The Economics of Commercial Van Usage Across Europe, 2024

A report by

Cebr

Authorship and acknowledgements

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Contents

Introduction and executive summary

Cebr is pleased to present the following report to Ford Pro on the electrification and economics of commercial vehicles. The report is split into the following sections:

1) The Electrification Index

    - The Electrification Index is a measure of electrification progress and potential for five prominent van markets in Europe: France, Germany, Italy, Spain, and the United Kingdom. The Index compares electrification potential and infrastructure in 2023, building upon a previous iteration looking at 2018.

2) Economic activity supported by vans

    - In a refresh of previous research, this section presents estimates for the value of economic activity in van-related industries, such as construction, repairs and maintenance, freight, and various services activities. Figures are here presented for the five national markets considered in the rest of the study, as well as for the EU as a whole. The data cover the period between 2019 and 2023.

3) Costs and benefits of electrification

    - This section explores the costs and benefits that could be realised by businesses seeking to adopt a fleet of electric vans. These costs are presented in total terms and in net terms, relative to the adoption of a fleet of petrol- or diesel-fuelled vans. A range of costs and savings sources is explored, including upfront purchase values, maintenance and operation, and depreciation.
    - The section benefits from input from a bespoke survey of van users across the five European markets. This provides bespoke values for various cost sources, while also exploring attitudes towards adoption.

4) Harnessing new technology and software

    - This section further utilises the bespoke survey to consider adoption of other technologies and software amongst van users. We also explore the extent to which such adoption has led to positive productivity and operational impacts.

The following represent key findings from the report:

The Electrification Index

- Between 2018 and 2023 all countries except for the UK have improved on the Electrification Index. The widespread improvement has mainly been driven by an increase in the number of charging points per 100,000 people and growth in the market share of electric vehicles in new van registrations.
- The market share of electric vans has grown particularly strongly in France, Germany, and the UK since the previous edition of this report. Given the high percentage of electric vans amongst new van registrations, this share can grow significantly further yet. Between 2018 and 2023 the electric van market share in new registrations has grown from 2.1% to 9.5% in Germany, from 2.1% to 7.1% in France, and from 0.3% to 6.0% in the UK.

- France ranked first on the Electrification Index in 2023, reflecting its already and continually strong adoption of electric vehicles.
- Spain observed the largest improvement in its index score, rising by 20.7 points between 2018 and 2023. This suggests there is potential for significant growth in the Spanish electric van market over the coming years.
- The UK was the only country to fall on the index. This partially reflects its poor performance on the fuel cost pillar, reflecting the UK's relatively high cost of electricity compared to petrol or diesel following the 2022 energy price shock.

Economic activity supported by vans

- Across the EU, activity amongst van-related industries was an estimated €860 billion. This exceeds the size of the GDP of all but five EU countries and is equivalent to 5.1% of EU-wide GDP. Within this figure, an estimated €14.1 billion was supported by activities of electric vans.
- Our estimates suggest that van-related activity across the EU picked up by 6.5% between 2021 and 2023. This was stronger than the equivalent growth rates for sectors such as agriculture, forestry and fishing, real estate, financial and insurance activities, public sector activity, and the broader categories of industry and construction. Van-related activity also outgrew the EU economy as a whole over this period.
- As of 2023, two of the national markets have witnessed a complete recovery in activity beyond pre-pandemic levels. In relative terms, France is the strongest performer on this metric, with activity being 13.4% higher last year than was the case in 2019.
- Germany is the largest national market for van-related activity. These sectors produced an estimated €213 billion of activity in the country in 2023.
- France is the second-largest national market, with van-reliant industries producing an estimated €180 billion of activity in 2023. In relative terms, van-reliant industries contribute a larger share of France's economy than any other market in this study.
- Van-related industries in the UK produced an estimated €136 billion of activity in 2023. The equivalent figures for Italy and Spain are €106 billion and €67 billion, respectively.

Costs and benefits of electrification

- Our analysis of the costs of electric vans compared to diesel or petrol equivalents demonstrates it is net beneficial to invest in an electric fleet when considering costs over a three-year timeframe. Beyond the higher upfront purchasing costs, this suggests that small- and medium-businesses could in fact benefit financially from switching vehicle types.
- Comparing the average upfront cost of small electric vans with their petrol and diesel counterparts, we find that France faces the smallest difference when excluding grants. This was followed by the UK and Germany. Italy sees the largest divergence on this metric.
- When taking into consideration government purchase subsidies, businesses in Germany face the largest average difference due to the recent removal of electric vehicle grants.
- Our analysis considered both small and large maintenance costs and found that it is net beneficial to own an electric van due to the cost savings through lower small maintenance costs.

- In the UK, France, and Spain, businesses using large electric vans face a negative net depreciation cost in comparison to petrol- or diesel-powered van users. This means that, in terms of absolute depreciation costs, it is more beneficial to have an electric fleet as opposed to a petrol or diesel one.
- Electric van users incur significantly lower costs to keep their van fuelled relative to those driving petrol or diesel vans, amounting to less than one third of the costs. Our survey results indicate that the annual cost associated with recharging an electric van is €3,700. Meanwhile, the equivalent value for refuelling a petrol or diesel van is estimated at €12,400. These calculations are based on a combination of our bespoke survey of van users, which asked respondents about their refuelling and recharging habits, and publicly available data on refuelling costs.
- When asking respondents that do not currently drive an electric van about their reasons for doing so, charging time was the most commonly-cited option, being selected by 38.1% of the sample. Upfront purchase costs were next, at 37.7%.
- There was a generally positive relationship between business size and the likelihood of having already adopted an electric van. For instance, just 2.2% of sole traders in our sample stated that they currently drive an electric van, while 13.0% of those at large enterprises reported usage.

Harnessing new technology and software

- Our survey asked businesses with vans about their adoption of, and experience with, various technologies. From a list of twelve technologies, software, or infrastructures, the most commonly used was vehicle safety and security measures, selected by 28.0% of the sample. This response was particularly common amongst drivers of electric vans, selected by 42.9% of this subgroup. This compares to 29.6% and 24.6% of petrol and diesel van drivers, respectively.
- Vehicle tracking technology was the second most common response, being used by 26.5% of the sample. Again, this response was particularly common amongst drivers of electric vans, cited by 40.5% of this subgroup. This compares to just 28.7% and 22.6% of petrol and diesel drivers, respectively.
- Amongst business adopters of technologies and software, the overwhelming majority reported positive impacts on productivity. This was particularly the case for those adopting vehicle safety and security measures, fleet management solutions, and communication software.
- Similarly, an overwhelming majority of business technology and software adopters reported positive operational impacts. Here, this was particularly likely amongst adopters of compliance and reporting systems, telematics integrated with other systems, and communication software.
- A minority of van users reported already adopting the various technologies and software posed to respondents. However, a majority of adopters reported having benefitted from doing so. This suggests an as yet unexhausted opportunity for making widespread improvements in productivity amongst businesses reliant on commercial vehicles.

Conclusion

- This report highlights that the technological shift towards electrification could potentially be beneficial for small- and medium-businesses in terms of net costs. This is because lower costs, such as refuelling and maintenance, outweigh the cost of factors such as infrastructure installation.
- Our research demonstrates that electric vans already support a significant proportion of economic activity across European markets. If adoption continues, then our broader figures for van-reliant industries indicate this could rise yet further.

- In terms of electric van sales, Germany leads the forefront of the electrification transition, followed by France and the UK. These are also the three highest ranked countries in our Electrification Index. However, our analysis illustrates all markets considered in this report have high electrification potential.

1. The Electrification Index

The Electrification Index represents a measure of the progress of, and potential for, electrification success for five prominent van markets: France, Germany, Italy, Spain, and the United Kingdom. Data were acquired from a range of sources to evaluate eight key indicators pivotal to the potential success of van electrification, encompassing factors such as:

- The dynamism of the existing van market
- The current extent of electric van adoption
- The comprehensiveness of governmental support for electrification initiatives
- Other country-specific attributes beneficial to advancing electrification further

The 2023 Electrification Index serves as an updated iteration of a previously constructed index, which covered electrification potential in 2018. The new measure offers a comprehensive evaluation of the evolving landscape of van electrification across the five countries of interest. Please note that the Electrification Index's methodology has been altered from the initial iteration to allow for cross-country and intertemporal comparisons, ensuring that the measure can gauge electrification progress both across nations and over time. Further details on the methodology are presented in Appendix A.

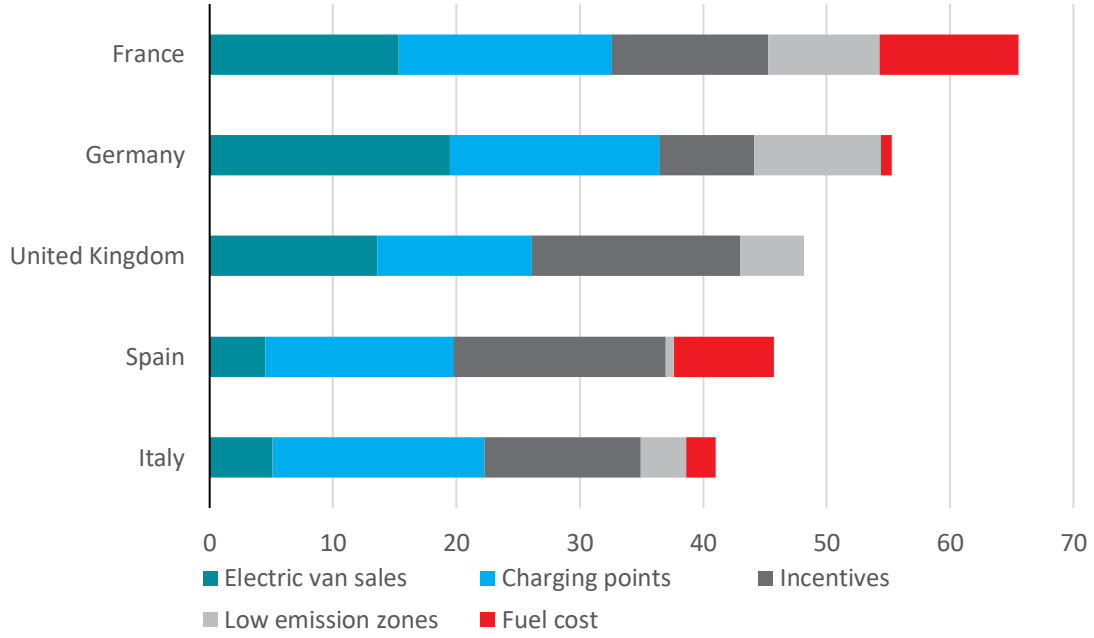
Our framework comprises eight indicators which feed into five distinct enabling pillars, with standardised scores ranging from 0 to 100 assigned to each nation. These scores were subsequently combined to derive the final Index, as depicted in Figure 1 below. A score of 100 represents the highest score on our index and would indicate a country has performed best on all the indicators. By contrast, a score of 0 would indicate a country has performed the worst on all the indicators both across countries and also over time. In general, higher scores are associated with stronger performance both over time and across the sampled countries.

The index is a measure of the potential for electrification success within a country and the existing progress made towards electrification. It does this by quantitatively assessing key factors for electrification success and progress. These factors include the ability for electric vans to penetrate the commercial market, the charging infrastructure available, incentives available for individuals and small and medium businesses considering electrification, and the ratio of fuel costs between electric and diesel or petrol vans. Collectively, these factors provide a comprehensive assessment of the opportunities and challenges associated with electrification within a country.

Amongst our five markets, France, Germany, and the United Kingdom appear to have made the most considerable electrification progress thus far in terms of electric van market share. This is reflected in the electric van sales pillar, which is a key measure for existing progress made with regards to electrification. These countries also comprise the top three scores on the overall Electrification Index in 2023.

Of the five countries France takes the top spot on the 2023 Electrification Index with a score of 65.6. This is largely reflective of its high-quality charging point infrastructure and strong fuel cost ratio. Consequently, these factors have contributed to electric vehicles gaining relatively high market share amongst drivers in France. Germany and the United Kingdom are placed second and third on the index with scores of 55.3 and 48.2, respectively. Meanwhile, Spain and Italy are slightly behind in their electrification potential and progress, scoring 45.7 and 41.0, respectively.

