

# THE CRITICAL IMPORTANCE OF THE EUROPEAN TYRE INDUSTRY

A REPORT FOR TYRES EUROPE

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# EXECUTIVE SUMMARY

Tyres are sophisticated, safety-critical products and a strategic component of the EU’s industrial and mobility ecosystem. Combining advanced materials, specialised design and manufacturing expertise, they must deliver across multiple performance requirements, including safety, durability, energy efficiency and environmental performance. Every passenger car, truck, bus, agricultural tractor, aircraft, and many types of industrial machinery depend on tyres to operate safely and efficiently. As a result, the European tyre industry plays a strategic economic and social role that extends far beyond its own economic footprint.

## A GLOBALLY INTEGRATED SUPPLY CHAIN WITH CONCENTRATED STRATEGIC RISKS

**Europe’s tyre industry operates within a highly globalised supply chain that exposes it to a range of structural dependencies.** Understanding and managing these risks is critical to ensuring the resilience of the tyre industry in the European Union (EU).

Tyres are complex products, comprising more than 200 components, that must be carefully designed and combined to balance demanding—and sometimes competing—performance requirements. Developing this technology requires sustained investment in research and development: Tyres Europe members invested €10.0 billion in R&D between 2017 and 2023 and operate more than 20 research and development centres across the EU. Tyres also incorporate several critical raw materials that are not produced within the EU. As a result, imported inputs accounted for an estimated 11.9% of production value—significantly higher than the economy-wide average of 7.0%.<sup>1</sup>

**The most significant vulnerability lies in natural rubber, where the EU is fully import-dependent.** Supply is highly concentrated, with over 90% sourced from the Ivory Coast and four Southeast Asian countries—Thailand, Indonesia, Malaysia, and Vietnam. This concentration heightens exposure to geopolitical and climate-related disruptions, as well as regulatory risks, including the EU Deforestation Regulation, which will require full supply chain traceability by 2027.

## SUBSTANTIAL DOWNSTREAM ECONOMIC FOOTPRINT

**The importance of the industry is amplified by the activity it enables.** In 2024, around 60% of newly fitted tyres used in the EU were manufactured domestically. These EU-produced tyres were estimated to have supported €572 billion in GDP, 6.1 million jobs, and €250 billion in tax revenues in immediate customer sectors, including EU manufacturers of passenger cars, commercial vehicles, and farm tractors, as well as the EU tyre dealer network. **A strong EU tyre manufacturing base helps limit dependence on external suppliers while strengthening the resilience of the broader automotive value chain.**

These figures are additional to the €43.9 billion GDP contribution, 498,000 jobs, and €12.2 billion in tax revenues generated by the EU tyre industry and its EU upstream supply chain in 2023, as quantified in our previous [study](#).

## BROAD SOCIETAL DEPENDENCE

**Beyond the immediate customer sectors, tyre-dependent vehicles and equipment are essential enablers of economic activity and public welfare.** Between them, the six major sectors of EU industry that are heavily reliant on tyre-using vehicles and machinery—namely agriculture, aviation, construction, passenger transport, postal services, and road freight—employed 30.5 million individuals in 2024 and directly supported €1.5 trillion of GDP. That was equivalent to 13% of all EU employment in that year, and 9% of total EU GDP.<sup>2</sup> In particular:

- **Road freight**—which transported 13 billion tonnes of goods in 2024, accounting for 88%

of all inland EU freight by tonnage. The sector supported 3.4 million jobs and €155 billion of direct GDP in that year, and is the primary means by which food, industrial goods, and household goods reach businesses and consumers across the EU.

- **Agriculture**—which employed 8.7 million workers and generated €291 billion of direct GDP in 2024, with food security directly dependent on reliable tyre supply for farm tractors and harvesting machinery.
- **Aviation**—which handled approximately 775 million departing passenger journeys in 2024, supporting connectivity globally. In addition, 7.7 million tonnes of freight and mail were loaded onto aircraft leaving EU airports, with the air freight sector providing the speed needed to move high-priority consignments across international and intercontinental distances.
- **Public transport, construction, and postal and courier services**—which are also critically dependent on tyre-equipped vehicles.

For millions of EU citizens—particularly in rural areas where car dependency is highest and alternative transport is limited—tyre availability is not merely an economic question but a matter of social inclusion.

**The sector also contributes to the EU’s sustainability objectives.** Investments in industrial decarbonisation, the development of energy-efficient tyres, and circular-economy practices such as retreading support lower emissions, improved resource efficiency, and sustainable mobility outcomes. Retreading also generates economic value within the EU. Circular tyre activities are inherently local, relying on short supply chains, which reduce dependency on imports, contributing to Europe’s strategic autonomy.

## ECONOMIC CONSEQUENCES OF DISRUPTION

**To quantify the macroeconomic implications of supply chain disruption, we model a climate-driven shock to Southeast Asian rubber production.** In this scenario, global rubber supply falls by 13%, pushing prices to around

1 Imported inputs data for tyres relates to 2023. Economy-wide data relates to 2022.

2 These figures exclude economic activity enabled in their customer sectors in turn.

160% above baseline levels by 2028.<sup>3</sup> This cost shock feeds through to higher tyre prices and, in turn, increased logistics costs across the economy. A concurrent six-month period of acute tyre shortages further constrains activity, temporarily grounding part of the EU truck fleet and disrupting output in key sectors including automotive, agriculture, and construction.

**The resulting macroeconomic impacts are both significant and widespread.** Producer prices peak at around 2 percentage points above baseline in early 2028, with cost pressures cascading through supply chains into consumer prices. Over a three-year horizon, EU GDP is reduced by an estimated €250 billion. By 2028, the average household faces a loss of approximately €230 in real purchasing power, while unemployment rises by around 400,000. Public finances also deteriorate, with government debt €120 billion higher than baseline.

## STRATEGIC TAKEAWAY

Tyres are a foundational component of the EU automotive and mobility ecosystem, underpinning the movement of people and goods across the economy. Their economic value and criticality to society extend well beyond the mobility industry. At the same time, tyre manufacturing is a technology- and knowledge-intensive activity, supported by significant investment in research and development and specialised European expertise. Maintaining tyre production capacity in the EU therefore means retaining not only industrial capacity, but also the innovation capabilities needed to advance tyre safety, performance and sustainability. This is critical to strengthening resilience against external shocks, supporting sustainability objectives and safeguarding the long-term competitiveness of the EU industrial base.

<sup>3</sup> The 13% supply fall is a scenario assumption capturing the impact of disease spread and adverse weather on natural rubber output in Southeast Asia. This is calibrated against historical episodes: the 2016–2019 leaf disease spread and the 2024 severe weather events. The full derivation is in Appendix B.



