience stores called Amazon Go. In these stores, shoppers use an app to enter, and then instead of dealing with a cashier, cameras and sensors note what they buy, and their accounts are automatically charged. Reports said that 50 of those stores will potentially open in 2019-2020, and hundreds more will be coming by 2021. In September 2018, Bloomberg News reported Amazon was considering plans to open as many as 3,000 Amazon Go locations across the United States by 2021.

Wal-Mart, the world's biggest retailer, made e-commerce one of its strategic pillars. After acquiring a range of e-commerce pure players, such as Jet.com, ShoeBuy, Moosejaw, ModCloth and Bonobos, the company announced a big capital investment to introduce Grocery Online, in order to ramp up its click-and-collect capabilities. In August 2017, Walmart announced the completion of its majority-stake acquisition in Flipkart, India's leading e-commerce marketplace, in a \$16 billion deal. In 2016, Wal-Mart and JD.com (China) formed a strategic alliance, the American company acquiring 10% stake in JD.

Auchan and Alibaba announced a co-operation to explore new retail opportunities in China's food sector, through leveraging the physical presence of Sun Art Retail Group, in which Auchan is a leading shareholder.

Carrefour has made targeted acquisitions to accelerate its deployment of e-commerce activities. It has acquired Rue du Commerce (more than 3 million non-food items) and Greenweez (20 000 organic items in addition to those offered in store), as well as Top Achat, Croquetteland, Grands Vins Privés and My Design. In addition, it has continued to expand its Carrefour Drive network in France to a total of 569 locations.

As seen in Table 3, apparel has the highest user penetration rate worldwide among the product segments, estimated at one third of the population – that is, one in three persons makes at least one online purchase in a given year. It is therefore understandable that multinational companies from the fast fashion industry are integrating physical stores with online business. Rather than buying established e-commerce companies or selling on external online marketplaces, Inditex and H&M have internally developed their own online stores and made them available in their biggest markets. One notable exception in this respect is the cooperation between H&M and Alibaba, which allowed the European retailer to sell on the Tmall platform in China since the spring of 2018.

1.6. THE STRATEGY AND FINANCIAL PERFORMANCE OF E-COMMERCE BRANCHES OF TRADITIONAL RETAILERS

Generally, it is believed the click-and-mortar multi-channel strategy is more profitable than pure players' business due to stronger brand image and higher purchasing volumes, economies of scale and positive impact on traditional sales (people ordering through Internet to pick up products might end up buying more products while in stores). However, this assumption is not easily verifiable with available financial figures.

It is more difficult to analyse the financial performance of e-commerce branches of traditional retailers, as the vast majority of these companies do not have separate financial reporting on their e-commerce branches. However, from the analysis of more than 22 traditional retailers that have developed e-commerce operations, several conclusions could be made:

- With few exceptions, e-commerce and omnichannel operations do not exceed 5% of total sales of traditional retailers from the fast-moving consumer goods sector. The exceptions are Casino Guichard Perrachon SA (France), for which sales through the branch Cdiscount accounted for 18% of revenues in 2018, and Koninklijke Ahold Delhaize NV (Netherlands), for which sales through the platform bol.com represent around 10% of total revenues. It is however important to note that both Cdiscount and bol.com were developed as pure player operations and later acquired by the traditional retailers.
- For some companies, developing e-commerce capabilities internally has been a rather difficult process. For instance, the Japanese company Seven & I Holdings Co Ltd passed an impairment loss of \$219.5 million on its omni7 e-commerce operation, including \$183 million on software.
- Although there is no transparent reporting, for most of the companies their e-commerce and omni-channel operations seem to generate below average profitability and in many cases even losses.¹¹

¹¹ For instance, Walmart recognizes that “for fiscal 2019, the decrease [of the gross profit] was due to the mix effects from our growing e-commerce business, the consolidation of Flipkart, our planned pricing strategy and increased transportation expenses”. We conclude therefore that e-commerce operations have a lower profitability than

- Some companies decided to enter into strategic alliances with pure players for developing omnichannel solutions in order to benefit from competences, synergies and lower development costs. These include co-operations between Walmart and JD.com, Auchan and Alibaba, Sun Art Retail Group and Alibaba, Distribuidora Internacional de Alimentacion and Amazon.

Companies from traditional retail, especially the ones that are publicly traded, have given e-commerce a central place in their corporate communication. In many cases, reporting on the development of e-commerce and omnichannel operations is combined with information on new in-store technologies such as automated check outs etc. This is certainly appealing for shareholders and financial markets, and also suggests that companies are modern and developing. However, it is important to underline that at present e-commerce does not provide traditional retailers with significant returns on investment and profitability and remains an auxiliary activity, certainly with an important growth potential. It is very difficult to predict a breaking point after which e-commerce and omnichannel will take a more central place in the business model of the traditional retailers.

In the fast fashion sector, the development of e-commerce has been seen as a new function in the value chain rather than a separate sales channel, and online platforms have been highly integrated with physical stores. Therefore, companies such as Inditex and H&M do not have separate financial reporting on their physical and online businesses, although they highlight that total revenues include online sales. Only recently, in 2017, both Inditex and H&M have started to report the share of online sales in their total revenues. As the apparel sector is more adaptable to online platform integration, it is understandable that the share of online sales in total sales of these companies are higher than for hypermarket and FMCG companies. Apart from starting reporting in the same year, both companies have a similar development rhythm – in 2018, online sales grew 27% to reach 12% (up from 10% the previous year) of net sales of Inditex and increased by 21% to reach 14.5% (up from 12.5% the previous year) on net sales of H&M¹². Neither of the two companies reported on margins or profits made by their online sales. We interpret this as the result of a high functional integration which makes the financial separation of the e-commerce activity rather difficult. As most of the online orders are picked up in stores (although delivery is also provided) and many returns of online purchased are done

traditional channels. The French company Casino Guichard Perrachon SA grew its e-commerce sales by 59% in France in 2018, but its e-commerce branch still registered a trading loss of 14 million euros.

¹² **Inditex** extended its online presence to 47 out of 96 countries in which it had a physical presence in 2017. Moreover, Zara collections are available in a total of 202 markets through its global online platform. In 2017, Inditex launched its first Automated Collection Point for Zara.com orders. Automated Collection Points allow customers to easily collect online purchases, scanning the QR code or entering the PIN code included on the electronic receipt. The automated system instantly locates the order, transferring it to the collection door.