Figure 1 – Electrification Index 2023, by category

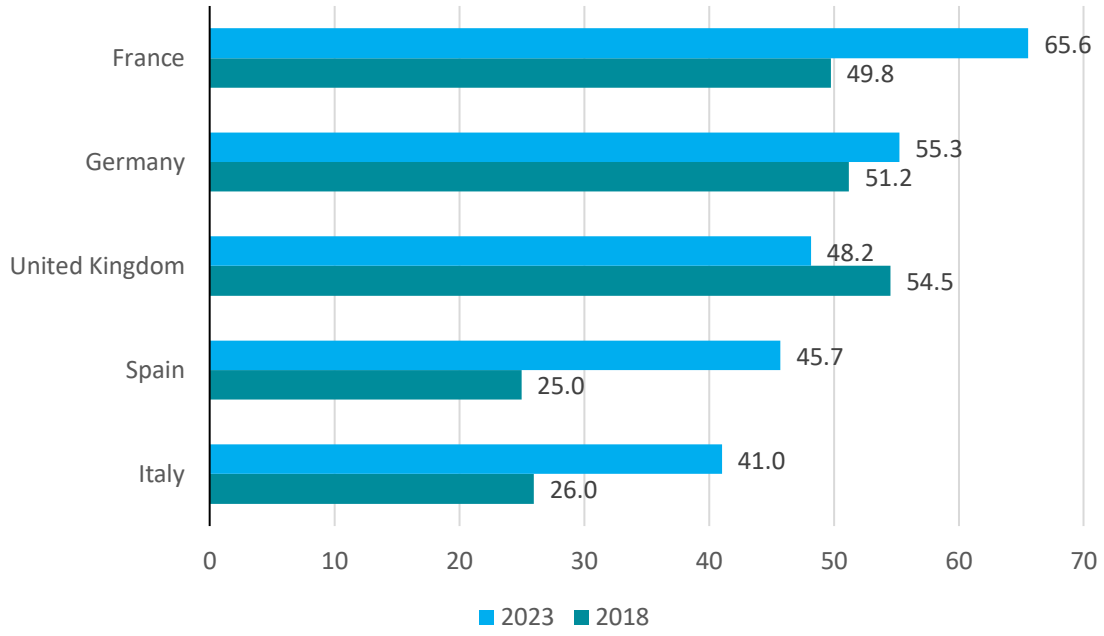


Source: Cebr analysis

Figure 2 shows how the Electrification Index has changed over time. Between 2018 and 2023 all countries except for the United Kingdom have improved on the measure. The widespread improvement on the index was largely driven by an increase in the number of charging points per 100,000 people and an uptick in the share of electric vehicles in new van registrations. Spain observed the largest improvement in its index score, rising by 20.7 points between 2018 and 2023. By contrast, the United Kingdom was the worst performer over time, dropping by 6.3 points between 2018 and 2023. The United Kingdom's fall reflects its particularly poor performance on the fuel cost pillar, which tracks the ratio of the cost of one litre of petrol or diesel fuel and the cost of one kWh of electricity. The UK's poor performance on this pillar reflects the fact that the country was particularly hard hit by the energy crisis from early 2022 onwards, due to its reliance on gas. Further, the United Kingdom has lagged behind its peers on the rollout of fast charging points, defined as points capable of charging at over 22kW.

Despite Germany having the highest electric van market share in 2023, it ranks second on the Electrification Index. This is due to its poor performance on measures of incentives for van electrification and also relative fuel cost. On the former, Germany recently decided to end its subsidy programme for the purchase of electric vans which explains its low score on the incentive pillar on the 2023 Electrification Index. Meanwhile, France performed second best on electric van market share in 2023 but ranks first on the overall index. This is because of strong performance on the fuel cost indicator and the widespread introduction of low emission zones, amongst other factors.

Figure 2 – The Electrification Index, 2018 and 2023



Source: Cebr analysis

France climbed from third to first on the Electrification Index between 2018 and 2023. The United Kingdom dropped from first in 2018 to third in 2023. This was largely driven by the aforementioned worsening on the fuel cost indicator. Meanwhile, Germany remained unchanged in second and Spain improved by one place to fourth. Italy dropped one place to rank last.

1.1 Electric van sales

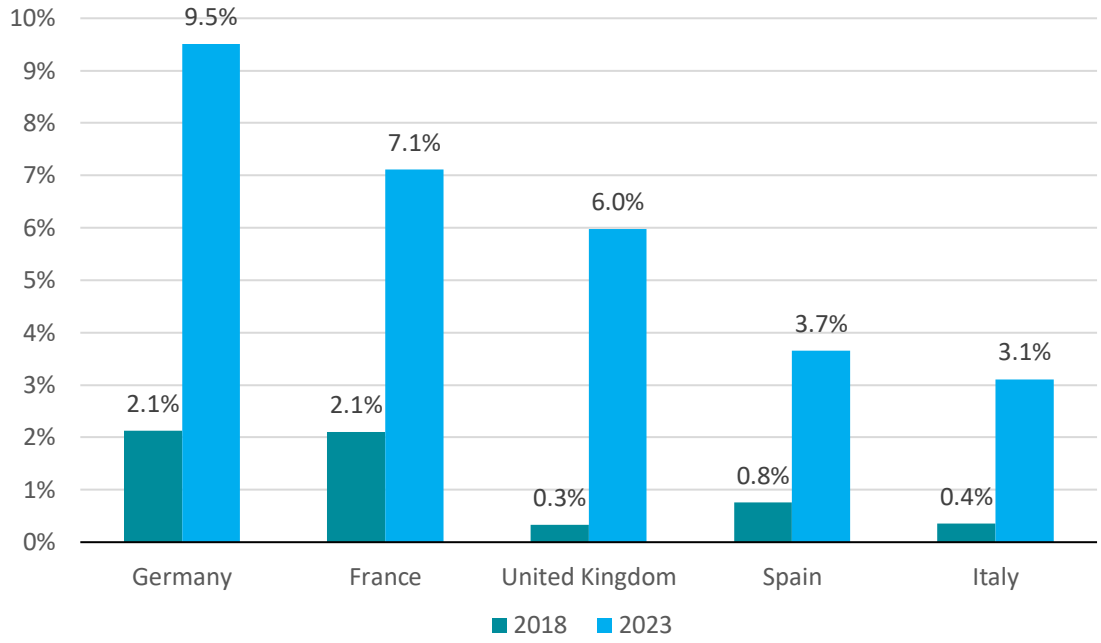
The ability of a market to transition to electrification is driven by the following two factors: the rate at which the stock of vans is updated and the ability of electric vans to gain market share.

Germany and France emerge as leading examples, demonstrating a noteworthy adaptability to electrification. Both nations have consistently exhibited higher rates of electric van market penetration compared to their counterparts, which may partially reflect the fact that they have updated their charging infrastructure faster, allowing for fast electric van adoption. According to Cebr modelling of data from the European Alternative Fuel Observatory, Germany witnessed electric vans accounting for 9.5% of new van registrations in 2023, higher than France's 7.1%.

It is worth noting that all countries have significantly improved on this measure since 2018. This is particularly the case for the United Kingdom, which has seen its share of electric vans in new van registrations rise from 0.3% in 2018, then the lowest share amongst the five countries considered in this study, to 6.0% in 2023. This is now the third highest share amongst the five countries.

A contributing factor toward the rise in the share of electric vans in new van registrations over this time period is the prevalence of new models available on the market. Indeed, the introduction of larger vans in particular means electric vans are more accessible to a wider range of business types.

Figure 3 – Share of electric vehicles in new van registrations



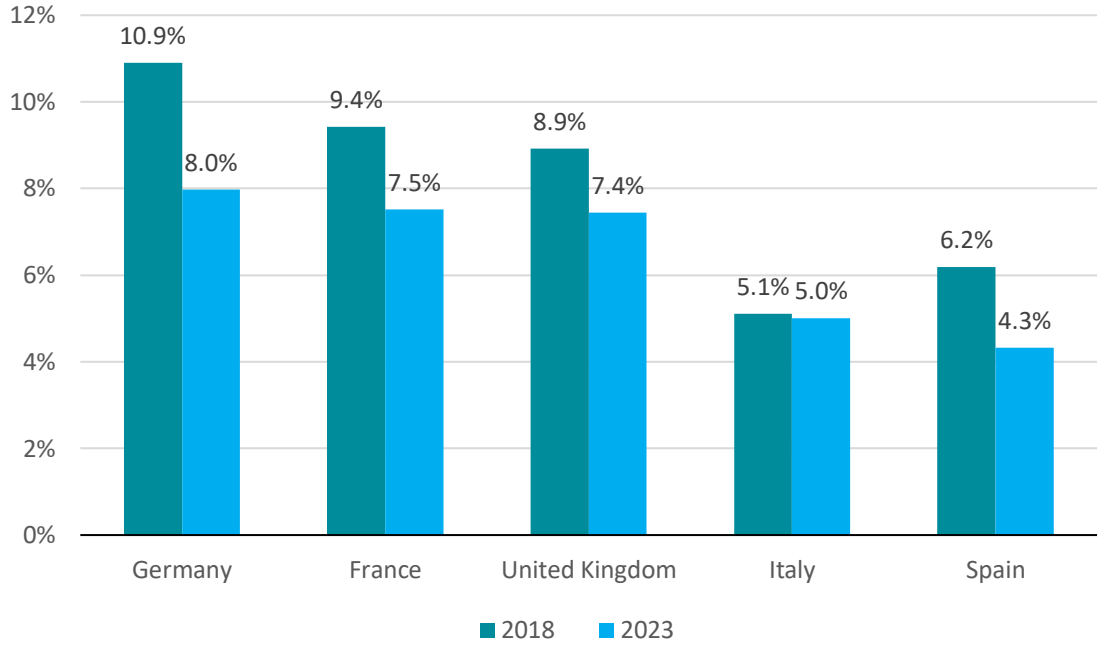
Source: European Alternative Fuel Observatory, Cebr analysis

The strong improvement in electric van market share since 2018 in Germany, France, and the United Kingdom is partially reflective of the rate at which new vans enter these markets. Figure 4 illustrates that Germany has consistently had the highest number of new registrations as a share of the total stock of vans. In 2023 the number of new registrations was 8.0% of the total stock of vans in Germany. This was closely followed by France and the United Kingdom at 7.5% and 7.4%, respectively. The higher tendency to register new vans, coupled with legislative changes and preference shifts towards electric vehicles, provides great potential for electric vans to make up a growing share of total vans amongst these countries.

Meanwhile, Italy and Spain continue to lag behind on the rate at which new vans penetrate their markets. Spain witnessed a particularly low reading on this measure in 2023, with new registrations making up just 4.3% of the total stock of vans.

Across all five countries the share of new van registrations as a percentage of total stock of vans has fallen since 2018. This could be partially reflective of weak growth across Europe for much of this period which has resulted in weaker growth amongst van-reliant industries. Indeed, Cebr analysis shows that, as of 2023, three of the five national markets have not witnessed a complete recovery in the economic activity of van-reliant industries beyond pre-pandemic 2019 levels. Additionally, there have been a number of notable supply chain disruptions, such as the pandemic and surging input costs, which will have impacted production and consequently new van registrations. Other factors holding back new van registrations as a share of total van stock could include the cost-of-living crisis, which has been experienced across all of the five markets in the study, as well as general economic uncertainty. These factors will likely have disincentivised major purchases such as vehicles in recent years. Longer replacement cycles may also lengthen the EV adoption curve.

Figure 4 – New van registrations as a percentage of total stock of vans



Source: European Automobile Manufacturers Association, Eurostat, Cebr analysis

1.2 Charging points

The rate at which a country is able to improve its infrastructure to support charging is an important determinant in how quickly and readily it can adopt electric vehicles. Though this section considers the availability of public charging points, it should be noted that for commercial uses where vans are typically charged at home or at a depot between shifts, how chargers are spread amongst these locations will be of major importance to a country's infrastructural capacity for electric vehicles.