# THE CRITICAL IMPORTANCE OF THE EUROPEAN TYRE INDUSTRY

## THE INDUSTRY'S UPSTREAM ECONOMIC FOOTPRINT

More than  
**300 million**  
tyres are produced in  
the **EU each year**



**€43.9 billion**  
contribution to **GDP**



**498,000**  
**Jobs supported**

## GLOBAL SUPPLY CHAIN DEPENDENCIES



**200+**  
components per **tyre**



### IMPORT DEPENDENCY

Imported inputs accounted  
for **11.9%** of production  
value—higher than **7%**  
economy-wide average



### NATURAL RUBBER RISK

**90%+** of supply from just  
**5 countries** (Ivory Coast, Thailand,  
Indonesia, Malaysia, Vietnam).  
**ZERO EU** domestic production.

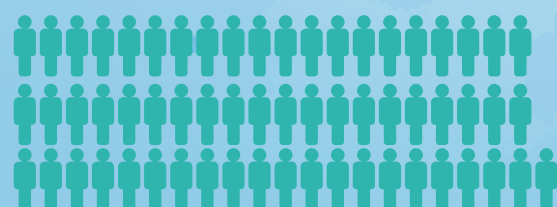
## SUBSTANTIAL DOWNSTREAM ECONOMIC FOOTPRINT

EU tyres for **passenger cars**,  
**commercial road vehicles**, and  
**farm tractors** potentially enabled  
a further:



**€572 billion**  
contribution to **GDP**

**6.1 million**  
**jobs supported**



## BROADER SOCIETAL DEPENDENCE

**13%** of EU employment accounted for by the major  
end-users of tyres.

### END-USER DEEP DIVE:



#### ROAD FREIGHT:

**13 billion tonnes transported**, accounted for  
**88%** of all inland EU freight.



#### AGRICULTURE:

Food security depends on tyres. **400m tonnes**  
**of crop** harvested, helped by the use of tractors



#### AVIATION:

**775 million passenger journeys**, supporting  
connectivity globally.

## ECONOMIC CONSEQUENCES OF DISRUPTION

Hypothetical climate-driven natural rubber supply shock  
reduces global supply by **13%** and drives prices **160%**  
**above baseline** by 2028.



**€250 billion**  
**EU GDP lost**  
over **3 years**

**+400k**  
rise in  
**EU unemployment**



**€120 billion**  
extra **government**  
**debt**



# SECTION 1: INTRODUCTION

Tyres are sophisticated products produced through a highly specialised manufacturing process that draws on inputs from around the world. They are indispensable to virtually every form of motorised transport—from passenger cars and commercial freight vehicles to farm tractors, construction equipment, and commercial aircraft. Without a reliable supply of high-performing tyres, the movement of people and goods that underpins the EU economy would be compromised.

This report, commissioned by Tyres Europe and prepared by Oxford Economics, is the second study in a research series from Oxford Economics. Our previous [study](#), published in 2024, quantified the economic footprint of the EU tyre industry and its EU upstream supply chain. This study extends the analysis in two important directions: into the industry’s global upstream supply chain dependencies and their associated vulnerabilities;

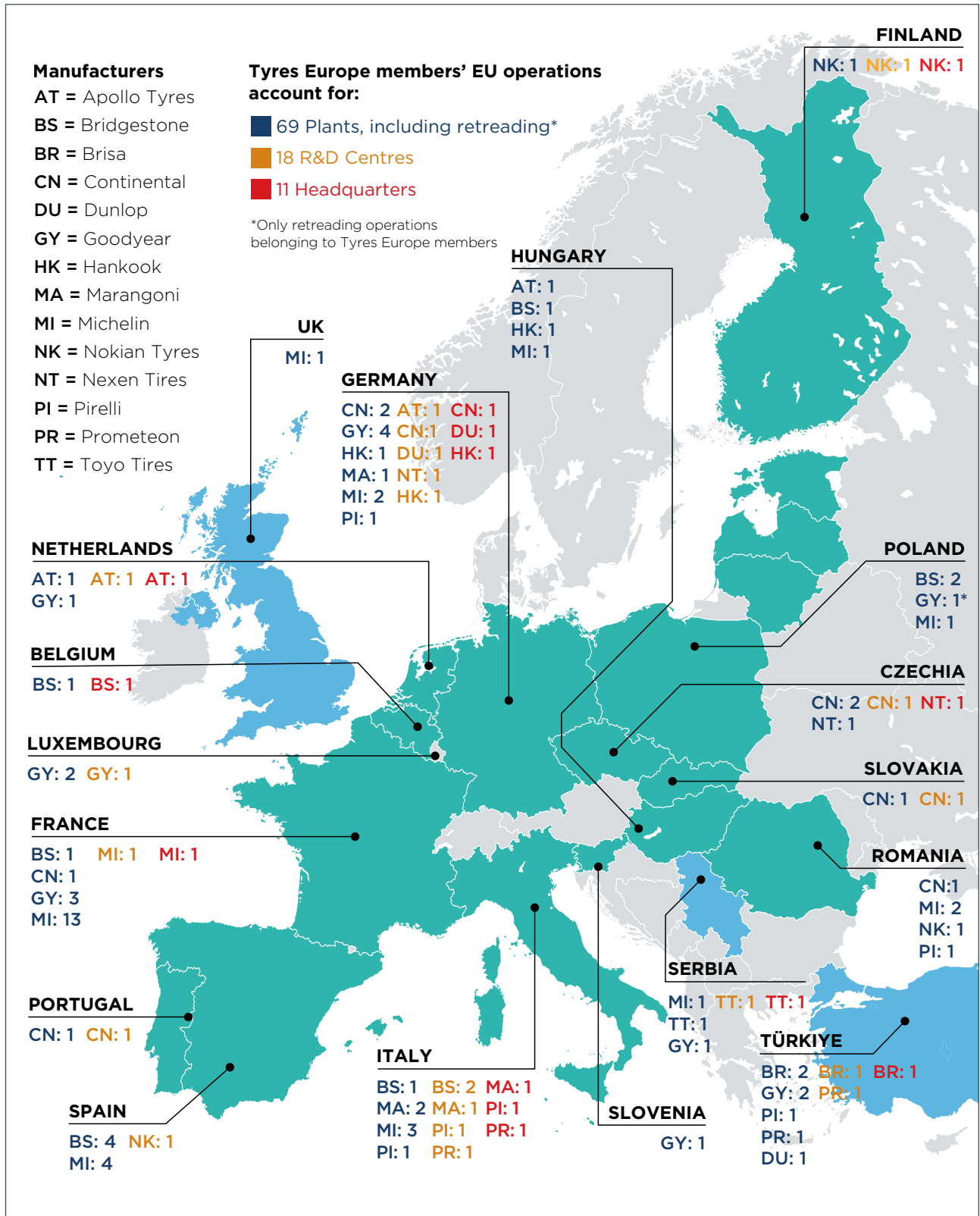
and downstream into the wide range of customer sectors and end-use activities that depend on EU-produced tyres. It also quantifies how a hypothetical raw material shortage for the industry could impact the EU economy.