H&M sells online in 47 of the 71 markets in which the company is present. In January 2019 H&M completed the transition to its new online platform globally by replacing the platform in Germany. All H&M's online markets are now on the new platform. In China, H&M was launched on Tmall in spring 2018. H&M also develops app integration, allowing shoppers to use their mobile phones to improve their experience in stores. Scan & Buy is available in all 47 online markets, Click & Collect is available in 7 markets and a further 10 markets are planned for 2019. Online returns in store is available in 15 markets. Next day delivery is offered in 11 markets and same day delivery is being evaluated in certain of these markets.

in physical stores, e-commerce cannot really be seen as a separate branch for these companies, but rather as a new function developed and integrated within the traditional perimeter. This has also specific consequences workers in the apparel segment, which will be shown in later chapters.



#2

MAJOR CHALLENGES: FROM REGULATION TO LABOUR

2.1. REGULATION AND TAXATION

The development of e-commerce posed a range of problems and needed governments to step in with regulations in order to ensure that a level playing field is maintained for all competitors. The rise of cross-border commerce has posed the issue of taxation in many countries. According to legal experts, e-commerce presents a major challenge for tax administrations, given the often multi-jurisdictional nature of the transactions and the potential anonymity of the parties¹³. Recently, a number of governments have been responding to these challenges and new measures have been introduced.

The U.S. Supreme Court ruled in June 2018 that states can require online retailers to collect sales tax on purchases that come from states where they don't have any shops, offices or warehouses. Before that, retailers didn't have to collect state sales taxes if it was shipping items to someone in a state where the business didn't have a physical presence.

Spain's government approved in October 2018 a new tax on big internet companies, introducing a 3.0% tax on online advertising, sales of user data and online platforms. The Spanish government announced it hoped to raise up to 1.2 billion euros in 2019 due to this measure.

The German government estimated that it loses up to 500 million euros a year in unpaid sales taxes on goods purchased from e-commerce sites. From 1 January 2018, a new German law on VAT with regard to trading goods on the Internet became effective. The law contains considerable additional VAT obligations for operators of Internet marketplaces and merchants selling goods online. Amazon announced that companies are no longer able to sell through its platform from March 1, 2019 if they have not provided a copy of a New German Tax certificate.

E-commerce is one of the cornerstones of the European Union's Digital Single Market strategy. In this respect, the EU has recently taken a range of measures to boost the development of e-commerce: revised Payment Services Directive and new rules on cross-border parcel delivery services¹⁴, new rules to stop unjustified geoblocking¹⁵, revised consumer protection rules¹⁶ and new VAT rules for online sales of goods and services.

¹³ For more on taxation of e-commerce, see <https://www.out-law.com/page-7512>

¹⁴ New rules on online cross-border parcel delivery services have been in place since May 2018, aimed at guaranteeing price transparency and competition, making it easier to find the cheapest way of sending a parcel from one Member State to another. See <https://ec.europa.eu/digital-single-market/en/new-eu-rules-e-commerce>

¹⁵ Geoblocking prevents users from using the internet in one EU Member State and buying from a website based in another. In 2015, up to 63% of websites screened and prevented shoppers in one way or another from buying in a different country. New rules will remove unjustified barriers such as being re-routed back to a country-specific website, or having to pay with a debit or credit card only from a certain country. Online sellers must treat all EU consumers equally regardless of where they choose to shop from. New rules to stop unjustified geoblocking are effective from 3 December 2018. See <https://ec.europa.eu/digital-single-market/en/new-eu-rules-e-commerce>

¹⁶ Revised consumer protection will enter into force in 2020 and will enable the removal of sites or social media accounts where scams have been identified. It will also be possible to request information from internet service providers or banks, in order to trace the identity of rogue online traders. In April 2018, the Commission also proposed a New Deal for Consumers which will further strengthen Consumer rights online: online market places will have to inform consumers whether they are buying from a trader or a private individual, so they are aware of their rights if something goes wrong; when consumers search online, they will be clearly informed when a search result is being

In December 2018, the European Commission announced that from 2021, large online marketplaces will become responsible for ensuring that VAT is collected on sales of goods by non-EU companies to EU consumers taking place on their platforms. According to the Commission's text, *"the new rules will ensure that goods sold from storage facilities within the EU will have the correct amount of VAT charged, even when the goods are technically being sold to consumers by non-EU businesses. Currently, it can be difficult for Member States to obtain the VAT due on goods sold from so-called 'fulfilment centres'."*¹⁷

The Australian government has also responded to the rise of cross-border e-commerce by introducing in 2018 a new legislation on goods and services tax (GST) in order to level the playing field between Australian goods and imported products. Since 1 July 2018, Australian residents have to pay an extra 10% on most types of products bought from foreign Internet platforms, regardless of their value.

2.2. E-COMMERCE AND VALUE CHAIN

The value chain is a model describing a business by deconstructing it to a series of activities that add value or cost in each phase of the process.

By limiting the need for an integrated physical presence, e-commerce activities are prone to fragmented value chains, in which different functions are performed by a range of smaller entities and subcontractors or even persons without proper labour contracts. This poses a range of problems:

- A fair repartition of the value added by different functions in the process is required, but the negotiating powers of the parties are often disproportionate;
- Operational and financial risks are often allocated to weaker counterparts in the value chain, a factor of vulnerability for workers employed by the subcontractors;
- For individuals without proper labour contracts (e.g. Amazon's Mechanical Turks), the lack of labour rights and social protection poses serious risks.

Pure players are more likely to develop fragmented value chains without proper labour relations, depending on their business model. As shown in the part on pure player's business strategy, these companies tend to create and promote low cost value chains, in order to support their top-line expansion, and therefore have low employment standards. It is also important to understand at which level of the value chain a given company is realizing its revenues and profits – as illustrated by the cases of Amazon, which tends to control a large part of the value chain, at least at its U.S. operations, in contrast with Alibaba or eBay, which have a more hands-off approach intervening only as intermediators between other sellers and buyers and thus selling the service of intermediating transactions rather than selling goods.

paid for by a trader and online marketplaces will have to inform about the main parameters determining the ranking of the results; when consumers pay for a digital service, they will benefit from certain information rights with 14 days to cancel the contract. See <https://ec.europa.eu/digital-single-market/en/new-eu-rules-e-commerce>

¹⁷ Full text available at http://europa.eu/rapid/press-release_IP-18-6732_en.pdf

On the other hand, click-and-brick e-commerce operations have lesser appetite to fragment their value chain and the risk to the quality of employment is lower.

The table below presents different stages of the value chain in e-commerce and our assessment of the risks for workers' vulnerability.