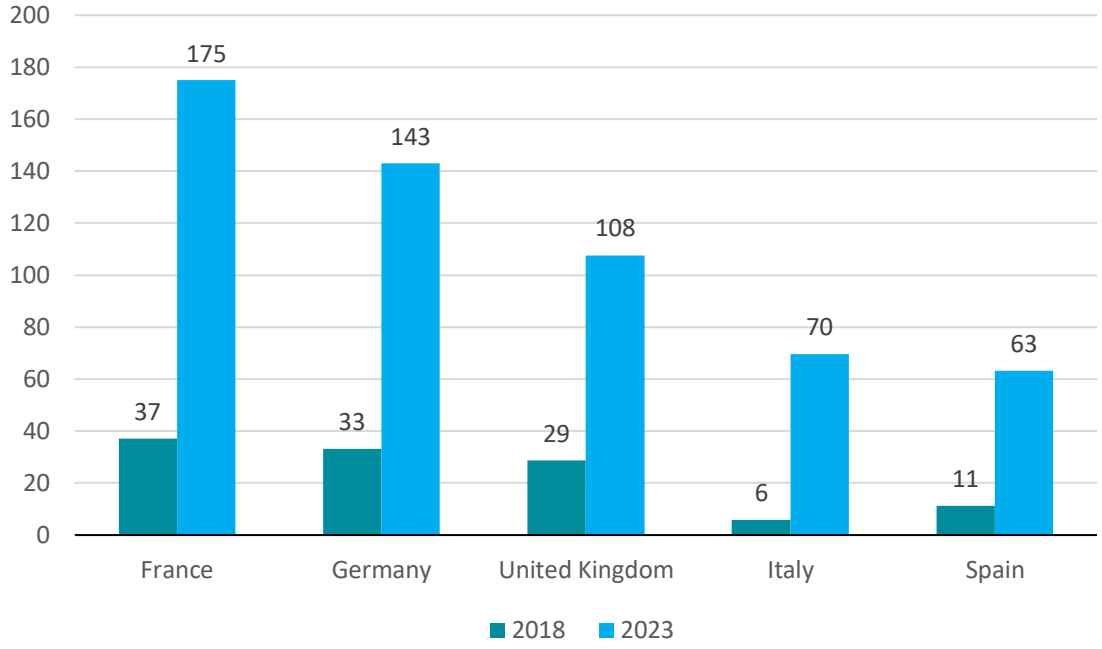
All countries witnessed significant growth in the number of public charging points between 2018 and 2023. France continues to lead the way in providing public charging points, rising from 37 per 100,000 people in 2018 to 175 per 100,000 people in 2023. However, across our five countries of interest it has the lowest share of fast chargers, defined as points capable of charging at over 22kW. These make up a total of just 16.8% of all chargers in France.

Meanwhile, Italy and Spain have the lowest numbers of charging points per 100,000 people at 70 and 63, respectively. However, they have the highest rates of fast charging points, at 28.9% and 26.5%, respectively, in 2023. This suggests that both these countries delayed installing chargers until charging technology had improved and that we may expect electric vehicle adoption to accelerate as infrastructure continues to improve.

Germany has a fairly high number of charging points at 143 per 100,000 people. It sits middle of the pack in terms of share of fast chargers, however, making up 20.1% of the total in 2023.

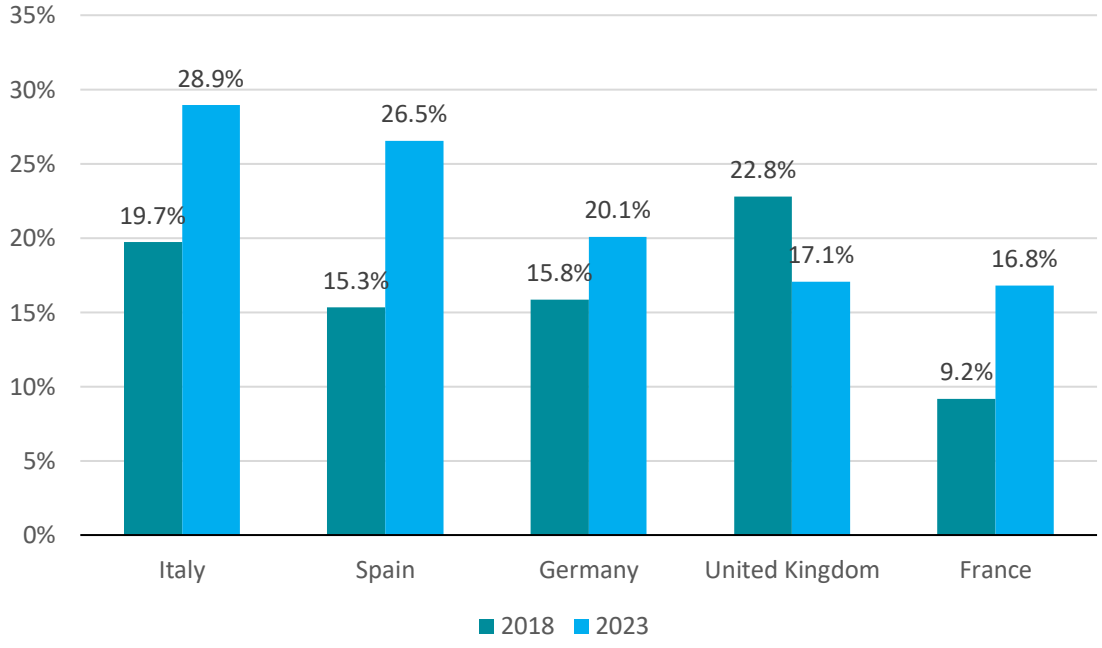
The United Kingdom's number of charging points has also improved rapidly from 29 to 108 per 100,000 people between 2018 and 2023. However, its share of fast chargers has fallen over time, suggesting that more slow chargers than fast ones have been installed since 2018.

Figure 5 – Charging points per 100,000 people



Source: Alternative Fuel Observatory, Cebr analysis

Figure 6 – Fast charging points as a share of total charge points



Source: Alternative Fuel Observatory, Cebr analysis

1.3 Electric vehicle incentives

The Index scores for electric vehicle incentives were categorised in two parts: purchase incentives and operational incentives.

When comparing purchase incentives between countries we adjusted for both the exchange rate and GDP per capita to account for discrepancies in relative purchasing power. On this measure, Spain comes out on top, offering up to €7,000 in incentives if a purchaser meets and follows certain criteria. This is followed by the United Kingdom, which offers a maximum discount for large vans of £5,000 (€5,750[1]). By contrast, Germany recently abruptly ended its electric vehicle purchase subsidies.

However, Germany does still offer a range of operational incentives. For example, electric vehicles are exempt from the annual circulation tax for five years from registration. In fact, all countries in this study offered fairly comprehensive operational incentives. This includes the United Kingdom offering grants for charging points at home. France gives electric vehicles 50% exemption from registration fees and 100% exemption from licence plate registration. Spain has exemption from registration tax for electric vehicles and exemption from road tax in many regions. Finally, Italy gives out tax credits to those who install domestic charging infrastructure, amounting to 80% of purchase and installation costs up to €1,500. These policies reduce the annual and total cost of electrification for small- and medium-sized business, providing incentives for electric van adoption.

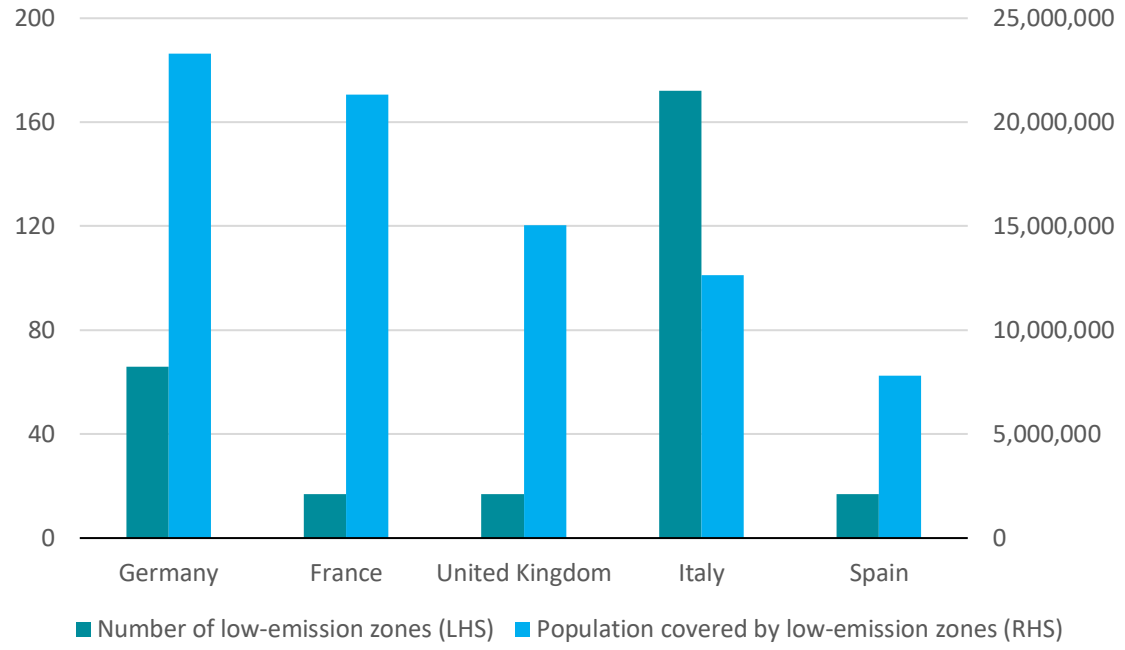
1.4 Low-emission zones

Low-emission zones serve as an incentive for the adoption of electric vehicles by imposing financial disincentives on the use of traditional combustion engines. By levying charges or penalties on high-emission vehicles entering designated areas, low-emission zones effectively elevate the operational costs associated with traditional petrol and diesel vehicles, thereby making electric alternatives comparatively more attractive, particularly for small- and medium-sized businesses.

As of 2023, Germany had the largest population covered by low-emission zones, at an estimated 23.3 million. This is closely followed by France, which despite only having 17 low-emission zones has a population coverage of 21.3 million. Similarly, the United Kingdom only has 17 low-emission zones but a population coverage of 15.1 million.

1 Currency conversion made using ONS data for April 2024.

Figure 7 – Number and estimated population coverage of low-emission zones, 2023



Source: Urban Access Regulations, Cebr analysis

These findings highlight that France and the United Kingdom have both chosen to implement low emission zones with a higher population density coverage than their counterparts.

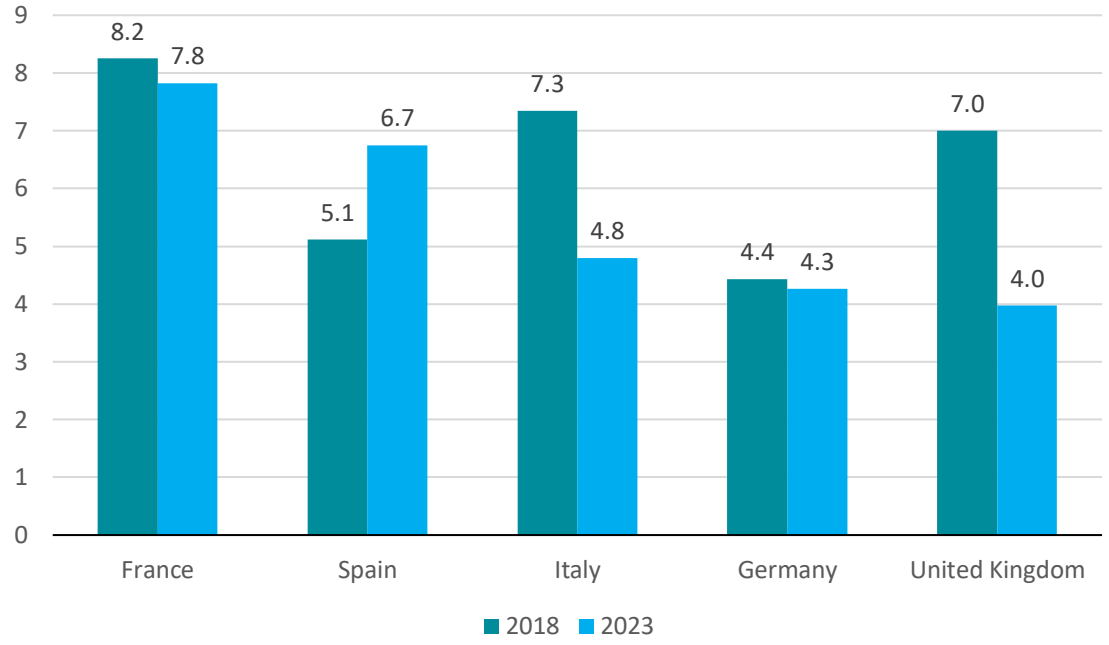
In contrast, Italy has by far the highest number of low-emission zones, at 172 in 2023. However, due to their small size, it has the second lowest population coverage of 12.7 million. Spain has both the joint lowest number of emission zones and the lowest population coverage, at 17 and an estimated 7.8 million, respectively. Notably, Germany, France and the UK have the largest populations in low emission zones and the highest EV van registrations within this five-year period. In terms of the share of population covered by low emission zones, this is highest in France (31.1%) and lowest in Spain (16.2%).