This analysis is published during a period of heightened relevance. The global economy is characterised by intensifying geopolitical competition, a fragmentation of established trade relationships, and ongoing sensitivity to supply chain vulnerability. The EU’s industrial base faces competitive pressures from lower-cost producers, particularly in Asia, while simultaneously navigating the structural transition to electric mobility and a more demanding regulatory landscape on sustainability. Against this backdrop, assessing the full value-chain economic dependencies and vulnerabilities of the EU tyre industry is of critical importance.

## 1.1 TYRES EUROPE

Tyres Europe is the association representing tyre manufacturers that produce in Europe. It aims to advance safe, smart, and sustainable mobility, and currently represents 14 corporate members operating more than 70 tyre-producing plants and over 20 research and development centres across the EU. Its members collectively account for the majority of EU tyre production, spanning the full range of tyre types, from passenger car and commercial vehicle tyres through to specialist agricultural and military equipment tyres.

Fig. 1: Tyres Europe member organisation locations in continental Europe



Source: Tyres Europe and its members  
Note: Non-EU locations highlighted in light blue.  
\*GY plant is affiliated

### THE EU TYRE INDUSTRY'S CONTRIBUTION TO SUSTAINABILITY

The EU tyre industry contributes to the European Union's sustainability objectives throughout the tyre lifecycle, from the sourcing of raw materials and manufacturing to product use, retreading, and end-of-life management.

Tyres produced in Europe are manufactured within a sustainability framework that promotes responsible sourcing, resource efficiency, and continuous improvements in environmental performance. Ongoing investments in industrial decarbonisation further support the sector's contribution to the EU's climate and sustainability goals, while maintaining a resilient and competitive industrial base.

Tyres also play an important role in improving vehicle energy efficiency. According to the European Commission, tyres can account for 20 to 30% of a vehicle's fuel consumption through rolling resistance.<sup>4</sup> Lower rolling resistance tyres reduce the energy required to move a vehicle, improving fuel efficiency and lowering CO<sub>2</sub> emissions. At the same time, tyre manufacturers must optimise multiple performance characteristics, including safety-related factors such as wet grip, highlighting the importance of innovation and technological development in tyre design.

The industry also contributes to the transition towards a circular economy. Retreading—the process of replacing a worn tyre tread with a new one—extends tyre life and is widely used for commercial vehicle tyres, particularly those fitted to trucks and buses. By enabling multiple life cycles for a single tyre casing, retreading can reduce raw material consumption by up to 70% and lower the overall environmental footprint associated with tyre production.<sup>5</sup> This also eases pressure on natural rubber supply chains.

Beyond its environmental benefits, retreading supports economic value within Europe. Circular tyre activities are inherently local, relying on short supply chains that support regional economies and reduce dependency on imports.

Taken together, these characteristics demonstrate the EU tyre industry's role as both an enabler of more sustainable mobility and a contributor to a resilient, circular, and resource-efficient European industrial ecosystem.

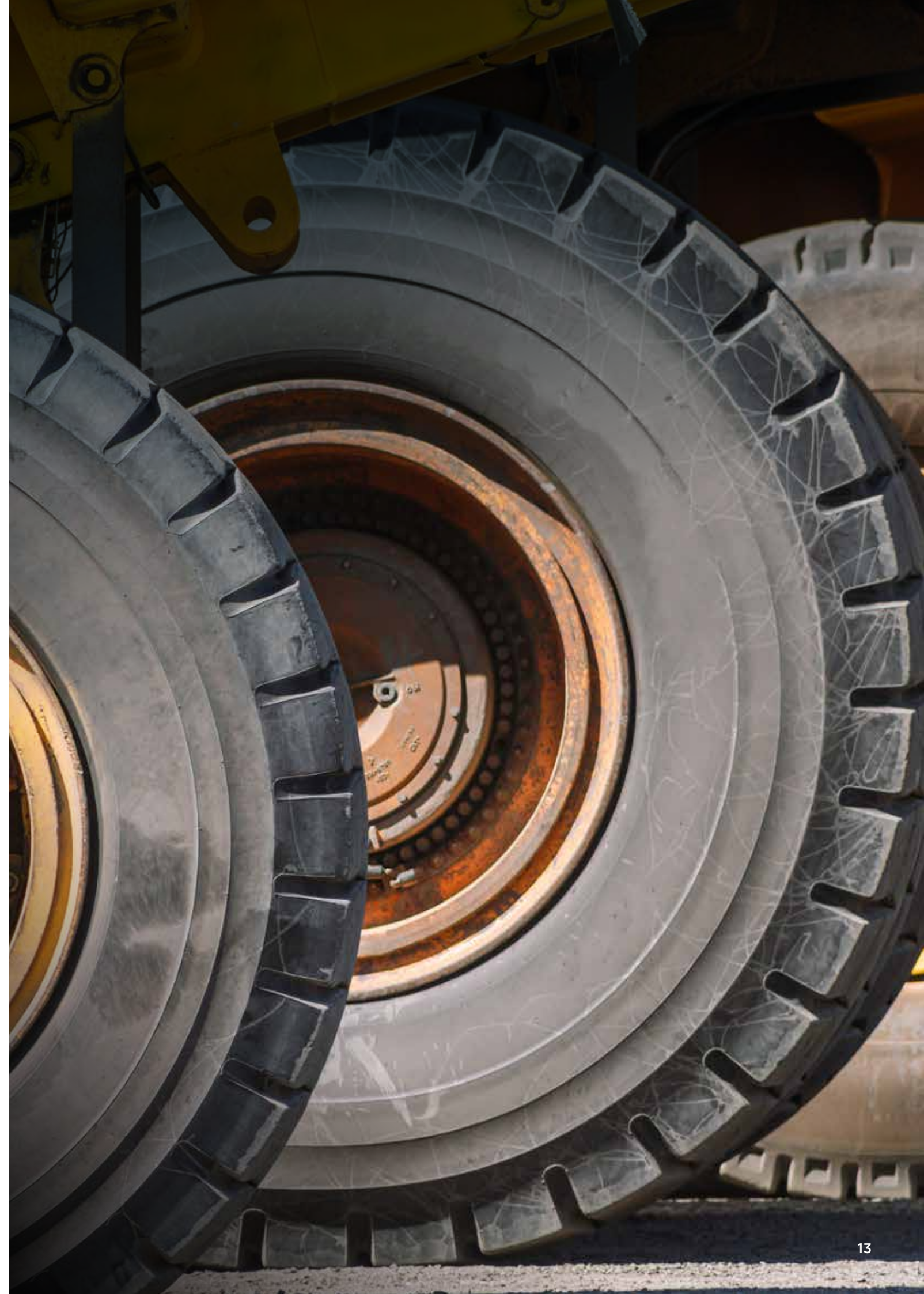
<sup>4</sup> European Commission, *A Consumer's Guide to Energy Efficient Tyres*, accessed June 2026  
<sup>5</sup> EY for Tyres Europe, *The socio-economic impact of truck tyre retreading in Europe*, 2016

