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Can Black Friday ever be green?

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With Black Friday, the retail event marking the unofficial start of the holiday shopping season, and other deep discount tactics rising in popularity, Premier Miton's Fiona Manning considers whether e-commerce could ever turn green.

How the pandemic boosted e-commerce – and the risks

The Covid-19 pandemic served to accelerate the e-commerce trend. In markets with mandated lockdowns, online shopping became a vital lifeline, particularly for vulnerable and at-risk groups, allowing them to safely access groceries, clothes and myriad other products. For many of us, it was simply a matter of convenience, but those habits have stuck.

By 2021, 63% of the world population had access to the internet[1] and 39% had used a mobile phone or the internet to buy something online. In 2017, pre-pandemic, that figure stood at just 24%[2].

The latest measure of digital development from ITU has revealed that 67% of the world's population, or 5.4 billion people, is now online. This represents an increase of 45% since 2018.

Meanwhile global e-commerce sales jumped 4% to $26.7 trillion in 2019, according to the UNCTAD, the UN agency that helps developing countries benefit from the global economy more fairly[3]. Its Digital Economy Report 2024 has found business e-commerce sales grew nearly 60% from 2016 to 2022 to reach $27 trillion.

The rising importance of e-commerce has been reflected in global markets, with companies like Amazon in the US, Alibaba and JD.com in China and Mercado Libre in Latin America all now key bellwethers of consumer sentiment and drivers of market returns. These businesses are widely considered to be the current winners in a digital arms race where financial success has required high investment – to build out extensive user networks and complex digital ecosystems driving frequent touch points with the consumer.

Consumers have also responded to high-profile price discounting on Black Friday, the retail event which falls on the day after Thanksgiving in the US, and Cyber Monday, its digital-only version, as well as other more region-specific events like Singles' Day in China or Juma in Kazakhstan. The success of these businesses in exploiting the thrill of a bargain, real or not, not to mention the all too human desire for instant gratification with easy one-click purchases and fast, disposable, fashion means increased risks for people and planet which need to be considered as part of any balanced investment decision.

[1]World Bank's Global Financial Inclusion data 2021. [2]World Bank's Global Financial Inclusion data 2021. [3]UN Trade & Development Digital Economy Report 2024, page 141. [4]Environmental Science and Technology: Comparative Greenhouse Gas Footprinting of Online versus Traditional Shopping for Fast-Moving Consumer Goods: A Stochastic Approach | Environmental Science & Technology (acs.org). [5]World Economic Forum's The Future of the Last-Mile Ecosystem.

Which has the bigger carbon footprint: online shopping or bricks and mortar?

As with many aspects of climate science, there is no straightforward answer to this question. While analysis of the available research on greenhouse gas emissions associated with different retail models has suggested that online shopping may be more carbon intensive than traditional retail practices, there are multiple factors at play[4].

The type of products ordered, the size of the basket, how those products are packaged and even the population density of the area in which the customer lives, or the carbon intensity of their own vehicle, all have an impact on the relative calculation. Also critical are the different warehouse and logistics practices of the e-commerce retailer, particularly choices over the “last-mile delivery”, the final stage of the delivery process where goods are delivered from a transportation hub to their final destination.

Greening the last-mile – logistics and environmental impacts

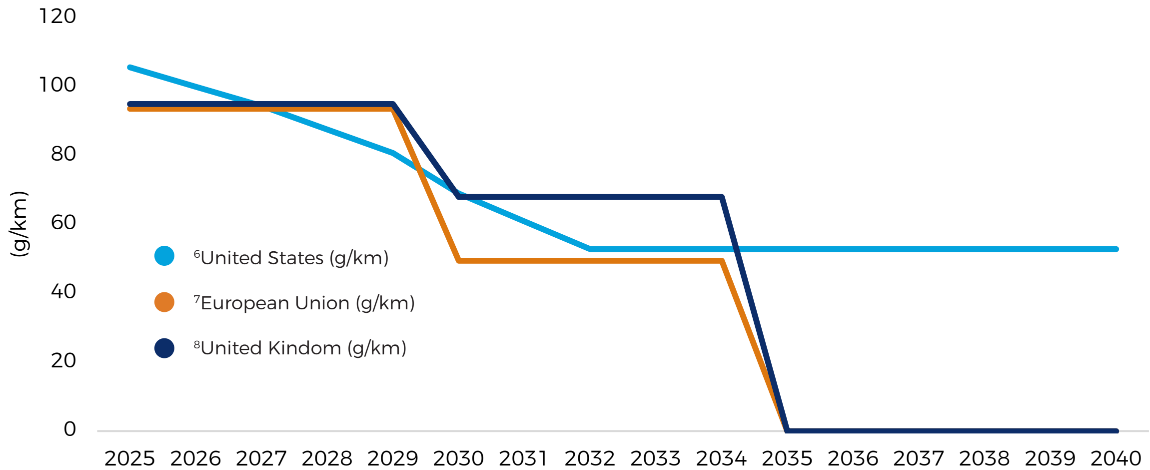
Traffic volumes associated with last-mile parcel delivery are predicted to increase by 36% by 2030, with an associated increase in congestion, carbon emissions and a decline in air quality, according to the World Economic Forum[5].