1.5 Fuel and electricity costs

In addition to the broader societal advantages of electrification brought about by zero emissions while driving, operators of electric vans also enjoy private advantages in terms of ownership. The operational costs of electric vehicles post-acquisition are notably lower, with the greatest benefits observed when fuel prices are high and electricity costs are low. The ratio between these two factors serves as a key indicator of the potential cost reductions for van operators across different countries.

Figure 8 demonstrates the ratio of the cost of one litre of fuel and the cost of one kWh of electricity. On this measure a higher score is better for electric vehicle users as it indicates that the price of electricity is low at that point in time relative to the price of fuel. In this section, fuel costs refer to a composite of petrol and diesel prices. Any references to electricity prices are made explicitly.

Figure 8 – Ratio of fuel and electricity prices



Source: European Commission, Office for National Statistics, Cebr analysis

Across four out of the five countries the ratio of fuel and electricity prices has worsened between 2018 and 2023. This is reflective of the energy crisis that has plagued Europe, following supply-chain disruptions and Russia's invasion of Ukraine. While fuel prices have not been immune to geopolitical turbulence in recent years, electricity prices in Europe have been more significantly affected.

Spain was the only country to witness an improvement on this metric between 2018 and 2023. Notably, Spain was more resilient to the energy price crisis, witnessing a lesser degree of inflationary pressure. Significant state intervention to lower energy prices also supported Spain's score for 2023.

Amongst the countries in the sample, the United Kingdom had the lowest ratio of fuel and electricity prices in 2023, indicating that electricity prices are relatively more expensive in this country. This is reflective of the United Kingdom being particularly hard hit by the energy crisis due to its reliance on gas. Germany was also impacted quite severely by the energy crisis and consequently experienced the second lowest ratio.

2. Economic activity supported by vans

This section presents a refresh of previous Cebr work for Ford Pro assessing economies' dependence on vans. We here present estimates for the gross value added, or economic activity, of van-reliant industries[2]. The details of these industries are outlined in Appendix B.

The figures cover the five national markets considered across the rest of this study, namely France, Germany, Italy, Spain, and the UK, as well as an aggregated estimate for the European Union.

For EU markets, actual figures from Eurostat are presented up to 2020. Figures for subsequent years are nowcasts based on Cebr modelling. For the UK, actual figures are presented up to 2018, with subsequent years presented as nowcasts based on data from the Office for National Statistics.

Van-reliant industries experienced a relatively uniform trend during the pandemic, with activity slumping as a result of restriction measures and general economic weakness. Since then, these industries have commenced with a recovery, though the extent of this varies across the national markets considered in this study.

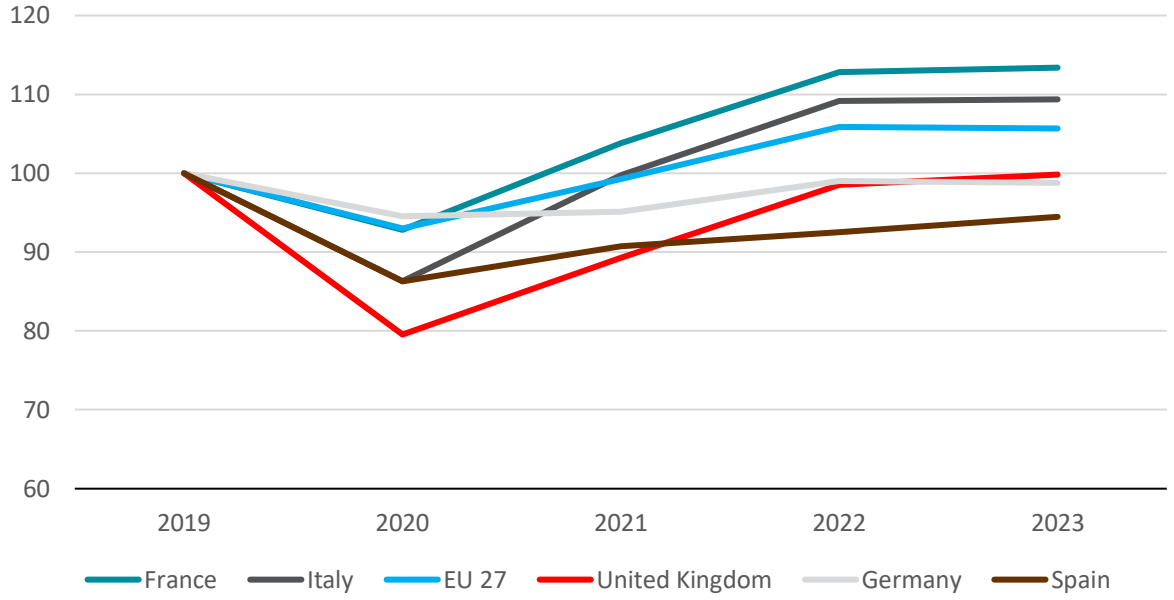
As of 2023, two of the national markets have witnessed a complete recovery in activity beyond pre-pandemic levels. In relative terms, France is the strongest performer, with activity being 13.4% higher last year than was the case in 2019. Activity in Italy was 9.4% higher in 2023 than in 2019. A complete recovery beyond pre-pandemic levels was also observed for the EU as a whole.

The other markets in this study continue to witness a shortfall in activity relative to 2019. This is largest in Spain, with output in van-reliant industries remaining down by 5.5% in 2023. Germany saw a shortfall of 1.2% on this metric. The UK was also down compared to 2019, though this was smaller in magnitude at 0.2%.

There has similarly been variation in near-term growth in activity. Despite witnessing the largest shortfall relative to pre-pandemic levels, Spain's van-reliant industries recorded the fastest growth in 2023, at an annual rate of 2.1%. At the other end of the scale, an annual contraction of 0.2% was recorded in Germany, mirroring the country's general economic weakness over this period, having been particularly exposed to the energy price shock stemming from Russia's invasion of Ukraine. A contraction was also recorded for the EU as a whole, despite growth in other major markets, such as France and Italy.

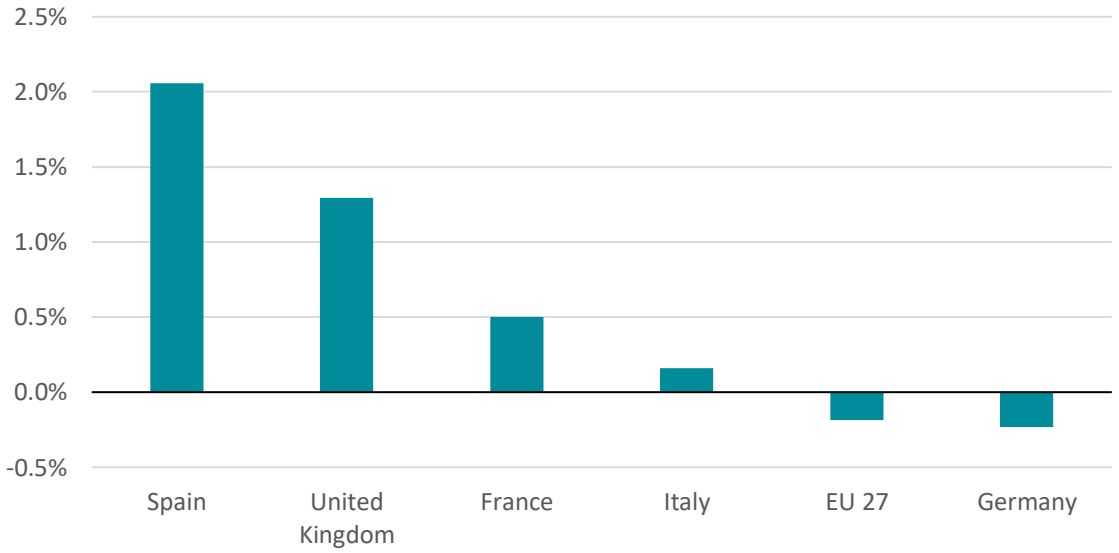
2 The terms 'gross value added' and 'activity' are used interchangeably in this section.

Figure 9 – Index of van-related activity in selected national markets, 2019 = 100



Source: Eurostat, Office for National Statistics, Cebr analysis

Figure 10 – Estimated growth in van-related activity in 2023



Source: Cebr analysis

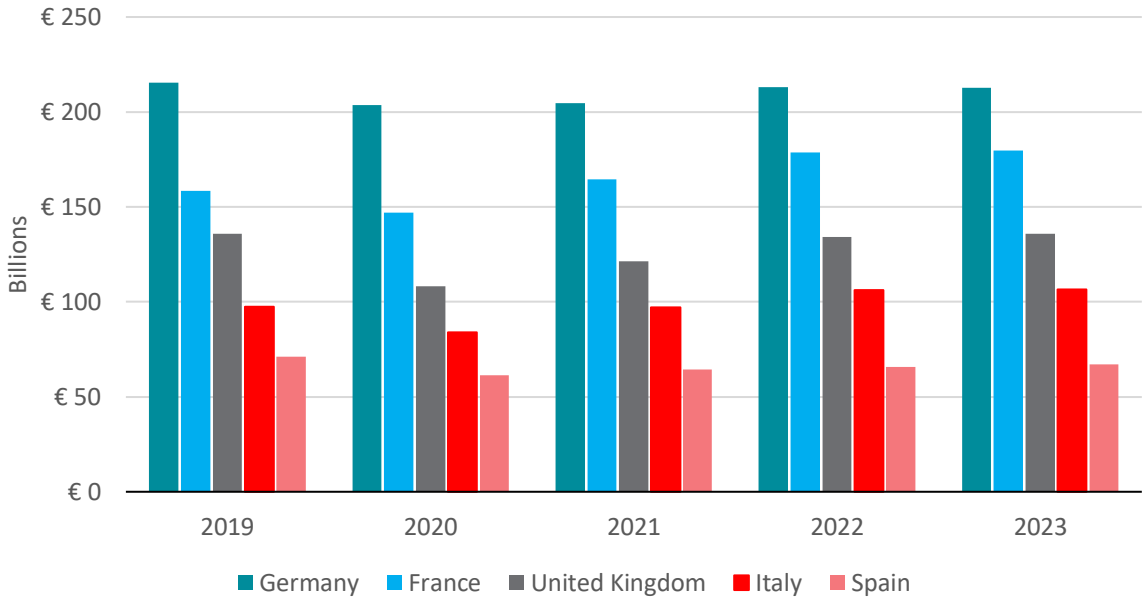
Germany's contraction in 2023 was not sufficient to displace it as the largest national market for van-related activity. These sectors produced an estimated €213 billion of activity in Germany in 2023. This is down on the near-term high of €215 billion recorded in 2019, however.

France is the second-largest national market, with van-reliant industries producing an estimated €180 billion of activity in 2023. In relative terms, van-reliant industries contribute a larger share of France's economy than any other market in this study. Returning to absolute terms, the UK is next in line, with estimated activity of €136 billion in 2023. The values for Italy and Spain are €106 billion and €67 billion, respectively.