## 1.2 STRUCTURE OF THE REPORT

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The remainder of this report is structured as follows:

- **Section 2** assesses the upstream value chain and vulnerabilities of the EU tyre industry.
- **Section 3** maps the key customer sectors of the EU tyre industry, and quantifies the economic footprint of the passenger car, commercial vehicle, and farm tractor customer sectors.
- **Section 4** sets out the importance of the industry for end-users across the EU, with a particular focus on EU freight, healthcare, and defence.
- **Section 5** quantifies the macroeconomic implications of a sustained disruption in the EU tyre industry.
- **Section 6** concludes.



## SECTION 2: UPSTREAM VALUE CHAIN

Tyres are complex products made with more than 200 components, including critical raw materials not produced in the EU. While this global integration supports competitiveness by allowing manufacturers to source inputs where they are produced most efficiently, it can also lead to

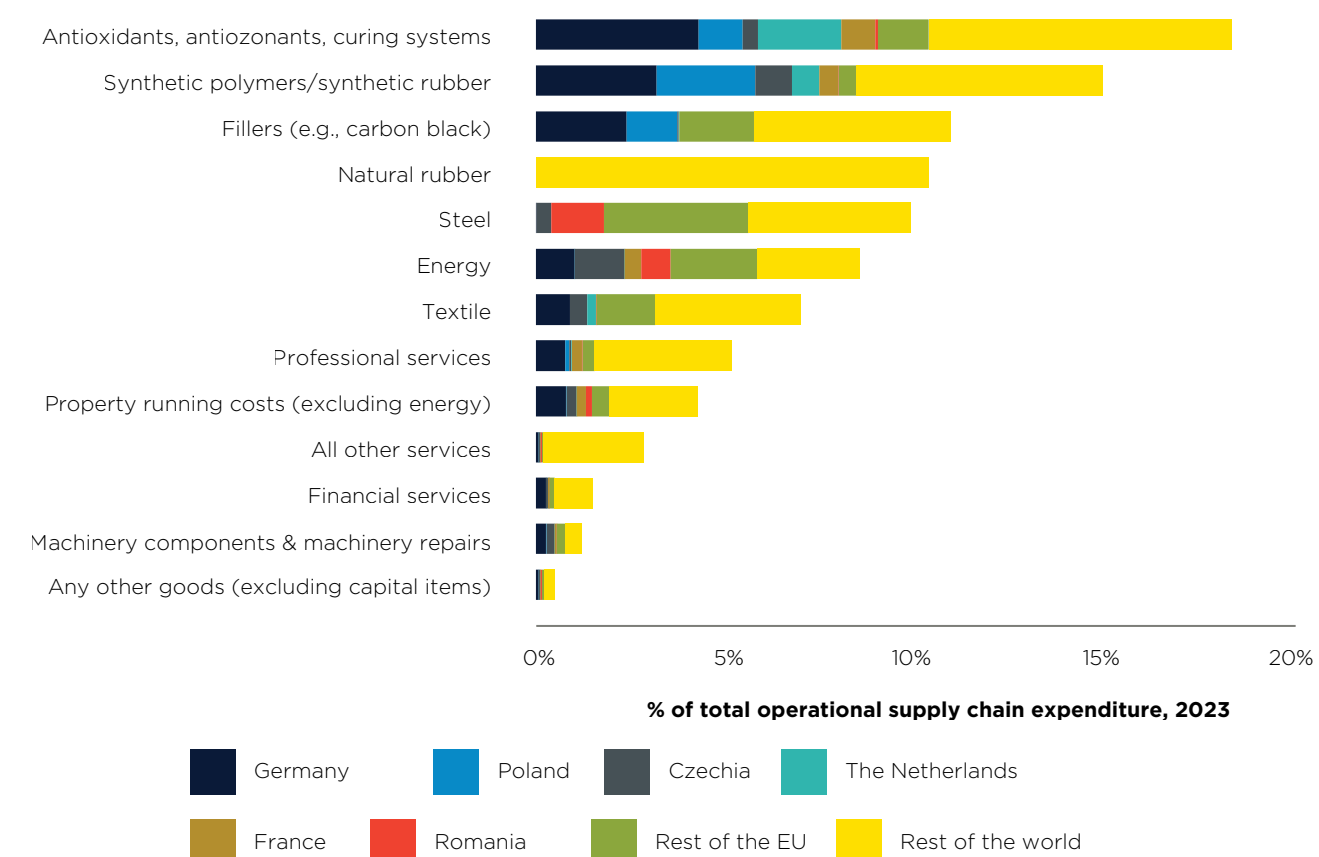
vulnerability. This section examines the structure of the EU tyre industry's upstream supply chain, identifies where the most significant vulnerabilities lie, and assesses how well the industry is positioned to manage them.

### 2.1 SUPPLY CHAIN STRUCTURE OF THE EU TYRE INDUSTRY

In our previous [study](#), we estimated that in 2023 the EU tyre manufacturing industry spent €28.2 billion on third-party purchases from around the world. This included both operational and capital spending. An estimated 85%—or €24.1 billion—was spent on inputs from EU-based suppliers, while the remaining 15%—or €4.2 billion—was spent on imports from the rest of the world.<sup>6</sup> We found this upstream supply chain spend with EU-based suppliers supported a €20.0 billion supply chain **(indirect)** contribution to GDP.

Fig. 2 charts the products used in Tyres Europe's members' operational supply chain expenditure by product type and location of supplier. This shows the importance of imports for many supply chain inputs. We examine this in further detail in this section, extending the EU-focused assessment in our previous study.