Table 10. Stages of the value chain in e-commerce (model)

Activity	Who performs the tasks	Risk for workers
Inbound logistics	Mostly subcontractors, delivery companies	Increased workload, safety risks No relationship with the real employer due to subcontractor relationship
Operations in fulfilment centers, warehouses	Employees if warehouses belong to parent company	Difficult working conditions High workload Automation
Outbound logistics	Subcontractors, self-employed	Increased workload, safety risks No relationship with the real employer due to subcontractor relationship
Last-mile delivery	Delivery companies, self-employed	Tendency for self-employment and rise of on-line platforms such as Uber leads to the destruction of contractual relationship with employers
Marketing, sales support	Internal workforce or subcontractors	Customer abuse No relationship with the real employer due to subcontractor relationship
On-line platform development	Mostly internal workforce	Flexibility due to project management Need for adequate training and qualification
Microdata management	Mostly subcontracted and individuals	Lack of proper work relationship ("Mechanical Turks")
Administrative, accounting and finance	Internal	Increased workload

2.3. IMPACT ON LABOUR

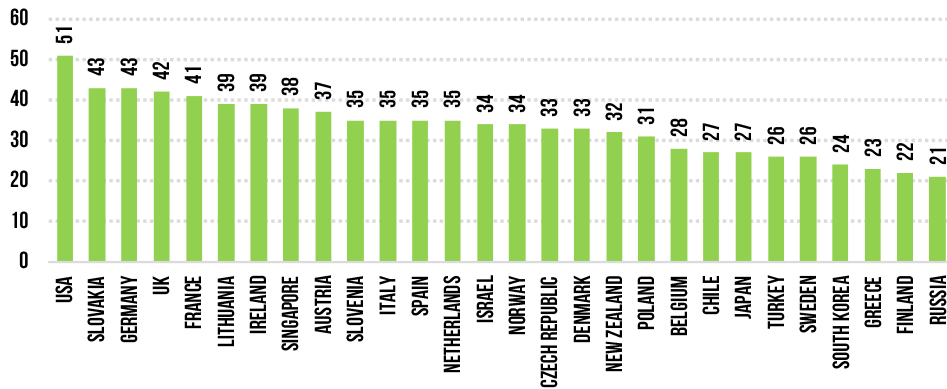
We have found very few studies which have addressed the impact of e-commerce on the labour market. Most of the studies related to e-commerce focus on the fast expansion of this sector and on key strategies to perform well as a company in this area. Therefore, it is important to address issues such as the impact of e-commerce on employment, productivity, working conditions and the role of trade unions.

As shown by Singh (2008), in the first years of e-commerce development most of the studies have found that Internet technology has had a positive impact on the business sector, whereas the impact on macroeconomic growth and labour market in particular was rather doubtful¹⁸.

¹⁸ Singh, Sumanjeet. *Impact Internet and E-Commerce on the Labour Market*. Department of Commerce, Ramjas College University of Delhi : 2018.

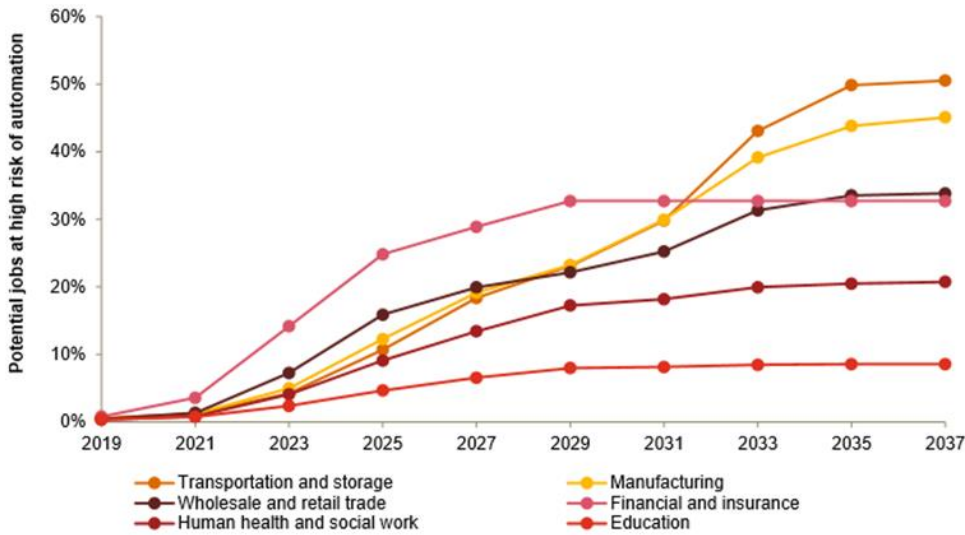
It is clear that retail is one of the sectors most exposed to automation, and e-commerce could be considered as an advanced form of automation. According to a PwC analysis (2018)¹⁹, wholesale and retail trade ranks among the industries with the highest risks of automation, with more than 34% of jobs at high risk of automation. The same research estimates that among the advanced countries, the highest potential risk of automation in the wholesale and retail is in USA, where it reached 51%.

Figure 1. Share of jobs with potential high automation rates for wholesale and retail trade by employment share, across countries, in %



Source: PIAAC data, PwC analysis

Figure 2. Potential impact of job automation over time across industry sectors, in %



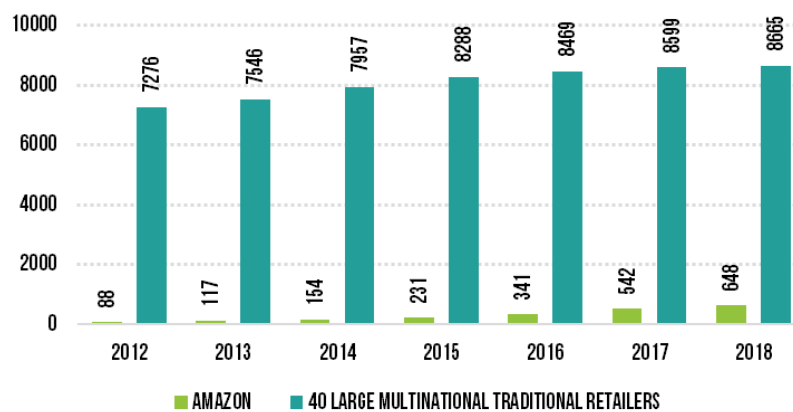
Source: PwC

¹⁹ Hawksworth, John, Berriman, Richard and Goel, Saloni. *Will robots really steal our jobs? An international analysis of the potential long-term impact of automation.* PricewaterhouseCoopers. 2018

Still, the long-term quantitative impact of e-commerce is impossible to predict. As the report “Understanding the impact of digitalization on society” (2017) of the World Economic Forum states: “Current estimates of global job losses due to digitalization range from 2 million to 2 billion by 2030.”²⁰ The range of these estimations is so broad that it makes them almost useless.