The value for the EU as a whole is €860 billion, down slightly from the near-term high of €861 billion recorded in 2022. This equates to a fall of 0.2%, marking slightly worse performance than the EU economy as a whole, which grew at the relatively slow rate of 0.4% between these periods. However, the performance was stronger than a number of sectors, including the broader industry category, which declined by 1.5%. For comparison, the scale of economic activity in van-reliant industries across the EU is larger than the national outputs of many European countries, only being smaller than the economies of Germany, France, Spain, Italy, and the Netherlands. As a share of the EU's total economic activity, van-reliant industries contributed an estimated 5.1% in 2023.

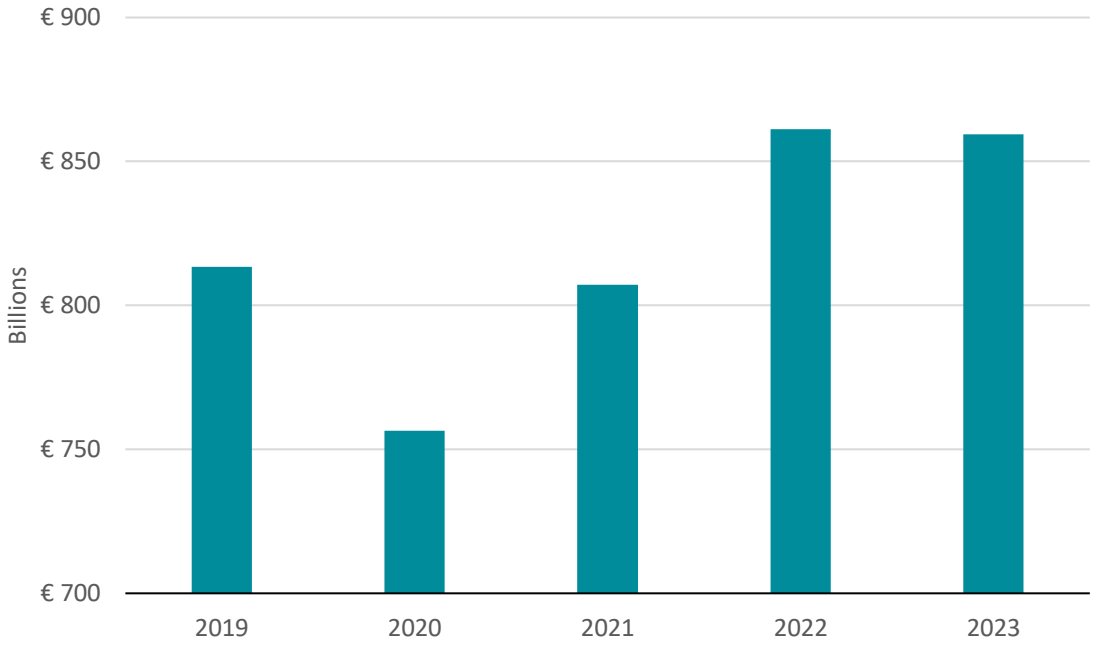
The growth of activity in van-related industries between 2021 and 2023 was stronger than many other sectors, however. Our estimates suggest that van-related activity across the EU picked up by 6.5% between these years. This was stronger than the equivalent growth rates for sectors such as agriculture, forestry and fishing, real estate, financial and insurance activities, public sector activity, and the broader categories of industry and construction. Van-related activity also outgrew the EU economy as a whole over this period.

Figure 11 – Gross value added amongst van-reliant industries, by national market



Source: Eurostat, Office for National Statistics, Cebr analysis

Figure 12 – Gross value added amongst van-reliant industries, EU 27



Source: Eurostat, Cebr analysis

A consistent result across the study is that services contribute to a majority of the output produced by van-reliant sectors. This includes activities such as transport, freight, removal services, cleaning and landscaping, and household repair services. In 2023, the share of van-reliant activity contributed by services sectors was highest in Spain, at an estimated 69.0% and lowest in Italy, at 53.5%. The remaining output amongst van-reliant industries stems from construction and industry activities, such as electrical installations, plumbing and heating, plastering, and joinery.

A new addition to this report relative to its previous iterations is an estimate of the value of activity supported by electric vans specifically. This combines the value added estimates presented in this section with data from the European Alternative Fuels Observatory on the share of total van stock classed as electric.

In doing so, we estimate that €14.1 billion of activity across the EU was supported by electric vans in 2023. Within this figure, the largest single contribution comes from Germany, at €4.7 billion. This reflects its status as the largest national economy considered in this study, as well as the fact that electric vans account for 2.2% of all vans in the country and 9.5% of all new van registrations. This was the largest share of the countries in the study.

As with the total contribution from van-related industries, France makes the second-largest contribution when looking only at electric vans, with supported activity amounting to €3.8 billion in 2023. Meanwhile, Italy and Spain's figures amount to €0.4 billion and €0.3 billion, respectively.

Collectively, the five national markets considered in this study recorded electric van-related activity of €11.0 billion in 2023. This figure includes the UK's contribution of an estimated €1.8 billion.

3. Costs and benefits of electrification

Costs of fleet electrification

This section considers the costs associated with transitioning to an electric van fleet, combining secondary desk research with insights from a bespoke survey of van drivers. Costs are presented in net terms against the costs associated with maintaining a fleet of petrol- or diesel-fuelled vehicles.

To assess the financial implications of transitioning to electric vehicles for businesses, we examine the hypothetical van fleets of four distinct business profiles. These profiles serve to illustrate the potential costs associated with the adoption of an electric fleet. Given the important role of vans in the operations of many businesses, ranging from sole traders to large corporations, we analyse the following archetypes:

1. A sole trader with one van
2. A small business with five vans
3. A medium-sized business with 100 vans
4. A large business with a substantial fleet of 1,000 vans

3.1 Electric van prices relative to petrol and diesel

To begin our assessment of the diverging costs between electric and petrol- and diesel-fuelled vans, we first consider the upfront purchase costs. In this section we present and assess the average prices of petrol, diesel, and electric vans across our five European markets, based on a review of prices of flagship models listed on the websites of major manufacturers[3].

The majority of the fully electric vans currently available on the market are small, classed as up to 2,000kg in gross vehicle weight. However, in recent years there has been an increase in the availability of larger vans, with gross weights up to 3,500kg. We provide average prices for both to give a detailed analysis of the costs associated with electrification.

The averages of the small petrol and diesel and electric model prices are presented in the table below. We also present the difference between these prices in both monetary and percentage terms.

Table 1 – Average price of small petrol, diesel, and electric vans, by European market, nearest €1,000

Country	Average list price (ex.VAT)		EV cost difference	
	Diesel/petrol	Electric	€	%
UK	€ 24,000	€ 36,000	€ 12,000	53%
Germany	€ 21,000	€ 33,000	€ 12,000	55%

3 The models analysed are Peugeot Partner, Citroen Berlingo, Nissan Townstar, Renault Kangoo, Ford Transit.

France	€ 23,000	€ 33,000	€ 10,000	39%
Italy	€ 21,000	€ 34,000	€ 13,000	64%
Spain	€ 21,000	€ 33,000	€ 12,000	57%

Source: Van manufacturers' websites, Cebr analysis

The above table illustrates that, exclusive of subsidies and value added taxes, the list-price of a small electric van is likely to lie between 40% and 65% above its diesel- and petrol-fuelled equivalent. Italian van operators face the largest cost difference, as the average price of diesel and petrol vans was at the lower end of the price range, while electric vans were towards the upper end. Meanwhile, France faces the smallest cost difference. The cost differences for the UK, Germany, and Spain are quite closely aligned and sit between 53% and 57%.

The averages of large diesel, petrol, and electric model prices are presented in the table below.

Table 2 – Price of large diesel/petrol and electric vans, by European market, nearest €1,000

Country	Average list price (ex.VAT)		EV cost difference	
	Diesel/petrol	Electric	€	%
UK	€ 53,000	€ 60,000	€ 7,000	13%
Germany	€ 42,000	€ 62,000	€ 20,000	47%
France	€ 48,000	€ 64,000	€ 16,000	32%
Italy	€ 40,000	€ 58,000	€ 18,000	43%
Spain	€ 47,000	€ 56,000	€ 9,000	20%

Source: Van manufacturers' websites, Cebr analysis

The large electric van list-price, exclusive of subsidies and value added taxes, is likely to lie between 10% and 50% above that of diesel- and petrol-fuelled vans. Interestingly, all five European markets have a lower implied cost difference for larger vans than for small.

3.2 The cost of workplace charge points

To achieve complete electrification of a commercial fleet, it is crucial for businesses to ensure that their vehicles can readily access suitable charging infrastructure. For companies operating from a central depot, this could entail installing sufficient charging stations to adequately serve the entire fleet's needs. Meanwhile, for a sole trader, this may involve installation of a domestic charging station.

Previous research[4] for the European Parliament's Transport and Tourism committee proposed a unit cost of up to €2,000 for a commercial slow charge point. This cost would rise for faster chargers, with direct current fast chargers costing in the region of €20,000. This type of charger is around 20 times faster than the basic slow chargers and aims to return batteries to around 80% charge within 20 minutes.

Across our five European markets there is a range of different policies in place to aid and encourage the installation of charging infrastructure. For example, the UK operates a Workplace Charging Scheme which provides support for businesses towards the cost of installing up to 40 electric vehicle charge point sockets. Meanwhile, Spain has a similar scheme in which businesses can receive either 30%, 45%, or 55% subsidy for the installation of charging infrastructure depending on the size of the business.

Across the different business archetypes presented in this study, the average net costs associated with standard charging points are the lowest in Spain due to the subsidies for installation. In Spain the average net costs are €900 for sole traders, €4,500 for a small fleet, €110,000 for a medium-sized fleet, and €1,400,000 for a large fleet. As previously mentioned, there are also installation subsidies available in the UK. Subsequently, the average net costs in the UK are €1,600 for sole traders, €8,000 for a small fleet, €184,000 for a medium-sized fleet, and €1,984,000 for a large fleet. Due to lack of subsidies, the other markets in this study are each assumed to have the same costs on this metric, amounting to €2,000 for a sole trader, €10,000 for a small fleet, €200,000 for a medium-size fleet, and €2,000,000 for a large fleet.

It is also worth noting that some workers, particularly those at small- and medium-sized businesses, may have to take their electric van home and charge it overnight. Consequently, an important part of encouraging electrification will be continuing to develop on-street charging. In addition to the schemes discussed above, our five European markets also have programs in place to incentivise and encourage the installation of such infrastructure.

3.3 Subsidies and fleet discounts

Some European governments provide subsidies to incentivise increased adoption of electric vehicles. These subsidies serve to mitigate the direct capital costs associated with electrification. However, not all European markets currently have such subsidies in place.

Table 3 – Government funded electric vehicle purchase incentives, by country

Country	Subsidy	Maximum
UK	20% of purchase price	£ 2,500 (small vans) £5,000 (large vans)
Germany	No purchase subsidy	
France	€ 4,000	27% of purchase price
Italy	€ 3,750 flat rate	
Spain	€ 4,500 flat rate	

4 Research for TRAN Committee: Charging infrastructure for electric road vehicles - June 2018 (PE 617.470)

Source: European Alternative Fuels Observatory

All schemes have differing requirements, but Spain has potentially the most generous regime in place for the purchase of commercial vehicles. At the other end of the scale, Germany recently decided to end its subsidy programme which had previously offered €4,500 for the purchase of electric vehicles.

Table 4 – Average price of small diesel/petrol and electric vans including government grants, by European market, nearest €1,000

Country	Average list price (ex.VAT)		Cost difference	
	Diesel/petrol	Electric (including grants)	€	%
UK	€ 24,000	€ 33,000	€ 9,000	41%
Germany	€ 21,000	€ 33,000	€ 12,000	55%
France	€ 23,000	€ 29,000	€ 6,000	22%
Italy	€ 21,000	€ 31,000	€ 10,000	46%
Spain	€ 21,000	€ 28,000	€ 7,000	36%

Source: Van manufacturers' websites, Cebr analysis

The above table combines the subsidy values with the pre-subsidy prices presented in Table 1. Unsurprisingly, Germany now has the largest electric vehicle cost difference due to its lack of purchase subsidy scheme. Meanwhile, France still has the smallest difference in prices between van types, followed by Spain. Both the UK and Italy now have cost differences between the prices of electric vans and diesel- and petrol-fuelled vans of less than 50%.