Fig. 2: Supply chain expenditure by product type and location of supplier



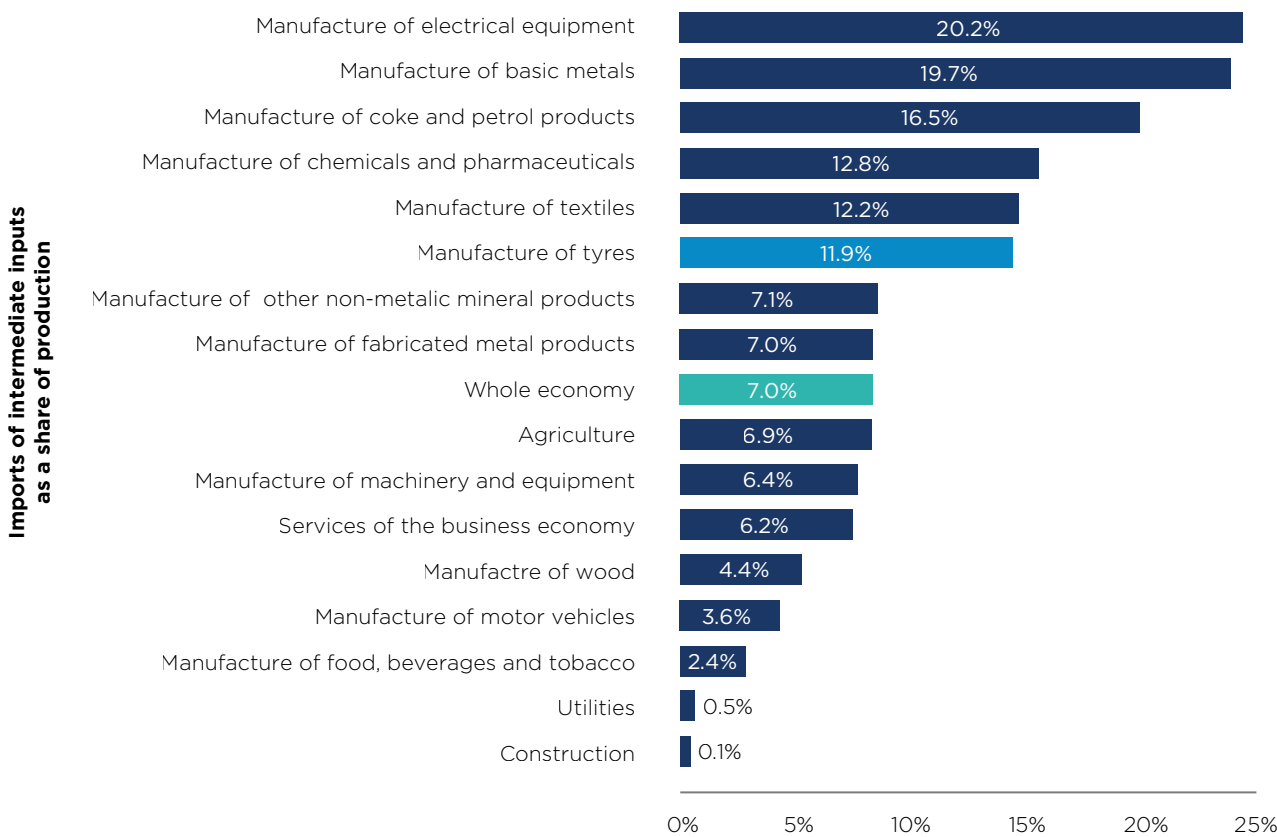
Source: Oxford Economics, Tyres Europe

6 Totals do not sum due to rounding.

The EU tyre manufacturing industry is more reliant on supply chain imports relative to several other sectors of the economy. In aggregate, an estimated 11.9% of the value of EU tyre production originates from imported intermediate inputs, higher than the whole-economy average of 7.0%.

The EU tyre manufacturing industry has a higher relative reliance on supply chain imports than the whole economy.

Fig. 3: Reliance on supply chain imports across the EU economy



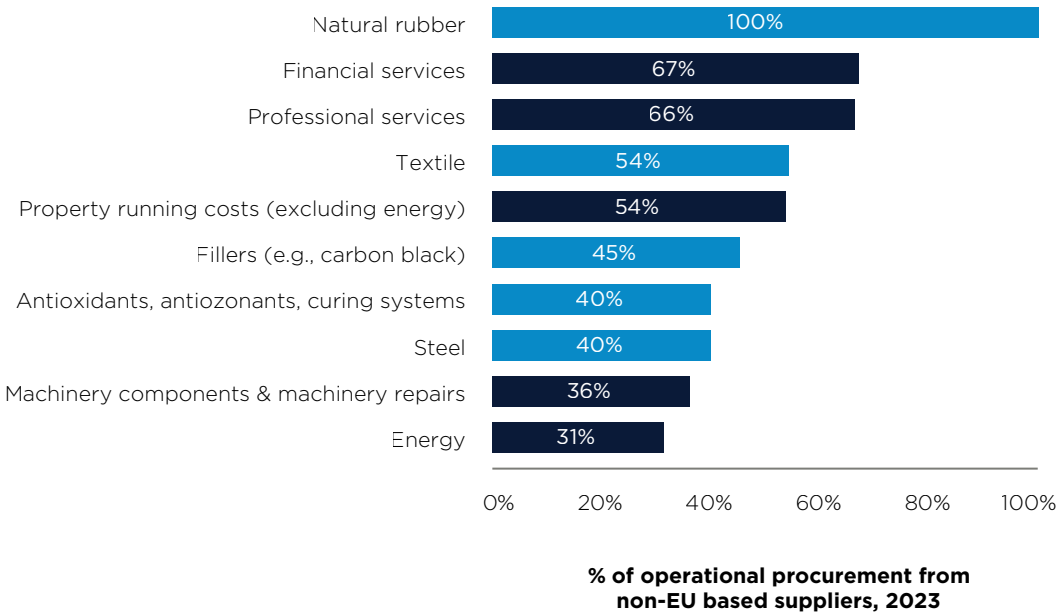
Source: Oxford Economics, Tyres Europe members, OECD  
Note: Data for tyres relates to 2023, data for all other sectors relates to 2022.

2.1.1 NATURAL RUBBER

The most acute import dependency in the EU tyre supply chain is natural rubber, which is solely reliant on imports (Fig. 4). This is because the climate conditions required for cultivation cannot be replicated in Europe. The primary sources of

natural rubber are from South East Asia—Thailand (29% of EU rubber imports in 2024), Indonesia (28%), Malaysia (10%), and Vietnam (7%)—as well as African markets including Ivory Coast (17%) and Nigeria (2%).

Fig. 4: Reliance on non-EU suppliers by product type



Source: Oxford Economics, Tyres Europe  
Note: Material inputs highlighted in light blue.

The geographic concentration of global rubber supply exposes the tyre industry to country-specific risks. For instance, in 2024, after Thailand and neighbouring Malaysia were hit by floods, natural rubber output dropped in these markets. Cultivation cycles of rubber restricted rapid supply-side adjustment, and so there was only a partial offset in production from other producers, such as the Ivory Coast. This in turn led to a 43% spike in global natural rubber prices in 2024 relative to 2023.