In recent years, we have seen Amazon’s employment numbers booming, its total headcount reaching 647,500 employees in 2018, compared to only 88,400 in 2012. But in the same time, it is true that giant traditional retailers have also been hiring, although not at the same pace as Amazon. In fact, the total number of employees in 40 largest public traditional retail companies increased by 1.4 million from 2012 to 2018, or 19%. It is worth noting that employment in large traditional companies increased globally in 2018 although the largest company Walmart reported a drop in headcount of around 100 thousand.

Figure 3. Total employment by Amazon and by 40 large traditional retailers



Source: data compiled by Syndex from the annual reports of the companies

Although the impact of e-commerce on the number of employees in the commerce sector is difficult to predict, it is clear that digitalisation and e-commerce will have a significant qualitative impact. As UNCTAD’s Information Economy Report (2017) states, “digitalisation will lead to new types of jobs and employment, change the nature and conditions of work, alter skills requirements and affect the functioning of the labour markets as well as the international division of labour”²¹.

The impact of e-commerce differs depending on the nature of jobs. Higher skilled workers – such as engineering, science, computer and information systems analysts and managers, commercial artists, designers, writers and editors, computer systems analysts, engineers, programmers – are needed for the development of web platforms, while the increased number of fulfilment centers require a higher number of warehouse workers and drivers. On the other hand it is

²⁰ See <http://reports.weforum.org/digital-transformation/understanding-the-impact-of-digitalization-on-society>

²¹ See https://unctad.org/en/PublicationsLibrary/ier2017_en.pdf

expected that in the long-term the number of marketing and sales personnel, cashiers and in-store clerks, purchasing managers and agents, and wholesale buyers will decrease.

It is true that the explosion of fulfilment capabilities has increased the number of warehouse jobs, but the quality of these jobs is frequently far from satisfactory. Although many of the warehouses are new, the low-cost business model implemented by many pure players has translated into strenuous work under pressure and sometimes inhuman working conditions, with very low salaries²². According to reports, ambulances were called to Amazon warehouses 600 times between 2015 and 2017²³. In U.S., between October 2013 and October 2018, at least 189 calls to emergency services were made from Amazon warehouses for suicide attempts, suicidal thoughts, and other mental-health episodes²⁴. Workers have often unattainable productivity targets and are pressured to under-report warehouse injuries. The use tracking devices to measure productivity and performance puts additional pressure on workers and raises issues related to their privacy.

According to the interviewed trade unions, in most of the countries there are no significant differences between the technological level of warehouses serving e-commerce or traditional retail. While automation and robotization are job disrupting phenomena, these could also lead to less physically demanding jobs. Also, a number of new occupations – such as “stowers” or “problem solvers”²⁵ – are being created by the automation of warehouses. Although some advances in automation and robotization have been implemented, it seems that fully automated shipping warehouses are at least a decade away²⁶.

The development of e-commerce as an additional function in the apparel and similar businesses also has an important effect on the workers in the physical stores. Integration of online and physical platforms means that personnel in stores has to manage a broader range of products, which makes storage and handling more difficult. Online returns brought in physical stores additionally increase the complexity of the task. In many cases, online sales are not factored in work planning, which leads to understaffing and increased pressure on existing personnel. Also, orders placed online and collected in stores are often not included in the calculation of productivity and sales commissions.

It is true that e-commerce, automation, digitalization and artificial intelligence have potential to increase wealth to unprecedented levels – but how will be wealth be distributed? As World Bank's World Development Report 2016 states, “*digital technologies have spread rapidly in*

²² Quote: „Recent reports that the median pay for Amazon employees is only \$28,446 a year demonstrate beyond any doubt that the company is more of a low-wage retailer than a high-wage tech disruptor. These disclosures on poverty pay, including shocking details about huge numbers of Amazon workers who depend on food stamps to survive, add to existing revelations about the company's brutal and often dangerous working environment and culture.” See <https://truthout.org/articles/is-amazon-the-uss-most-anti-worker-company/>

²³ See https://www.vice.com/en_us/article/pa5q7y/amazon-warehouse-bear-repellent-dozens-hospitalized-new-jersey-vgtrn

²⁴ See <https://www.thedailybeast.com/amazon-the-shocking-911-calls-from-inside-its-warehouses>

²⁵ Stowers stock and balance the shelves carried by robots, requiring human judgment. Problem solvers are employees working near a scale on a conveyor belt that weighs each package. If the weight isn't consistent with what's supposed to be in the box, the package is analysed by the problem solver, who opens the box to see if the order was filled correctly.

²⁶ See <https://www.theverge.com/2019/5/1/18526092/amazon-warehouse-robotics-automation-ai-10-years-away>

much of the world. Digital dividends—that is, the broader development benefits from using these technologies—have lagged behind.”²⁷ But digital dividends do not only mean access to Internet and mobile technologies, but also to skills, jobs and wealth created by technological advances.

The short-term impact of the rise of e-commerce on labour markets is often negative, increasing income disparities and reducing access to social security systems. The rise of e-commerce pure players has created an unhealthy and unfair transnational competition among workers with different levels of social protection, leading to situations that have been described as “social dumping” – that is using cheaper labour than is usually available and sustainable for a given business, using low-wage and sub-standard employment.

It is also believed that e-commerce will have a different impact on earnings depending on the types of occupations. The table below summarizes the expected impact of e-commerce on employment and earnings depending on the nature of performed work, as published in the “World Development Report 2016: Digital Dividends”.

Table 11. Impact of e-commerce on employment and earnings

Type of occupation	Expected impact on employment	Expected impact on earnings
Nonroutine cognitive	Positive – higher productivity, need for ICT skills	Positive – higher productivity, higher demand for workers, also depends on the capacity to negotiate
Routine	Negative – less demand for labour, displaced by machines	Negative – less demand for labour, displaced by machines
Nonroutine manual	Positive – demand to be sustained by higher economic activity, difficult to replace by machines	Negative – competition from workers replaced in routine occupations

Source: World Development Report 2016: Digital Dividends

The rise of e-commerce also raises the issue of promoting education and upskilling in order to adjust to new technologies. More educated workers are able to adjust to new technologies and benefit from increased productivity. Automation thus comes with an increased risk of widening wage income and wealth inequalities. Therefore, governments should work closely with employers and education providers in order to promote adequate training programs, focused on vocational training, including adaptation and reskilling programs. In the same time, social safety nets should be enhanced to support those who have difficulties in adapting to new requirements of the labour market. This could be done through enhancing existing social security benefits, promoting minimum wages, universal basic income, dedicated funds for lifelong learning that can be accessed by each person etc.