Manufacturers and dealers of commercial vehicles also offer discounts to fleet operators that may reduce the upfront capital cost of electrification, albeit these are also available for diesel and petrol vehicles. For the purposes of our scenarios, the following subsidy values were assumed across all markets:

- Sole traders (1 van) and small businesses (5 vans): 0% discount
- Medium-sized fleet (100 vans): 10% discount
- Large fleet (1,000): 15% discount

When considering these discounts and grants, we can comprehensively evaluate the upfront purchase costs across our different business archetypes and countries. We find the absolute cost of buying small electric fleet vans is lowest in Spain where the total purchase costs are €28,000 for sole traders, €142,000 for a small fleet, €2.5 million for a medium-sized fleet, and €24.1 million for a large fleet. This is closely followed by France where the initial costs of buying small electric vans are €29,000 for sole traders, €143,000 for a small fleet, €2.6 million for a medium-sized fleet, and €24.3 million for a large fleet.

When it comes to purchasing large vans we find that Spain again has the lowest fleet purchase cost inclusive of grants and fleet discounts. In Spain large electric vans are on average €52,000 for sole traders, €259,000 for a small fleet, €4.7 million for a medium-sized fleet, and €44.1 million for a large fleet.

3.4 Cost of depreciation

Depreciation, a significant factor in assessing the total cost of ownership for vehicles, warrants a comparative analysis between electric vans and petrol or diesel vans. There is research[5] that indicates that electric vehicles tend to depreciate at a slower rate than their diesel and petrol counterparts, presenting a noteworthy advantage for businesses considering electrification.

Electric vans' slower depreciation rates compared to diesel and petrol vans could be attributed to several factors, such as increasing demand for sustainable transportation options, lower market supply, and reduced reliance on volatile fuel prices.

However, it should be noted that not all research supports the notion of slower depreciation for electric vans[6]. Arguments to the contrary include concerns such as battery degradation and evolving market dynamics. Additionally, increased supply can place downward pressure on residual values.

Using depreciation rates presented in Lebeau et al (2019)[4] and the average vehicle prices presented in Section 3.1, the following table outlines the expected net depreciation costs over three years in our European markets. A period of three years was chosen after consultation with Ford Pro regarding the average period over which the different business archetypes may choose to maintain their van fleet. It is noteworthy that despite the slower rate of depreciation, the costs associated with this source are still higher for small electric vans than for their petrol or diesel counterparts. This reflects their higher prices and induces a positive net cost associated with electrification for these vehicles. Comparing across countries, the highest net cost from depreciation is observed in Italy while France has the lowest. The net depreciation cost gradually rises across our business archetypes.

Table 5 – Net depreciation cost over three years for small electric versus diesel/petrol vans, by fleet size, rounded to nearest €1000[7]

Country	Sole trader (1 van)	Small (5 vans)	Medium (100 vans)	Large (1,000 vans)
UK	€ 2,000	€ 9,000	€ 181,000	€ 1,812,000
Germany	€ 2,000	€ 9,000	€ 180,000	€ 1,796,000
France	€ 340	€ 2,000	€ 34,000	€ 339,000
Italy	€ 3,000	€ 13,000	€ 268,000	€ 2,684,000
Spain	€ 2,000	€ 10,000	€ 202,000	€ 2,024,000

5 Lebeau et al (2019): How to Improve the Total Cost of Ownership of Electric Vehicles: An Analysis of the Light Commercial Vehicle Segment

6 Motorpoint (2024): How bad is electric car depreciation?

7 France's figure is unrounded due to being less than €1,000.

Source: Lebeau et al (2019), Cebr analysis

A slightly different picture emerges when considering larger vans. Here, the narrower cost differences between electric and non-electric vans mean that three of the five markets have a negative net cost. These markets are the UK, France, and Spain. The negative net cost means that, in terms of absolute depreciation costs, it is beneficial to have an electric fleet as opposed to a diesel or petrol. The net depreciation costs are most favourable to businesses in the UK, where the price differential between these vehicle types is smallest.

Table 6 – Net depreciation cost over three years for large electric versus petrol or diesel vans, by fleet size, rounded to nearest €1000

Country	Sole trader (1 van)	Small (5 vans)	Medium (100 vans)	Large (1,000 vans)
UK	-€ 6,000	-€ 28,000	-€ 558,000	-€ 5,579,000
Germany	€ 2,000	€ 10,000	€ 204,000	€ 2,039,000
France	-€ 1000	-€ 4,000	-€ 86,000	-€ 858,000
Italy	€ 1000	€ 6,000	€ 129,000	€ 1,285,000
Spain	-€ 1,000	-€ 17,000	-€ 341,000	-€ 3,410,000

Source: Lebeau et al (2019), Cebr analysis

3.5 Refuelling and recharging costs

In addition to the secondary research on the costs associated with vehicle purchase, charging point installation, and depreciation, we explored a variety of other costs incurred by drivers via a bespoke survey of 1,000 van drivers, conducted with Opinium.

The first cost source we consider from the survey was that associated with refuelling or recharging. Here, we combined results from the survey on the frequency of refuelling and recharging with secondary data on the costs of fuel and electricity. In doing so, it is revealed that users of electric vans incur significantly lower costs to keep their van fuelled relative to those driving petrol or diesel vans. For instance, while the annual charge associated with recharging an electric van is estimated at €3,700 from the survey results, the equivalent value for refuelling a petrol or diesel van was estimated at €12,400. The net fuel cost savings from switching to an electric van for a sole trader therefore stand at €8,700 per year, rising to €43,600 for a business with a small fleet, €872,000 for a medium-sized fleet, and €8.7 million for the large fleet archetype. These savings are netted off against the other categories considered in this section and help to reduce the overall cost burden associated with electric vehicle adoption. Consequently, when we consider these costs over the three-year horizon the net savings are even larger. The net fuel cost savings from switching to an electric van over three years, the time-horizon considered for total net costs in the final part of this section, for a sole trader stand at €26,200, rising to €130,800 for a business with a small fleet, €2.6 million for a medium-sized fleet, and €26.1 million for the large fleet archetype.

It is also worth noting that our research considered the average charging cost for electric vans. However, small and medium-sized businesses could choose to charge their electric vans overnight during off-peak charging hours. This would increase the cost savings of refuelling for electric vans further.

3.6 Maintenance, servicing, and insurance

Maintenance costs were split into two categories. The first was smaller maintenance, taking place on a regular basis, such as filter replacements and other servicing costs. We also included annual charges in addition to maintenance, such as road taxes. The second category covered larger, less frequent maintenance requirements, such as tyre replacements and vehicle security.

The costs presented in this section stem from the results of our bespoke survey. In general, survey respondents reported lower small maintenance costs for electric vans than other fuel types. This is unsurprising given lower small maintenance costs are a well-reported benefit of electric vans. Across the smaller maintenance subcategories, the average respondent reported annual costs of €1,400. This compared to an average of €1,700 across drivers of petrol or diesel vans. This yields an annual net cost of -€300. In other words, it is net beneficial to own an electric van from the perspective of smaller maintenance costs.

Across the different archetypes presented in this study, the annual net costs associated with smaller maintenance therefore stand at -€300 for a sole trader, -€1,400 for a small fleet, -€29,000 for a medium-sized fleet, and -€288,000 for a large fleet.

Generally, electric van owners reported slightly higher larger maintenance costs than diesel or petrol. The average driver of an electric van reported annualised large maintenance costs of €320. The equivalent figure for a driver of a petrol or diesel vehicle was €230. The net cost therefore amounts to €90.

Across the different archetypes, the annual net costs associated with larger maintenance therefore stand at €90 for a sole trader, €440 for a small fleet, €8,900 for a medium-sized fleet, and €89,000 for a large fleet.

Combining smaller and larger annualised maintenance costs, our analysis finds that it is net beneficial to own an electric van due to the cost savings through smaller maintenance costs. Spread over the three-year timeline considered in the rest of this analysis, the net costs associated with both smaller and larger maintenance costs are -€600 for a sole trader, -€3,000 for a small fleet, -€60,000 for a medium-sized fleet, and -€600,000 for a large fleet. The negative sign on all of these net costs means they are actually net savings.

Our broader analysis also considered insurance costs. It was generally reported on our survey that electric vans had higher annual insurance costs. This corroborates with other evidence suggesting that electric vans have higher insurance costs. These higher costs were factored into the calculations in the following subsection on total net costs.

3.7 Total net costs

Combining the findings from the above subsections allows us to produce overall net cost estimates for each of the four business archetypes. As previously mentioned, we consider a period of three years which was chosen after consultation with Ford Pro regarding the average time-horizon by which the different business archetypes may choose to change their vans.

For small vans, we estimate that the total costs of adopting an electric vehicle and operating it for three years average €65,500 for a typical sole trader across the five markets in this study. These costs encompass the purchase of the vehicle and a charge point and three years' worth of depreciation, recharging costs, and maintenance. The figures net off any relevant purchase subsidies. Amongst countries in the study, these costs are highest in the UK at an estimated €69,000 and lowest in Spain at €62,000. Averaging across the markets,

the total costs amount to €328,000 for a small fleet, €6.6 million for a medium-sized fleet, and €65.7 million for a large fleet.

It is important to also consider net costs, however. These are the costs associated with electric vehicle adoption over and above those associated with purchasing and maintaining a fleet of diesel or petrol-fuelled vehicles. Interestingly, we find that net costs across a three-year period are negative across our business archetypes. The net negative cost means it is financially beneficial to operate an electric fleet as opposed to a petrol or diesel one, when considering the total costs over a three-year period. Consequently, our analysis suggests an average net saving of €14,000 across the five markets for sole traders, with savings being as high as €19,000 in France and being lowest in Germany at €11,000. The net costs are also negative across all five of the European markets we consider in this study. This finding can be partially attributed to electric vans performing better on net for the cost of refuelling when compared to petrol and diesel vans.

Averaging across the five markets, the net savings across our three-year time horizon amount to €72,000 for a small fleet, €1.4 million for a medium-sized fleet, and €14.3 million for a large fleet.

A summary of these costs and net savings for small electric vans is presented in the below tables.