Indeed, the European Commission’s INFORM Risk Index shows that several Southeast Asian natural rubber exporting markets have a clearly higher-than-average exposure to natural hazards, such as tropical cyclones, floods, drought, and earthquakes.<sup>7</sup>

7 The European Commission’s INFORM Risk Index identifies countries at risk from humanitarian crises and disasters that could overwhelm national response capacity. It is made up of three dimensions—hazards and exposure, vulnerability, and lack of coping capacity.

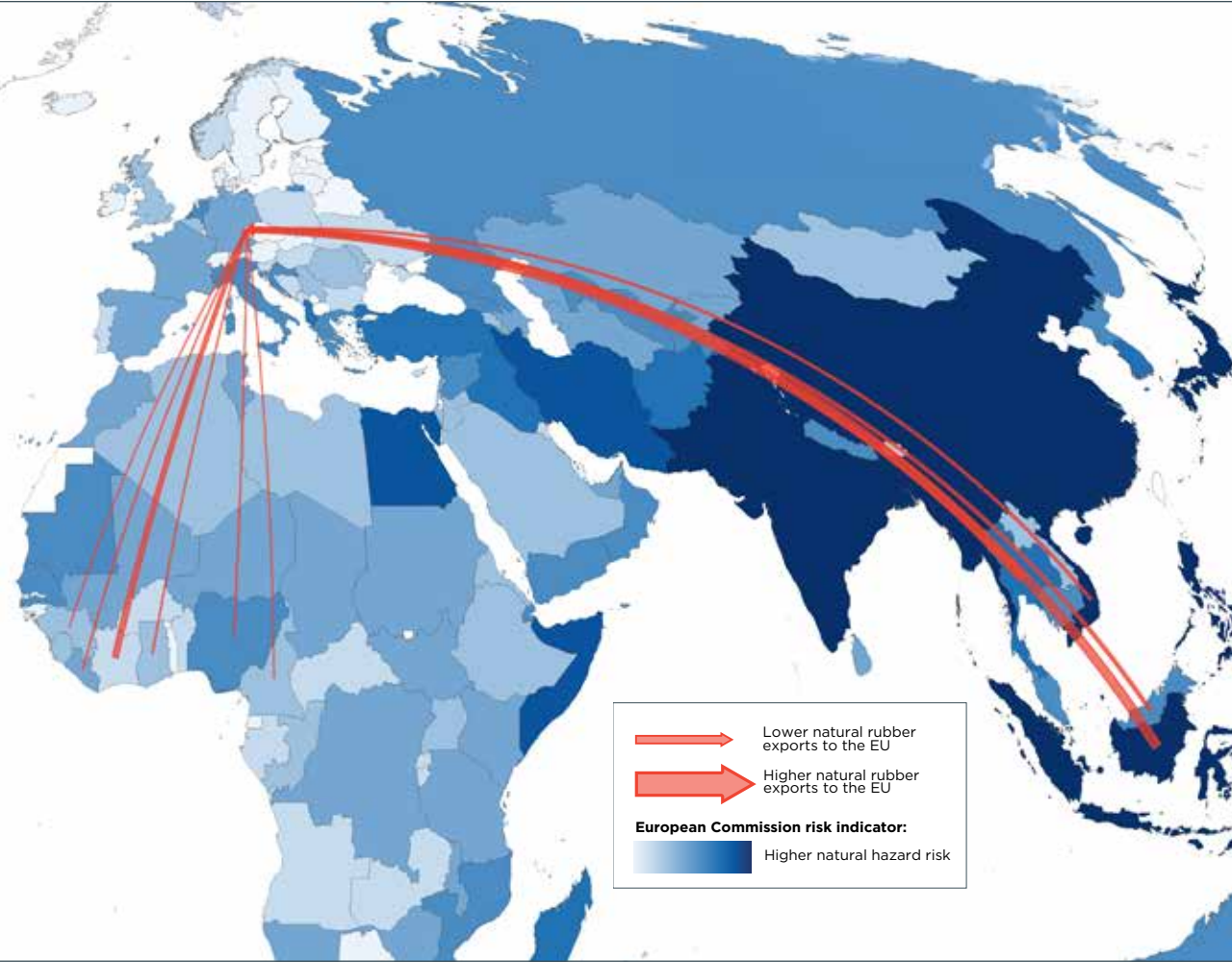
These vulnerabilities have drawn the attention of EU policy makers. Natural rubber was classified by the European Commission as a critical raw material (CRM) in 2020 on account of its high supply-chain risk, economic importance, and lack of viable substitutes. It was subsequently removed from the CRM list in 2023, at least partly reflecting the increase in recycled rubber inputs—an example of how circular economy measures can partially hedge against supply chain exposure.<sup>8</sup> Nevertheless, removal from the list should not be read as an indication that the underlying vulnerability has been resolved.

A further layer of risk stems from recently introduced regulatory requirements. The phased introduction of the European Deforestation Regulation—applying to large and medium-sized

companies from 30 December 2026, and to small and micro enterprises from 30 June 2027—requires that natural rubber placed on the EU market be deforestation-free, legally produced, and traceable to specific plot-level geolocation data. Any shortfall in the availability of fully compliant rubber could create near-term disruption to tyre production.

Beyond compliance, the EUDR may also affect global supply dynamics. By restricting the availability of compliant natural rubber, the regulation could effectively reduce globally accessible supply at a time when demand for transport—and therefore tyres—is increasing. This may intensify global competition for natural rubber inputs, adding further pressure to supply chains and prices.