The industry is already wrestling with the issues of suboptimal delivery logistics as well as poor loading factors of delivery trucks and vans as it faces the challenge of bringing down its carbon footprint – a challenge which is amplified by the significant increase in predicted demand.

Urban areas already account for three quarters of carbon emissions, and many cities in both developed and emerging markets have implemented traffic restrictions to address concerns around air quality and congestion, such as London’s low emission zones and license-plate circulation restrictions in Mexico City and Delhi.

Further deterioration is likely to attract increased regulatory pressure to up the pace of adoption of electric vehicles or, on the flip side, increase the cost of using polluting vehicles, through targeted taxation and emissions standards.

Targeted emissions reduction for passenger vehicles: 2025 – 2040



Source: [6]EPA United States Environmental Protection Agency - Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks. [7]European Commission - CO2 emission performance standards for cars and vans. [8]Vehicle Certification Agency - New UK Car and Van CO2 Regulations Guidance for manufacturers on the legislation governing CO2 emissions.

While Alibaba, in China, and Amazon, in some of its key markets, are both exploring robot and drone deliveries, a more immediate and arguably more practical solution has already been commercialised – the parcel locker.

Despite their initial introduction in Germany in the 2000s, it is Poland which has seen the fastest adoption of parcel lockers in Europe. Indeed InPost, the leading operator of parcel lockers in the market, estimates that 62% of the Polish population live within a 7-minute walk of one of their parcel lockers, which increases to 88% in urban areas. The model has now been rolled out across 9 countries.

The benefits of the model are clear for consumers – convenience, ease of access and availability for both parcel deliveries and returns – but also for the planet. The pooling of parcels from a number of retailers and then the delivery to hub locations in lieu of "to-door" delivery means fewer journeys as well as the opportunity to optimise utilisation and delivery routes, which reduces the carbon footprint of each parcel. InPost estimates that in Poland lockers reduce carbon emissions by 98% when compared to to-door delivery, and that 172,000 tonnes of carbon emissions were avoided from their operations last year.

Social impacts and the importance of MSMEs

Companies can mitigate many of these risks by improving their operating practices, and investors can influence improvements in behaviour through engaged stewardship. However, a key element of the impact that each company has is inherent in the way the business model was conceived. In contrast to many other retail models, the third-party e-commerce platform model that has been successful in many emerging economies enables positive social impact. The retail platform, as a concept, has been developed to connect and service large cohorts of consumers and, predominantly small and mid-sized merchants with the platform charging a fee for the various services they provide.

Globally, small businesses play an important role economically, in driving innovation, economic growth and employment[9]. In emerging economies, micro, small and mid-sized businesses (MSMEs) contribute up to 40% of GDP, and their importance is probably underestimated given the high share of informal businesses omitted from reported data[10]. In Latin America, almost half of individuals are employed in the informal sector[11], and MSMEs play a crucial role, accounting for 99.5% of all businesses, with the very smallest businesses making up the lion's share.

However, productivity is poor. MSMEs, particularly those operating informally, suffer from a number of challenges including key skills shortages, lack of access to digital technology and poor access to financing.

In the retail sector, online platforms have been part of the solution[12]. By leveraging the power of the online ecosystem, selling through a third-party platform allows a small business to access a significantly wider base of customers, increasing the potential volume of transactions. Many platforms, such as Mercado Libre which operates across Latin America, offer digital payment facilities both online and offline, access to credit to fund working capital or expansion, as well as the opportunity to aggregate fulfilment, leveraging a significantly more efficient warehouse and logistics system. The platform is able to provide support in upskilling in terms of sales and marketing as well as advertising: both parties aligned in the common purpose of driving sales for greater profitability.