Table 7 – Total costs of adopting small electric vans, three-year time horizon, rounded to nearest €1000

Country	Sole trader (1 van)	Small (5 vans)	Medium (100 vans)	Large (1,000 vans)
UK	€ 69,000	€ 346,000	€ 6,941,000	€ 69,555,000
Germany	€ 68,000	€ 338,000	€ 6,768,000	€ 67,682,000
France	€ 63,000	€ 315,000	€ 6,301,000	€ 63,009,000
Italy	€ 66,000	€ 330,000	€ 6,592,000	€ 65,917,000
Spain	€ 62,000	€ 309,000	€ 6,198,000	€ 62,275,000

Source: Cebr analysis

Table 8 – Total net savings of adopting small electric vans compared to diesel or petrol, three-year time-horizon, rounded to nearest €1000

Country	Sole trader (1 van)	Small (5 vans)	Medium (100 vans)	Large (1,000 vans)
UK	€ 14,000	€ 68,000	€ 1,331,000	€ 13,161,000
Germany	€ 11,000	€ 56,000	€ 1,114,000	€ 11,143,000
France	€ 19,000	€ 95,000	€ 1,906,000	€ 19,064,000
Italy	€ 12,000	€ 61,000	€ 1,222,000	€ 12,217,000

Spain	€ 16,000	€ 81,000	€ 1,600,000	€ 15,705,000

Source: Cebr analysis

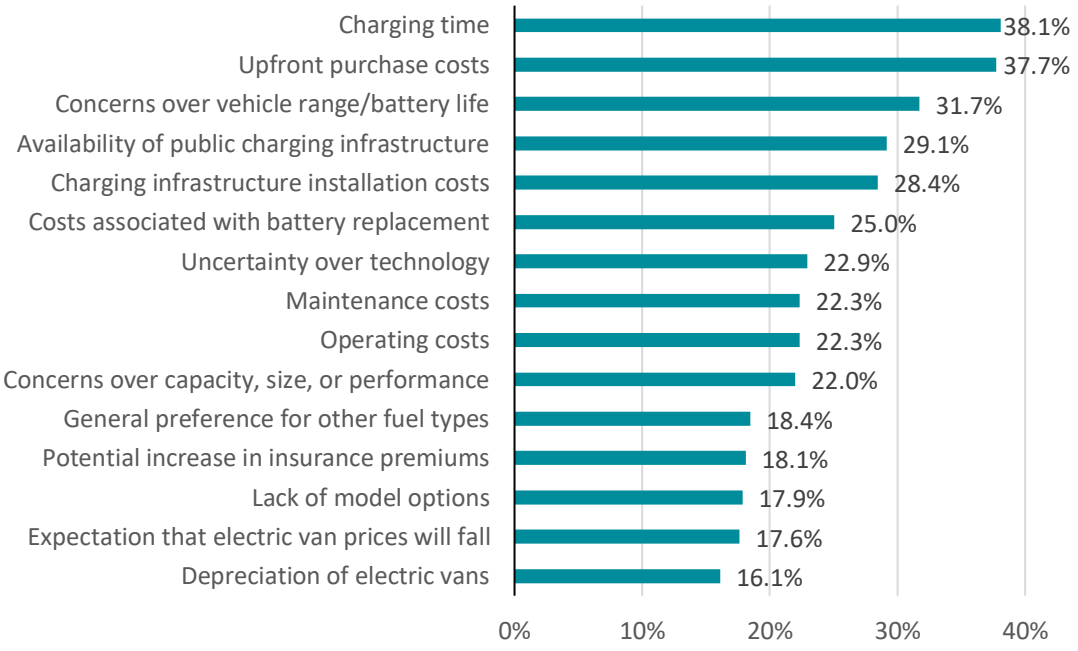
Barriers to adoption, future plans, and benefits of electrification

The above analysis has suggested that there are large upfront costs to purchasing a fleet of electric vehicles, but that these can be offset over time by lower refuelling costs, amongst other factors. Nevertheless, the existence of such upfront costs can be sufficient for drivers to delay the switch between petrol or diesel vehicles and their electric counterparts.

This sentiment was captured via our bespoke survey. When asking respondents that do not currently drive an electric van about their reasons for doing so, the upfront purchase cost was the second-most commonly cited option, being selected by 37.7% of the sample. This sentiment was particularly strong in France, being selected by 48.8% of the relevant subsample. This response was least common amongst those in Germany, the country with the highest living standards of those in our study, though it was still cited by more than a quarter (25.4%) of respondents.

Also of note was the relationship between business size and electric van adoption. There was a generally positive relationship between business size and the likelihood of having already adopted an electric van. For instance, just 2.2% of sole traders in our sample stated that they currently drive an electric van, while 13.0% of those at large enterprises reported usage. Given the upfront costs associated with purchasing electric vehicles, this likely partially reflects the greater economies of scale achievable by larger enterprises. This could also reflect the fact that large enterprises are likely to have more vehicles in their fleet, providing more scope to test electric vehicle adoption relative to smaller businesses.

Figure 13 – Barriers to adoption amongst van drivers yet to switch to an electric vehicle



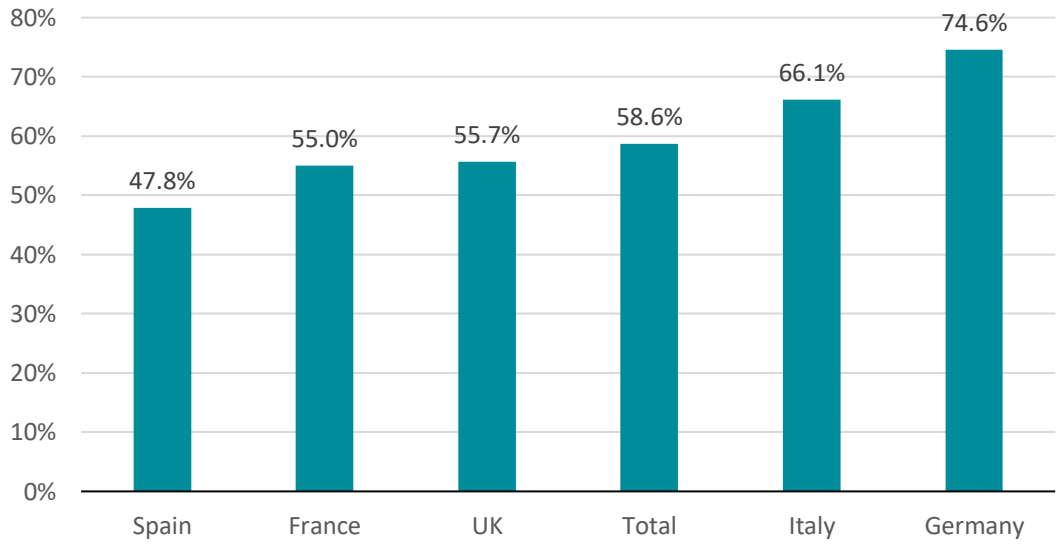
Source: Opinium, Cebr analysis

There were other commonly cited barriers amongst those who have not yet switched to a fully electric van. The most common response was charging time, which was selected by 38.1% of those yet to switch. Again, this sentiment was particularly likely to be expressed in France, at a rate of 45.7%, and least likely to be displayed in Germany, at 31.7%. Concerns over vehicle range or battery life was the third most commonly cited barrier across the whole sample, selected by 31.7% of those to have not yet switched to an electric van.

Depreciation represented the least commonly cited barrier to adoption of an electric vehicle. This likely reflects the fact that depreciation would affect any vehicle regardless of fuel type, though may also capture the observation that depreciation rates have been shown to be lower amongst electric vans than other fuel types, as discussed earlier in this section.

Despite the barriers to current adoption, those yet to switch to an electric van were largely positive about their plans to do so within the next five years. Amongst those yet to switch, a majority (58.6%) said that they were at least somewhat likely to switch to an electric van over the next five years. Within this figure, 15.0% said that they would definitely switch. Expectations for switching were particularly widespread in Germany, with 74.6% of those yet to use an electric van saying that they are at least somewhat likely to do so within the next five years. At the other end of the scale, Spain saw a minority report positively on this metric, though this was still a large one at 47.8%.

Figure 14 – Percentage of drivers yet to switch to an electric van stating that they are at least somewhat likely to do so within the next five years



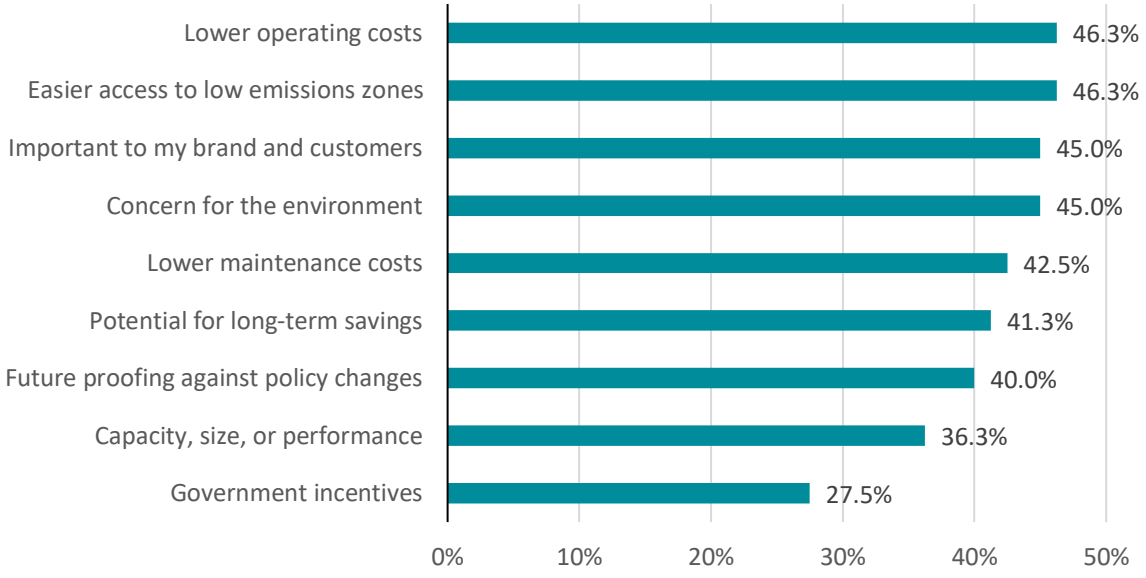
Source: Opinium, Cebr analysis

Respondents saying that they are unlikely to switch to an electric van within the next five years were asked to follow up with reasons why. Many of these responses cited similar themes to the barriers presented in Figure 13. Examples of other points cited by respondents included reliability, safety, and having made petrol or diesel vehicle purchases too recently.

Turning to analysis of the benefits of electric vehicles, we asked those who currently drive an electric van about the reasons behind their adoption. Here, the most common responses were lower operating costs and easier access to low emissions zones. Both of these options were selected by 46.3% of the subsample. Environmental concerns and the importance of using an electric vehicle to a respondent's brand or customers were the next most common responses, both being selected by 45.0% of the sample. This suggests that almost as many

businesses care about their reputation as their operating costs. Interestingly, despite relatively widespread fiscal support, as identified earlier in this section, government incentives were selected as a reason for adoption by just 27.5% of the sample.

Figure 15 – Percentage of drivers to have switched to an electric van on their reasons for doing so



Source: Opinium, Cebr analysis

For the final part of this section, we highlight a much-discussed benefit of driving an electric vehicle which is that they are less susceptible to charges for entering areas such as low emission zones. For instance, in London, electric vans are exempt from restrictions related to the Ultra Low Emission Zone (ULEZ), whereas diesel- and petrol-fuelled vans may be subject to charges depending on their exhaust emissions and age.

Exemption from these types of charges not only provides a financial advantage to electric van owners but also incentivises electrification. Furthermore, the accessibility of areas such as low emission zones enhances the overall convenience and usability of electric vehicles for small- and medium-businesses operating within them. Electric vehicle drivers can navigate through these areas with greater confidence, knowing that they are less likely to incur penalties or fees.

4. Harnessing new technology and software

This section explores additional themes posed to respondents in our survey. In particular, we asked about different technologies, software, and infrastructures and the impacts they have had on productivity and operations.

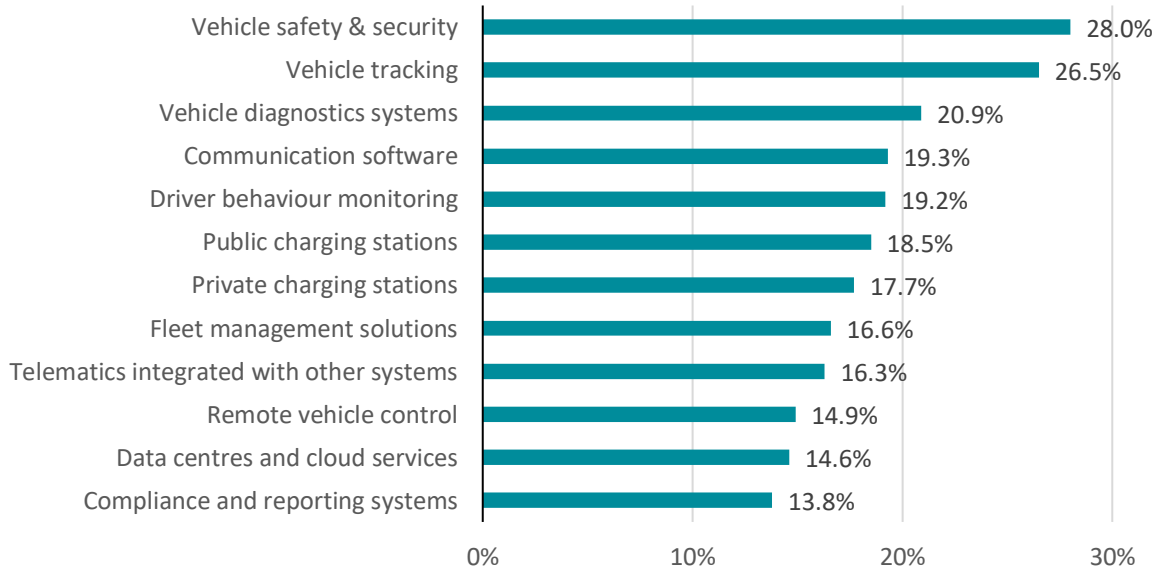
From a list of twelve technologies, software, or infrastructures, the most commonly used was vehicle safety and security measures, selected by 28.0% of the sample. This response was particularly common amongst drivers of electric vans, selected by 42.9% of this subgroup. This compares to 29.6% and 24.6% of petrol and diesel van drivers, respectively. This response was also particularly likely amongst respondents in France, selected by 36.7%.