Fig. 5: EU 2024 imports of natural rubber and natural hazard risk



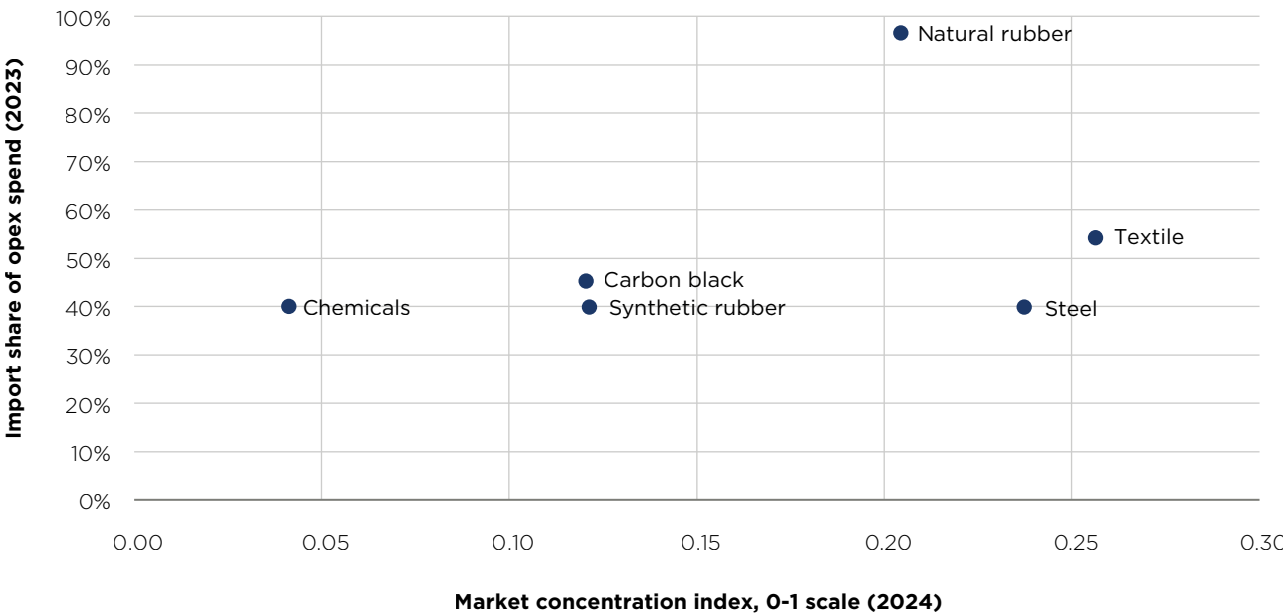
Source: Oxford Economics

2.2 SUPPLIER CONCENTRATION AND DIVERSIFICATION

While natural rubber illustrates the risks arising from reliance of overseas suppliers, a related risk arises when supply is dominated by a small number of producing nations, limiting the industry’s ability to diversify rapidly in response to disruption. One way to explore concentration is a Herfindahl-Hirschman Index (HHI) analysis. An HHI is a standard measure of market concentration

running from 0 (fully dispersed) to 1 (fully concentrated). Constructing an HHI for 2024 EU imports shows that certain inputs, including natural rubber as well as textiles and steel, exhibit relatively limited diversification of import suppliers by country.<sup>9</sup> On the other hand, supplier markets are more diverse in the case of synthetic rubber, carbon black, and (most notably) chemicals.

Fig. 6: Import reliance mapped against market concentration of imports



Source: Oxford Economics, Tyres Europe members, Eurostat

9 The Herfindahl-Hirschman Index (HHI) is calculated by squaring the shares of the individual countries in total EU imports of a specific product and then summing them.

2.2.1 SYNTHETIC RUBBER

Synthetic rubber is one of the many product types produced by the chemical manufacturing industry, which has a strong presence in the EU. Consequently, EU-produced synthetic rubber accounts for 60% of all synthetic rubber used by the EU tyre manufacturing industry, with imports from non-EU countries accounting for 40%, as indicated by Fig. 2 in section 2.1 above. That is in stark contrast to natural rubber, where all inputs have to be sourced from non-EU suppliers. Furthermore, as Fig. 6 shows, supplier markets are reasonably diverse in the case of synthetic rubber. Five countries—namely the US, Japan, South Korea, the UK, and China—accounted for 68% of all EU imports of synthetic rubber from non-EU nations in 2024, with the next 31% sourced from 12 supplying economies spread across the Americas, Europe, Middle East, and Asia.<sup>10</sup>

Of the supplies specifically sourced by the EU tyre manufacturing industry from within the EU, as shown in Fig. 2, Germany and Poland account for broadly 30% each, and Belgium and the Czech

Republic, for around 10% each. In the relatively unlikely event that non-EU supplies became restricted, it is quite possible that these industries would be able to expand production to make up for some or most of the resulting supply shortfall, given the lack of output growth in those sectors in the last few years.

Of course, if natural and synthetic rubber were perfect substitutes for each other, then the negative impact of an interruption to natural rubber supply—referred to in section 2.1.1 above and analysed in more depth in chapter 5—could be more easily contained. But that is not the case: the typical modern tyre requires a mix of both natural and synthetic rubber, which have different qualities. But on a positive note, the risk of a harmful interruption to synthetic rubber supplies is relatively modest.