Mercado Libre estimates that more than 1.8 million families depend on the platform for their main source of income, and over 234,000 people were employed by the MSMEs that trade on the platform in 2022. Importantly, 90% of businesses have used the platform to expand beyond their local market.

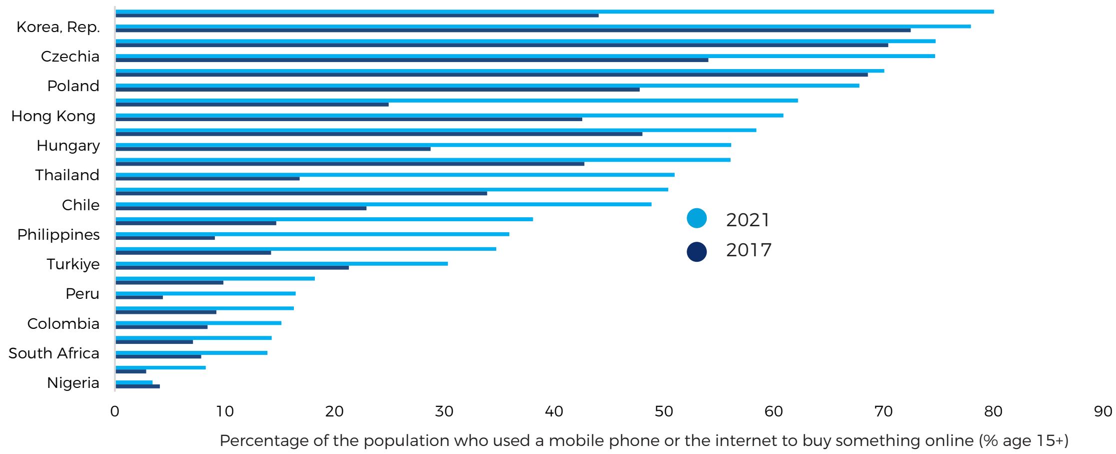
[9]OECD SME and Entrepreneurship Outlook 2023. [10]World Bank SME Finance. [11]OECD SME Policy Index: Latin America and the Caribbean 2024 Towards an Inclusive, Resilient, and Sustainable Recovery.[12]OECD The Digital Transformation of SMEs.

Solutions for the under-served

Crucial to identifying the social impacts in e-commerce, part of a company's social license to operate is an understanding of unmet needs. Latin America is a region where e-commerce is underpenetrated. The share of internet users making online purchases in 2023 in Brazil was around 50%, in Mexico it is less than 40%, and it is only 20% in Peru.

By contrast, China makes it into the top five markets with around 80% of internet users making online purchases, similar to the UK and the Netherlands[13].

Online purchasing penetration by country 2017 and 2021



Source: The World Bank. Data from database: Global Financial Inclusion, accessed on 05.11.2024.

Not only is this important to contextualise the positive social impact a business might be able to enable through its products and services, but it also impacts the attractiveness of the financial investment.

While the powerful network effect can deliver extremely attractive growth and profitability, as the business matures and higher penetration into the market is achieved, growth becomes more challenging to deliver.

In China, the largest online businesses increasingly overlap and jostle for dominance. While this may enhance the customer proposition through lower prices, it likely impacts the benefits that accrue to merchants.

Market dominance and the growing infiltration of social media by e-commerce has also attracted the attention of regulators in developed markets, as key digital businesses are slow to grapple with the challenges of cyber-security, issues around data management and consumer protection, particularly of the youngest users.

Jevons' paradox: a problem for retail too?

Despite these challenges, the opportunities associated with digital retail will no-doubt continue to grow. Although low- and middle-income countries have lower penetration of online purchasing today, the pace of adoption is rapidly increasing[14].

Normally applied to the analysis of technological progress, in economics Jevons' paradox is the phenomenon where increased resource efficiency, and therefore reduced cost, in fact increases demand, thereby offsetting any savings.