²⁷ See <http://www.worldbank.org/en/publication/wdr2016>

2.4. TRADE UNIONS RESPONSES

The low-price low-cost business model has put a lot of pressure on labour and social standards in pure player e-commerce companies. These new businesses are trying to create new corporate identities, such as “associates”, “Mechanical Turks”²⁸, “micro-entrepreneurs”, that are often replacing traditional employment forms. Amazon does not refer to its employees as workers, but as „associates”, creating a false impression of co-operation between the company and its workers – a situation that is rather intended at maximising employment flexibility, increasing incidence of atypical work forms, abusing productivity norms and overtime work, countering efforts of worker unionization. Amazon is known for its open anti-union policy, including the use of specific training videos for middle management to counteract any attempts of unionization.

Pure players are in most of the cases new companies and generally trade union coverage is low or even completely absent in many cases. As shown before, these companies operate in fragmented value chains, which makes it a difficult task for trade union to have access to all stakeholders and develop an integrated social dialogue. Several trade unions in more advanced economies, such as Australia or Sweden, have implemented specific strategies to unionize workers from pure player companies.

During collective bargaining, management teams might find a convenient argument in the threat represented by e-commerce and bring it forward as an excuse to limit labour expenses and expenditures to improve working conditions. This is fuelled by many press articles and even some researchers that have been recently promoting the misconception that traditional retail is being “killed” by the rise of e-commerce²⁹. We have shown in the previous parts, as well as in our research paper “Grocery Hypermarkets: Global Trends in Economic and Social Performance” (2018) why this is a fallacy and that traditional retail is still expanding alongside e-commerce.

In reality, as numerous researches show, the main reasons for store closures are different from competition from on-line commerce. As Holman and Buzek (2018)³⁰ show, the main causes for store closures are:

1. Massive overexpansion of their store footprint beyond sustainable levels;
2. Management of Private Equity that saddled the companies with unsustainable level of debt;
3. Refusal to modernize systems or improve customer experience;
4. Failure to update the business model to reflect changing times, and in some cases, for decades.

²⁸ Amazon Mechanical Turk is a crowdsourcing marketplace that makes it easier for individuals and businesses to outsource their processes and jobs to a distributed workforce who can perform these tasks virtually.

²⁹ Press headlines were announcing: “Retail is Dead. Here’s What To Do Now”, “Why The Physical Store Model Is Dead” or “Traditional Retail Might Not Be Dead, But It Is In A Coffin”.

³⁰ Holman, Lee and Buzek, Greg. *Retail’s Radical Transformation/Real Opportunities. Beyond the “Retail Apocalypse” to a Bright Future*. August, 2018

To a certain extent the presence of on-line competitors requires more adaptability from traditional retailers. According to IHL, more than 24% of Amazon US retail sales can be attributed to customers who first tried to buy the product at the local store and found them out of stock³¹. It is therefore important for trade unions to understand real success factors of their companies and to avoid putting excessive emphasis on the competition from e-commerce. After all, e-commerce does not have more than 10% of the market share in most of the countries.

At a wider scale, e-commerce is of central interest for international trade unions. In 2018, the ITUC, together with TUAC and ITF lead a working session entitled 'A workers' agenda for e-commerce' at the WTO's Public Forum in Geneva. The working session addressed issues such as regulation and democratic control of data, traceability in global value chain, optimising processes and occupational health and safety, protection of the workers and promotion of a human-centred approach for the workplace, including the right to disconnect³².

Given the many impacts that e-commerce has on employment, working conditions and revenues, it is important that trade unions protect the rights of the workers through:

- Supporting a fair playing field among all competitors in terms of labor rights, protection of workers and taxation;
- Protecting workers in arduous occupations and fighting for improved working conditions through investments;
- Contributing to a better management of workload and scheduling;
- Improving social and psychological factors influencing workers' comfort at work;
- Fighting against harassment, discrimination, pressure, abuse etc.;
- Opposing the incidence of part-time, zero-hour, agency employment;
- Promoting adequate compensation to all employees including compensation for overtime and work during night or week-end shifts;
- Countering polarisation of work and the rise in income inequalities;
- Ensuring access to social protection to all employees, including through promotion of living wages in developing regions;
- Helping that new forms of digitalised work organisation improve rather than deteriorate job quality;
- Protecting employees' private lives in a time of omnipresent digital mobile communication, with limits to universal availability / reachability;
- Implementing standards of information security, data protection and privacy at work;
- Promoting vocational training adapted to requirements, integration with new technologies through private and public investments;
- Building a transparent dialogue between management and trade unions through regular information and consultation on economic, financial and strategic matters;
- Counteracting "anti-union" policies.

³¹ Idem.

³² See <https://www.ituc-csi.org/WTO-public-forum-2018-workers-agenda-for-e-commerce>



#3

SURVEY ANALYSIS

In order to assess the impact of e-commerce on employment and trade unions, UNI Commerce Global Union has conducted a survey among its members and Syndex has interviewed trade union leaders from U.S.A., Australia, Sweden, Belgium and the Netherlands.

15 trade unions from 13 countries participated in the survey on the impact of e-commerce on labor and unions. Most of the unions consider that the development of e-commerce has had a rather negative impact on traditional commerce sector (8/15), on the workforce and the quality of jobs (9/15).

Most of the participating unions (10/15) have members from pure e-commerce companies and all unions have membership in companies that are involved at a certain step in the e-commerce value chain, most often in warehouses and fulfillment centers (14/15) and transport and delivery services (12/15). Less frequent are unions in the back-offices of parent e-commerce companies (8/15) and subcontractors (9/15). Not in all places where unions are present collective agreements have been signed – in fact, in only 9 countries trade unions have signed collective agreements in warehouses and fulfillment centers servicing e-commerce businesses, and in only 8 countries collective agreements were signed in back-offices of parent e-commerce companies.

The large majority of the responding unions are currently developing a specific strategy, roadmap or plan for organizing e-commerce workers and only in two countries such plans were already implemented – Sweden and Australia.

Unions are generally involved in a dialogue with employers from the e-commerce sector (12/15) or from the traditional retail sector (11/15), as well as with public authorities (9/15) on issues related to e-commerce development. Most often, the dialogue is focused on working conditions, collective agreements and employment terms and conditions, and less frequently on topics related to competencies and trainings, occupational standards. Subjects such as taxation or data protection and security are addressed only in a few countries.

In **Argentina**, e-commerce has developed mostly in services (tourism, entertainment, finance) and under the form of a C2C platform (MercadoLibre). The traditional retail commerce (B2C) has not extended to digital commerce, although complementary strategies to develop traditional channels have been used – these include selling through platforms such as MercadoLibre or Tienda Nube, marketing on social networks such as Facebook or Instagram. Overall, the impact of e-commerce on the traditional commerce sector in Argentina is still low, particularly due to limited access, use and implementation of technological innovations in retail. Although there have been advances in e-commerce in terms of volume and turnover in recent years, traditional employment still remains dominant in Argentina, and in this respect there is no evidence of an impact of e-commerce on the volume or quality of work in the traditional retail sector. In the same time, new forms of precarious labour relations are being promoted with the use of digital platforms such as Glovo, Rappi and PedidosYam. Generally, workers from large e-commerce companies are covered both by sectoral and company level collective agreements. Specific agreements are also signed with companies from the traditional retail

sector on issues related to competences and training in relation with the advancement of new technologies³³.