Vehicle tracking technology was the second most common response on this question, being used by 26.5% of the sample. Again, this response was particularly common amongst drivers of electric vans, cited by 40.5% of this subgroup. This compares to just 28.7% and 22.6% of petrol and diesel drivers, respectively.

The least commonly used technologies included compliance and reporting systems and data centres and cloud services, being selected by 13.8% and 14.6% of total respondents, respectively. However, electric van drivers were disproportionately likely to use these technologies, with this being the case for 26.2% and 33.3% of this subgroup, respectively. Other technologies particularly likely to be used amongst electric van drivers included telematics integrated with other systems, such as inventory management or customer relationship management software, and fleet management solutions.

13.9% of respondents stated that they do not use any technologies or infrastructures when driving their van. This was particularly common amongst diesel van drivers, cited by 19.3%.

Figure 16 – Technologies, software, and infrastructures reported as used by van drivers

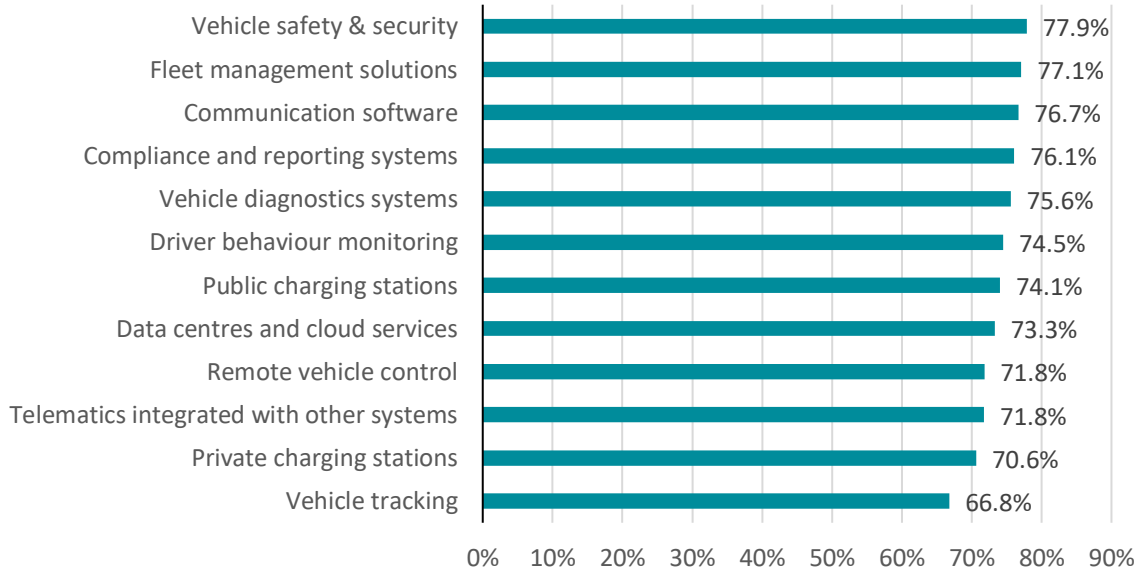


Source: Opinium, Cebr analysis

Amongst users of technologies and infrastructures, we subsequently asked about the impacts they have had on productivity. This could be through reducing expenses, breakdowns, administration time, or increasing vehicle efficiency. For each technology or software, a majority of adopters reported positive impacts across both productivity and operations. Combining the fact that a minority of respondents have reported already adopting these technologies with the observation that a majority of adopters have benefitted from doing so suggests an as yet unexhausted opportunity for making widespread improvements in productivity amongst businesses reliant on commercial vehicles.

77.9% of respondents reported that adopting vehicle safety and security measures had had a positive impact on productivity. This was the largest share of any of the technologies or infrastructures. A particularly large share of respondents in France said that this measure had had a positive impact, at 87.3%. Fleet management solutions and communication software saw the next highest rates of respondents reporting positive productivity impacts, at 77.1% and 76.7%, respectively. Vehicle tracking saw the lowest rate on this measure, though still more than two-thirds (66.8%) reported a positive productivity impact.

Figure 17 – Percentage of adopters reporting positive productivity impacts from use of technologies, software, and infrastructures

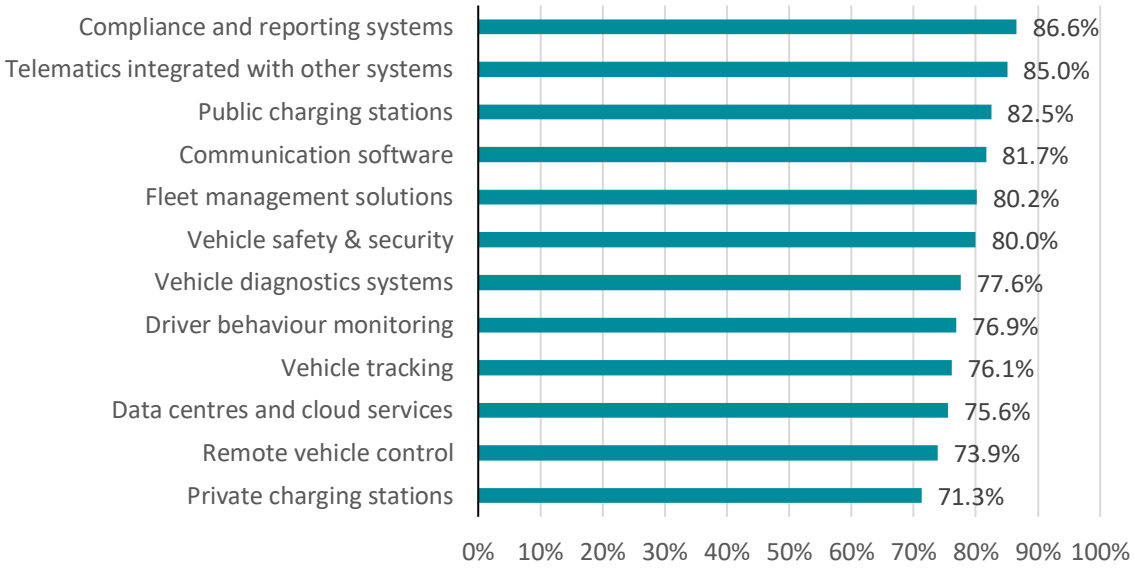


Source: Opinium, Cebr analysis

When asking respondents about whether adoption of technologies or infrastructures had had positive impacts on their operations, there was similar widespread positivity. However, this was more heavily concentrated in different technologies and infrastructures relative to the productivity impacts described above. For instance, the highest share reporting positive impacts on operations was found for compliance and reporting systems, being the case for 86.6% of adopters.

Other categories reporting high shares included telematics integrated with other systems, at 85.0%, public charging stations, at 82.5%, and communication software, at 81.7%. At the other end of the scale, private charging stations saw the lowest rate of respondents reporting positive operational impacts from their adoption, though this was still high at 71.3%.

Figure 18 – Percentage of adopters reporting positive operational impacts from use of technologies, software, and infrastructures



Source: Opinium, Cebr analysis

Conclusion

This report has considered the electrification and economics of the commercial vehicle market.

The transition to electric could bring considerable societal benefits on both local and global scales, primarily through the mitigation of harmful pollutants and greenhouse gas emissions. The Electrification Index serves as a valuable tool to identify which governments and nations are optimally positioned to capitalise on the electrification opportunity. In some regions, favourable economics driven by fuel and electricity prices will facilitate the transition for van operators, while in others, governmental initiatives will spearhead infrastructure development and provide incentives to expedite the benefits of decarbonisation and improved air quality.

Currently, France, Germany, and the UK are at the forefront of this transition, with more widespread electric van adoption amongst small businesses. However, Spain and Italy also demonstrate significant electrification potential. While all of these countries have suffered from turbulent refuelling costs amid the European energy crisis, it is positive to see van markets in all nations have seen a rise in the market share of electric vehicles over the time-horizon presented in our study.

This report highlights that this transformative technological shift could potentially be beneficial for small- and medium-businesses in terms of net costs. Our analysis of the costs of electric vans compared to diesel and petrol over a three-year period demonstrates it is financially net beneficial to operate an electric fleet. Underpinning this finding is our analysis comparing the net cost between electric vans and petrol or diesel vehicles over a three-year time-horizon, which finds it is cheaper to operate an electric fleet as opposed to a conventional one. This is because lower costs, such as refuelling, outweigh the cost of factors such as infrastructure installation and maintenance.

Our research demonstrates that electric vans already support a significant proportion of economic activity across European markets. If adoption continues, then our broader figures for van-reliant industries indicate this could rise yet further. Future editions of this study will hope to reveal further progress on this metric.

Appendices

Appendix A – Electrification Index methodology

The 2023 Electrification Index serves as an updated iteration of a previously constructed index, which covered electrification potential in 2018. The new measure offers a comprehensive evaluation of the evolving landscape of van electrification across the five countries of interest. Please note that the Electrification Index's methodology has been altered from the initial iteration to allow for cross-country and intertemporal comparisons, ensuring that the measure can gauge electrification progress both across nations and over time.

The electrification index considers eight indicators across the following five areas of interest:

1. Electric vehicle sales
2. Charging infrastructure
3. Incentives
4. Low emission zones
5. Fuel costs

These indicators are averaged together to produce the final index score. The averaging process demands that the scores be converted into common units. We compare the measures on our ten key indicators across the five countries and also across time, assigning the lowest value on each indicator a score of 0 and the highest a score of 100. Values in-between this are then scaled to reflect how close to each extremity they are.

Because of the updated methodology, the Index's 2018 scores have been revised. Revisions to source data have also contributed to changes to the back history in places.

The previous 2018 edition of the Electrification Index included a sixth pillar: roads and climate. Due to a lack of updates to source data, this has since been removed from both the revised 2018 scores and new 2023 scores in this updated version.

Appendix B – Van-reliant industries definition

In order to estimate the amount of economic activity that is generated with the assistance of vans, it is necessary to establish which sectors, and more specifically which activities within those sectors, depend on vans.

Using Eurostat's annual detailed enterprise statistics, which divide data into the construction, industry, and services sector, we have assumed that the following activities make frequent use of vans:

Figure 19 – Breakdown of industries deemed to be reliant on vans

Construction
Test drilling and boring
Electrical installation
Plumbing, heat and air conditioning installation
Other construction installation
Plastering
Joinery installation
Floor and wall covering
Painting and glazing
Other building completion and finishing
Roofing activities
Other specialised construction activities n.e.c.

Industry
Repair of fabricated metal products
Repair of machinery
Repair of electronic and optical equipment
Repair of electrical equipment
Repair and maintenance of other transport equipment
Repair of other equipment
Steam and air conditioning supply

Services
Urban and suburban passenger land transport
Other passenger land transport n.e.c.
Freight transport by road
Removal services
Cargo handling
Postal and courier activities
Restaurants and mobile food service activities
Event catering activities
Tour operator activities
Security systems service activities
Cleaning activities
Landscape service activities
Organisation of conventions and trade shows
Repair of personal and household goods

The definition of van-reliant industries is consistent with that used in previous editions of this research, published in 2015, 2019, and 2022. Please note that discrepancies for economic contribution figures in this report compared to previous iterations is a result of revisions to official data sources.