A parallel can be drawn with retail behaviour in e-commerce: as e-commerce has increased ease of access and price-comparison[15], we see increased purchasing frequency[16]. This propensity for impulse-driven purchases, particularly in categories such as apparel, toys and electronics[17], leads to an increased risk of overconsumption[18] – with the associated negative impacts of increased waste and carbon footprint. This increased inclination to purchase is amplified by the increasing role of social media in influencing decision-making[19], and the rise of mobile shopping sites which further increase the ease of, and therefore tendency to, purchase.

[13]UNCTAD UN Digital Economy 2024. [14]World Bank Global Financial Inclusion database. [15]UNCTAD UN Digital Economy 2024. [16]Tech Report: Online Shopping Statistics – Ecommerce Trends of 2024 (Statista). [17]Tech Report: Online Shopping Statistics – Ecommerce Trends of 2024 (Statista). [18]UNCTAD UN Digital Economy 2024. [19]Tech Report: Online Shopping Statistics – Ecommerce Trends of 2024 (Statista).

Against this backdrop, and with higher inflation impacting the cost-of-living, cross-border commerce has grown at an explosive pace. Chinese players, such as fast-fashion retailer Shein and the multiline retailer Temu, owned by Pinduoduo, have seen their share of app downloads rise exponentially. Temu app downloads reached a peak of 60 million in July 2024. up from only 0.4 million two years ago[20]. The business model facilitates the purchase of huge quantities of low value products, which are sent directly to consumers from Chinese factories.

While some might argue for the “democratisation” of consumption through aggressive price competition, particularly as these brands expand into developing markets, the negative impacts of their business models require careful consideration.

Various studies have shown that e-commerce on average uses higher quantities of packaging materials compared to bricks-and-mortar shopping[21]. This has an impact on carbon footprint through both the manufacturing process as well as the increase associated with the higher weight for shipping, not to mention waste management. The composition of packaging is also a key consideration with mixed materials used in composite packaging and sticky returns labels almost impossible to recycle.

Meanwhile, the vast majority of plastic packaging, particularly films and plastic bags, is never recycled, resulting in high levels of pollution into the ocean[22].

In addition to the environmental impact of the shipping of millions of low value parcels, it is worth considering the impact on domestic economies. The low value of each individual parcel means that they typically bypass local cross-border customs tariffs, which local retailers will be obliged to pay on their own imports of both finished goods and inputs into domestic manufacturing operations. Doubtless this will attract increasing regulatory attention as the share of cross-border e-commerce grows[23].

How can we invest in e-commerce sustainably?

Online shopping is likely to increase for years to come, with penetration in emerging markets catching up or even leapfrogging developed markets. Understandably investors are keen to access this growth.

This requires a careful analysis of business models to ensure that there is a credible theory of change – to explain both unmet needs and specifically how a business’ products and services address that to enable positive, measurable impacts.

In the case of e-commerce, the value often lies in being able to leverage the powerful network effect of a platform to benefit small entrepreneurs, enabling them to be more productive and optimise their market reach, boosting formalisation and employment.

There are a number of ways e-commerce businesses can address the operational risks associated with their carbon footprint. It could mean committing to net zero strategies, setting clear and credible targets which encompass the adoption of electric vehicles, the use of logistics-optimisation technology and considering the lowest carbon options for last-mile delivery.

Although not covered here, it is important to also consider the human capital implications of increased warehouse automation with cost improvements reinvested in the upskilling of the workforce.

Investors can engage actively on these issues and other material areas of strategy, for example the optimisation of packaging and the adoption of closed-loop recycling initiatives.

[20]Statista: Temu global app downloads 2024. [21]UNCTAD UN Digital Economy 2024. [22]The Ellen Macarthur Foundation: The New Plastics Economy: Catalysing action. [23]Time: The Tax Loophole That Helps Temu and Shein Keep Prices So Low.

From a financial sustainability perspective, while the power of the ecosystem provides a potent economic moat, companies need to continue to invest and innovate to maintain industry leadership. An unwavering focus on the creation of long-term customer value is the key to achieving this.

Put simply, the key to investing for both financial return and positive impact lies in identifying and assessing answers to three questions or, as we call it, the power of three.

E-commerce platforms enjoy powerful network effects, benefitting from operational leverage such that attractive financial returns ought to be possible, but we need to go further in answering the first two questions if Black Friday is ever to turn green.

The power of 3

Is what the company does sustainable?

Is how they do it sustainable?

Can the business deliver a sustainable financial return?

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