In **Australia**, the biggest e-commerce operators are actually existing traditional retailers who have adopted an omni-channel approach. SDA, the Australian union representing commerce workers, said that e-commerce has put undue pressure on negotiations in traditional bricks and mortar retail operations. However, SDA has taken an approach to e-commerce that it is not a good thing or a bad thing, but rather a reality that poses a number of challenges, including to ensure that the pay and conditions are fair and don't undercut existing retail conditions. There is an emerging trend in union negotiated e-commerce agreements in on-line fulfilment centres, and often negotiated conditions include premiums compared to the wages in the same business' bricks and mortar operations. Currently, SDA NSW Branch has approximately 2,000 members engaged directly in e-commerce out of a membership of approximately 60,000 members. SDA has coverage in both commerce and warehouse/logistics, as e-commerce is generally seen in Australia to fit more into the coverage of commerce rather than logistics. In order to expand its presence in e-commerce, SDA has been implementing and further developing a specific plan, starting with mapping of the major e-commerce players and identifying their method of fulfilment and locations. SDA has then implemented both traditional and experimental organising methods. The trade union has had some engagement with the local peak employer group for e-commerce called NORA (National Online Retail Association). SDA and local e-commerce and omni-channel employers worked in tandem to ensure that VAT taxation was applied equally and fairly to both local and overseas e-commerce activity – this resulted in adjustments to the application of VAT to lower value purchases from e-commerce sites overseas. Equal taxation commenced in July 2018. SDA has also been cooperating with the Transport Workers Union for organising workers in a dedicated online fulfilment centre for a major existing Department Store³⁴, which led to the formation of an alliance to organise e-commerce workers called the Online Retail and Delivery Workers Alliance, created in 2018. Under pressure from union activity, Amazon Australia moved from operating with a model of 100% labour hire casual employees to a model of phasing in mainly direct hire permanent employees with increased wages. This was partially in response to a combination of organising activity, legal proceedings and media exposure.

In **Belgium**, the traditional retail sector is under pressure from cross-border e-commerce. Exposed to product flows from neighboring countries, Belgian traditional retailers face increased competition and are losing sales. According to ACV PULS, from the overall retail market estimated at near 105 bn€, retail via e-commerce was in 2018 up to 11.5 bn€, including 7.5 bn€ cross-border flows. In the country, e-commerce has had a limited impact on creating jobs in

³³ For instance, at the companies MDQ SA and Studio 1, from Mar del Plata, Buenos Aires, trade unions and management are involved in a joint effort to create innovative framework agreements that would address changes in workforce management and ensure the protection of labour rights in the process of a planned conversion of the company to e-commerce.

³⁴ The terms and conditions of the negotiated agreement provided a significant wage premium above and beyond the wages and conditions in the union contract for the traditional bricks and mortar operation of the same retailer. The wage premium exceeded the target of an additional 7.6% wage premium in a dedicated online site compared to the same retailers bricks and mortar sites.

wholesales, distribution and logistics, as most of Belgian webshops are outsourcing these processes to companies that operate from the Netherlands, Germany or the North of France³⁵. In order to develop a specific strategy for addressing e-commerce, ACV PULS is mapping the value chains of the biggest retailers in order to set up a coordination and has been conducting a dialogue at sectoral level to which employers from the e-commerce sector have to apply. The union intends to set sectoral standards but face the opposition of the employers. In 2015, the unions have been invited by the Minister of employment to several round tables on the topic of e-commerce development and have been finally forced to sign a collective agreement providing overnight work for e-commerce. Since the development of the collect & pick services at major retailers, employees must work until late in the night in order to prepare the orders and then earlier in the morning to fill in the shelves. In negotiations, managements have been putting pressure on trade unions to introduce lower standards for jobs in e-commerce omni-channel operations, specifically aiming at removing bonuses for night work.

In **Switzerland**, the majority of traditional retailers from both the food and the non-food sectors have opened on-line platforms with home deliveries or click & collect services linked to physical stores, or have linked their stores with external platforms of delivery service providers (bicycle couriers, taxis, etc.). According to Unia, these developments have had a rather negative impact on employment in the traditional sector, although they have also opened a potential for upgrading the level of retail workers, through customer counseling, specialization, diversification of tasks and acquisition of new skills. However, jobs are still precarious in picking, return handling, logistics and record writing. In terms of impact on union membership, Unia does not have a clear visibility as its database is not able to distinguish between those who work in warehouses or logistics for large retail distributors or online operations, or, in transport, whether they work for e-commerce, for the post or for wholesale logistics – in fact, for delivery providers the activities are often mixed. Unia has also organized a small number of bike couriers. Several agreements providing minimum wages are signed by unions for warehouse and delivery workers, but these agreements are not widespread, and this area was recognized as a “trade union construction field”. Trade unions have made some organizational tests in e-commerce companies, but the domain was rather difficult. Some research was done in the branch, but figures are scattered, which does not help for a good understanding of the situation. Recently, unions have denounced Migros, a so-called community service shopping developed by Amigos, the largest distributor in Switzerland, forcing it to stop the implementation in order to verify the legal parameters of its social protection packages, accident insurances and wages. Unia is also trying to organize Le Shop, an e-commerce branch of Migros, where “working conditions are catastrophic”, but the mission is very difficult – workers are being paid mainly in bonuses, which makes them afraid to expose themselves. At national level, Unia has been actively involved in the development of the Tripartite Declaration on the Future of Labor and Social Partnership in Switzerland in the era of the digitalization of the economy, under the auspices of the ILO. The

³⁵ Belgian unions have been negotiating with Decathlon on the setting up of a e-commerce hub in Belgium, demanding higher labor standards than the legal minimum. After one year of negotiations, Decathlon decided to develop its new warehouse in Waalwijk, Netherlands, in cooperation with Ingram Micro, the company that is also servicing bol.com warehouses.

Swiss Federation of Trade Unions is also active in political lobbying on issues related to platform workers, VAT and right to continuing vocational training.

In **Spain**, e-commerce is not widespread as the country's most frequent model of commerce is represented by small and medium size enterprises. A small number of these companies have developed an on-line presence and it remains auxiliary for the large majority. Therefore, the impact of e-commerce on traditional retail has been minimal, but according to Servicios CCOO there is a potential threat that several point of sales could be reduced due to the rise of e-commerce competition. The trade union does not have a clear visibility of its membership involved in omni-channel activities of the traditional retail, as often these activities are not clearly separated. In practice, if employees are working for omni-channel activities of traditional retailers, they are covered by the same collective labor agreements, which are universally applicable. In some specific cases, the union has negotiated agreements that regulate digital disconnection, as well as specific conditions for workers employed in warehouses that service online sales. On a wider scale, Servicios CCOO is currently developing a protocol that will be proposed to employers with the intention to set guidelines for a dialogue in the face of transformations that the sector will suffer through digitalization. The union considers that the risk of restructuring comes not only from e-commerce, but also from the changes in jobs and functions brought by technological advances. Facing this situation, companies must adapt and provide adequate training to their employees.

In the **Netherlands**, the trade union FNV has described job quality in fulfilment and customer care centers that provide their services to e-commerce – through subcontractor companies – as low, due to repetitive tasks, high pressure, low pay, insecure hours and bad conditions. This also puts an indirect pressure on job quality in the traditional retail as well. However, e-commerce is not directly responsible for failures of traditional retailers, according to FNV. Retailers that go bankrupt usually do so because of business mistakes and not (just) because of the rise of e-commerce. While large department stores seem to disappear, traditional shopping is growing, and shopping streets are very busy. Currently, FNV has some membership in the e-commerce sector, but it is scattered throughout companies and branches. The trade union, FNV has no strategic position in a given company in e-commerce, which makes their efforts to organize bol.com – the largest national on-line platform bol.com, detained by the Ahold Delhaize group – a strategic priority. As in the case of many pure players, bol.com has externalized its warehouses (to Ingram Micro) and its customer service (to Teleperformance), which makes it difficult to have a common representation for all the workers across the value chain. A first joint meeting of worker representatives from these different companies working for the same business provider is planned for the near future.

In **Poland**, e-commerce has spread with the development of omni-channel branches in companies such as H&M, Zara, Ikea or Lidl, and also with the entrance of Amazon with offices and fulfilment centers. Both Polish unions participating to this survey, H&M and Amazon, consider that the impact of e-commerce on traditional retail in the country was rather negative, due to falling turnover in retail trade, and hence reduction of jobs in stores, but also the adaptation in working hours that require traditional retailers to open on Sundays. At H&M, unions have been active in protecting and promoting workers' rights in the warehouses, reaching an agreement with the employer that the employees (as of today around 1,900 people)

must have at least two weekends per month free³⁶. The Amazon union considers that working conditions in the e-commerce sector are worse than in traditional retail due to the lack of legal solutions, as employers are using any gaps available in the labor law. For the moment, only 2% of workers at Amazon Poland fulfilment centers are unionized, and the trade union is making efforts to increase membership. In this respect, the Amazon union is using traditional media and social media to publicize problems related to working conditions, is conducting stop actions against unfair employee assessments leading to extreme exploitation of employees and is providing legal assistance over the telephone 24 hours a day for its union members.

In **Sweden**, trade union views on e-commerce differ compared to most of the other countries. Generally, e-commerce is positively viewed by both respondent unions, Handels and Unionen, especially in terms of its impact on the economy and the traditional retail sector. The unions consider that traditional retail has managed to adapt and incorporate e-commerce in their business model or at least coexist. There is a large number of small e-commerce companies in Sweden that are open to unions and collective bargaining. The union Handels has recently completed a 4-year project of organizing workers from the e-commerce sector, which concluded with the union entering 350 workplaces, unionizing more than 3500 members and signing 250 collective agreements. Unionen is also going to develop a specific strategy targeting e-commerce. In terms of impact on jobs, Unionen has underlined the gender aspect of e-commerce impact on jobs – administration jobs that were performed traditionally mostly by women are being replaced by IT and technologically advanced jobs that are mostly performed by men. Another aspect is related to sustainability, as e-commerce is mostly developed in big cities, and thus has an impact on climate through extensive use of transport. To address all these issues, the unions within the commerce sector in Sweden have established a foundation together with the employer counterpart Sverkets Handel, with an annual budget of around 1.9 million € to support research on retail and e-commerce. Through this foundation the unions participate in different seminars on the e-commerce development in Sweden and globally.

In **USA**, RWDSU-UFCW has a rather negative view on the impact of e-commerce both on traditional retail and on the quality of jobs it is creating. The rise of e-commerce has led to loss of good jobs in the retail sector, did not come with upskilling opportunities, and has displaced jobs particularly impacting women. Pay scale in the e-commerce sector was described as equivalent to retail worker levels rather than warehouse wages. E-commerce had also health and safety impacts, while training and upskilling opportunities lack. The development of omni-channel had also a negative impact on workers in stores, as this created additional workload that was not recognized and not compensated. As stated by union leaders from Macy's and Bloomingdale's, for workers paid in commissions of sales, fulfilling on-line orders takes time that otherwise would be dedicated to customers in store and is not recognized as employee's sale, therefore not paid for. Also, productivity indicators are directly impacted, as only sales done in store are registered, while the volume realized from e-commerce division is ignored. Latest collective bargaining agreement at Bloomingdale's addressed this issue and it was agreed that

³⁶ Also, H&M union provides individual legal advice for each union member as part of the membership fee.

employees will no longer be required to handle order fulfilments conducted online when any viable sale opportunity is present.

The following problems were underlined by participating unions for workers involved at different stages of the e-commerce value chain:

in warehouses and fulfilment centers	<ul style="list-style-type: none"> • Working conditions, precarious work (AU, BE, IT, US) • Work intensity, high pressure (AU, NL) • Stress (SW) • Health problems related to ergonomics (SW) • Flexibility of the work schedule, tracking and monitoring of work (AR, AU, BE) • Overnight work and late working hours (BE, NL) • Weather, working in hot / cold conditions (AU, SW) • Insecurity of working hours (NL) • Terms and conditions preventing sick leaves (SW) • Productivity measures are too high (US) • Low wages (AU, BE, SW) • Loss of commissions on sales (AR) • High variable part of compensation (SW) • Infringement of labour rights of traditional workers (AR) • Absence of employment contracts (BR) • Need for technological update, computer trainings (AR) • Outsourcing (BR) • Difficulty of worker representation (BR) • Anti-union animus, lack of voice on the job (US)
in delivery services	<ul style="list-style-type: none"> • Unrealistic run/delivery schedules (AU) • Ever growing amount of deliveries (NL) • Impossible delivery quotas (US) • Job insecurity (NL) • Flexibility of working time (BE, IT) • Non-standard contracts, self-employed or working for delivery-platforms (BE) • Low wages (BE) • Issues with security when delivering into houses (AU) • Safety when delivering to premises with difficult physical layouts (AU) • Problems with load heights and weights (AU) • Problems with equipment (AU) • Precarious work (BE) • Working conditions (US) • Stress on the job (BE, SW) • Tight calculation of routes (SW) • Shorter delivery times (SW) • Traffic congestion (SW) • GPS monitoring (SW) • Working time is not fully paid, for ex. loading time (SW) • Need for technological update (AR) • Need for computer trainings (AR)

	<ul style="list-style-type: none"> • Infringement of labour rights of traditional workers (AR) • Lack of regulation for last-mile delivery (US) • Anti-union animus (US)
in back-office of parent e-commerce companies (IT, customer support, marketing etc.)	<ul style="list-style-type: none"> • Poor working standards (BE) • High pressure (BE) • Low wages (BE) • Lack of information (SW) • Data protection and security (IT) • Infringement of labour rights of traditional workers (AR)
of other actors involved (back office of subcontractors, independent workers etc.)	<ul style="list-style-type: none"> • Subcontractor work for package returns, subcontractor deliveries etc. (SW) • Infringement of labour rights of traditional workers (AR) • Lack of collective agreements (IT) • Work pressure (NL) • Insecure working hours (NL) • Possible automation of jobs (NL) • Low wages (SW) • Lack of social security (SW) • Poverty wages (US) • Lack of regulation and protection (US) • Anti-union animus (US)

Participants to the survey:

Code	Country	Union
AR	Argentina	Federación Argentina de Empleados de Comercio y Servicios
AU	Australia	SDA
BE	Belgium	ACS PULS
BR	Brazil	CONTRACS
CH	Switzerland	Unia
ES	Spain	Servicios CCOO
FI	Finland	Service Union United, PAM
IT	Italy	FIST-CISL
JP	Japan	UA ZENSEN
NL	Netherlands	FNV
PL_A	Poland	NSZZ Solidarność Amazon Poland
PL_H	Poland	NSZZ Solidarność
SW_H	Sweden	Handels
SW_U	Sweden	Unionen
US	USA	RWDSU-UFCW

How do you/ your union estimate the impact of e-commerce on traditional commerce sector in your country?

Rather positive	3	IT, SW_U, SW_H
Neutral or no impact	4	AR, ES, FI, NL
Rather negative	8	AU, BE, BR, CH, JP, PL_A, PL_H, US

How do you/ your union estimate the impact of e-commerce on the workforce/quality of jobs in your country?

Rather positive	2	IT, SW_U
Neutral or no impact	4	AR, ES, FI, SW_H
Rather negative	9	AU, BE, BR, CH, JP, NL, PL_A, PL_H, US

Does your trade union and/or other unions in your country have membership in pure e-commerce companies (companies selling only or mainly over an Internet platform)?

Yes	10	AR, AU, BE, BR, CH, FI, IT, PL_A, PL_H, SW_H
No	4	ES, JP, NL, US
I don't know	1	SW_U

Does your trade union and/or other unions in your country have membership in companies involved in the value chain of e-commerce? Number of positive answers.

Warehouses and fulfilment centers	14	AR, AU, BE, BR, CH, ES, FI, IT, NL, PL_A, PL_H, SW_H, SW_U, US
Transport, delivery services	12	AR, AU, BE, CH, ES, FI, IT, JP, NL, SW_H, SW_U, US
Back-office of parent e-commerce companies	8	AR, BE, ES, FI, IT, NL, SW_H, SW_U
Back-office services of subcontractors	9	AR, BE, ES, CH, FI, IT, NL, SW_H, SW_U

Are workers involved in e-commerce activities covered by collective agreements?

Warehouses and fulfilment centers	9	AR, BE, CH, ES, FI, IT, SW_H, SW_U, US
Transport, delivery services	9	AR, BE, CH, ES, FI, IT, NL, SW_H, US
Back-office of parent e-commerce companies	8	AR, BE, ES, FI, IT, SW_H, SW_U, US
Back-office services of subcontractors	8	AR, BE, ES, FI, IT, NL, SW_H, SW_U

Does your trade union have a specific strategy, roadmap or plan for organizing e-commerce workers?

Yes, it is already implemented	2	AU, SW_H
It is currently under development	9	AU, CH, ES, IT, NL, PL_A, PL_H, SW_U, US
We intend to develop one	4	BE, BR, FI, JP

Does your trade union have a dialogue with employers from the e-commerce sector on issues related to e-commerce development in your country?

Yes	12	AR, AU, BE, CH, FI, IT, JP, PL_H, PL_A, SW_H, SW_U, US
No or no answer	4	BR, ES, JP, NL
by subject:		
Development of the e-commerce sector	5	AR, AU, BE, PL_H, SW_U
Employment terms and conditions	9	AR, AU, BE, FI, IT, PL_H, SW_H, SW_U, US
Working conditions	10	AR, AU, BE, FI, IT, PL_A, PL_H, SW_H, SW_U, US
Training	5	AR, AU, BE, SW_U, US
Occupational standards	4	AR, BE, IT, SW_U
Data protection and security ²	1	IT

Does your trade union have a dialogue with employers from the traditional retail sector on issues related to e-commerce development in your country?

Yes	11	AR, AU, BE, CH, FI, IT, JP, NL, SW_H, SW_U, US
No or no answer	4	BR, ES, PL_A, PL_N
by subject:		
Development of e-comm. in traditional retail	8	AR, AU, BE, CH, IT, JP, SW_H, SW_U
Impact of the competition from e-commerce ²	5	AU, BE, CH, IT, JP
Collective agreements ²	10	AR, AU, BE, CH, FI, IT, NL, SW_H, SW_U, US
Impact on workers/working conditions	10	AR, AU, BE, CH, FI, IT, JP, SW_H, SW_U, US
Competences and training	5	AR, BE, CH, IT, SW_U
Data protection and security ²	1	CH
Supply chain integration	1	SW_U
Health and safety (additional answer)	1	CH

Has your trade union been involved in discussions with the government/public authorities on issues related to e-commerce development in your country?

Yes	9	AR, AU, BR, CH, IT, JP, PL_A, SW_U, US
No or no answer	5	BE, ES, FI, PL_A, SW_U
by subject:		
Impact on economy and the sector ²	6	AU, BR, CH, JP, SW_U, US
Impact on labour	6	AR, BR, CH, IT, SW_U, US
Taxation ²	3	AU, CH, US
Employment terms and conditions ²	5	BR, CH, IT, SW_U, US
Competition/level playing field ²	5	AR, AU, BR, CH, US
Occupational standards and training	4	AR, CH, SW_U, US
Collective agreements ²	4	AR, CH, IT, US
Data protection and security ²	2	CH, US
Health and safety (additional answer)	1	PL_A