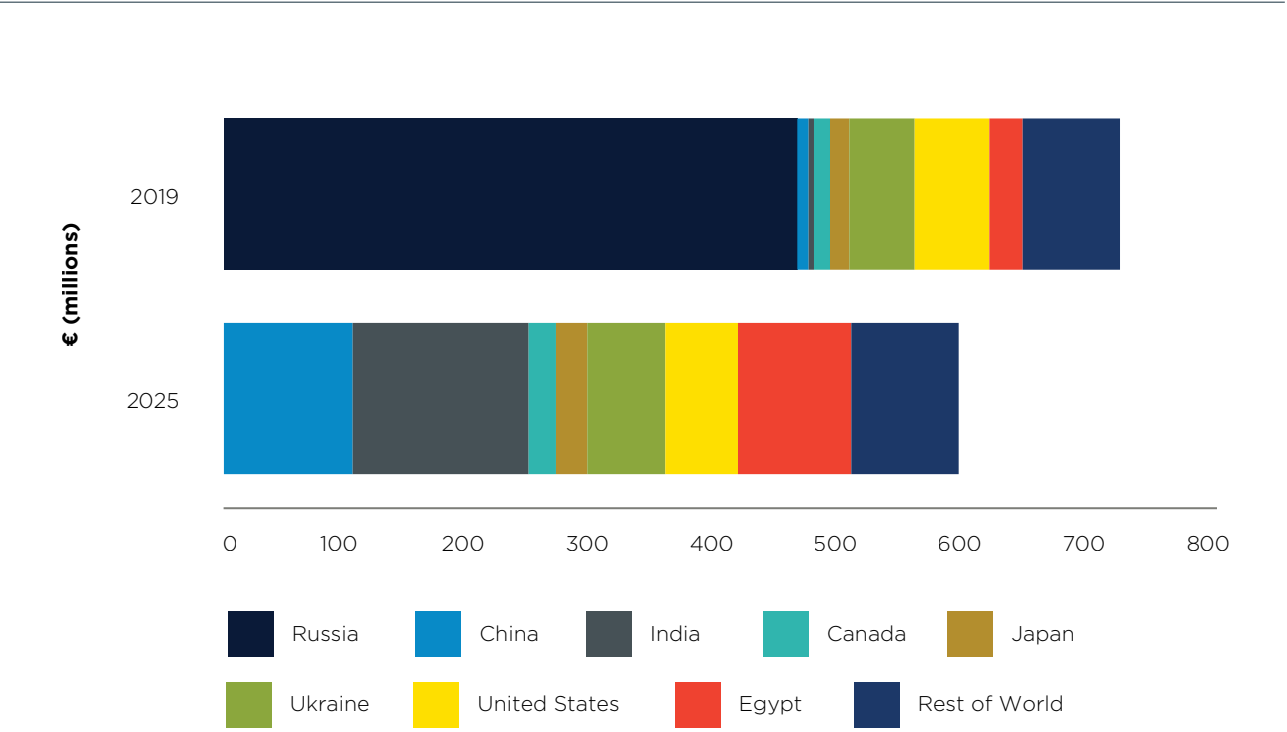
2.2.2 CARBON BLACK

Like synthetic rubber, carbon black is also sourced from a fairly diverse range of countries, as Fig. 6 indicates.<sup>11</sup> However, geographic diversification at the country level can sometimes mask underlying concentration in the supply base. While imports may originate from multiple countries, production may still be controlled by a small number of multinational firms. By investigating firm-level supply chain datasets, Oxford Economics found that the major EU tyre manufacturers purchase carbon black inputs from a limited number of supplier companies.

That being said, carbon black provides an example of how the industry has responded to supply

disruption through diversification of the country of supply. Prior to the EU’s sanctions following Russia’s invasion of Ukraine, Russia accounted for around 60% of EU carbon black imports. The EU ban on Russian carbon black, which entered into force in July 2024 and was later expanded to Belarus, forced rapid sourcing adjustments. Due to the sanctions, EU trade data show a diversification of EU imports of carbon black by country of supplier (Fig. 7).<sup>12</sup> By 2025, EU imports from Russia had stopped, whilst imports from China, India, and Egypt had surged, with India becoming the largest source of EU carbon black imports.<sup>13</sup> EU-based carbon black production also rose by 34% between 2019 and 2024—with notable gains in Germany, Hungary, and Italy.<sup>14</sup>

Fig. 7: EU imports of carbon black, 2019 vs 2025



Source: Oxford Economics, Eurostat

Carbon black provides an example of how the industry has responded to supply disruption through diversification of the country of supply. Following the EU ban on Russian carbon black, India has overtaken Russia as the largest source of EU carbon black imports.

Taken together, the analysis in this section points to a supply chain that is globally integrated, strategically exposed in specific materials, and capable of adaptation—but not without limits. Natural rubber represents the most acute vulnerability, combining total import dependence, geographic concentration, climate risk, and increasing regulatory burden. Carbon black illustrates both the risks of over-reliance on a single supplier nation, and also the capacity of EU buyers to pivot when forced to do so.

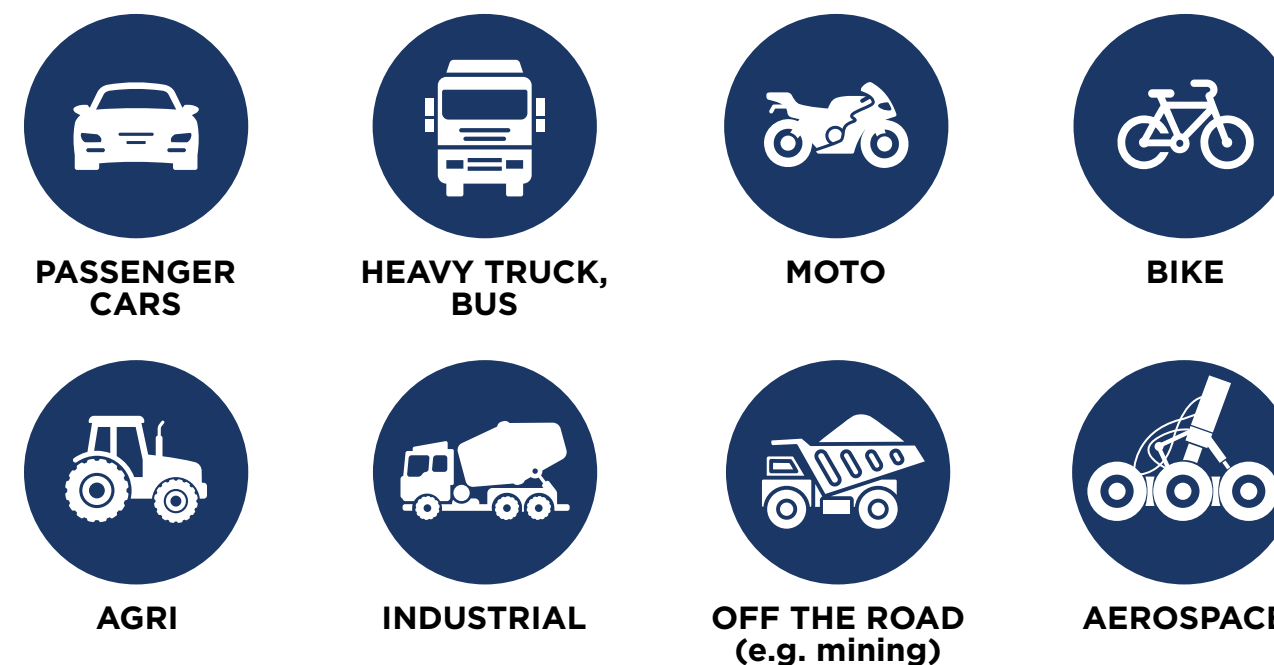
10 Oxford Economics analysis of Eurostat trade data.  
11 Carbon black is a fine, high-surface-area powder composed of elemental carbon, produced by the controlled, incomplete combustion or thermal decomposition of hydrocarbons (petroleum products). It is primarily used as a reinforcing agent to enhance the strength, durability, and UV resistance of rubber products—especially tyres—and as a black pigment in inks, plastics, and coating.  
12 This analysis is also corroborated by the HHI index for carbon black, as described in this report, which fell from 0.44 in 2019 to 0.12 in 2024.  
13 2019 is chosen as the reference year given possible distortions during the Covid-19 pandemic and subsequent recovery.  
14 Analysis of Eurostat PRODCOM data for carbon black.

## SECTION 3: THE ECONOMIC FOOTPRINT OF DOWNSTREAM CUSTOMERS

Demand for tyres is driven by the production of vehicles and purchases by consumers, fleets, and businesses to replace tyres on their existing vehicles. This section quantifies the economic footprint potentially “enabled” in three downstream customer sectors through their purchase of tyres. The three customer sectors

assessed are passenger cars, commercial road vehicles, and farm tractors. In each sector, we quantify the economic footprint potentially enabled in manufacturers of new vehicles, as well as the footprint of tyre dealers selling replacement tyres. We also examine the role of exports in the industry.

Fig. 8: Vehicles that use tyres



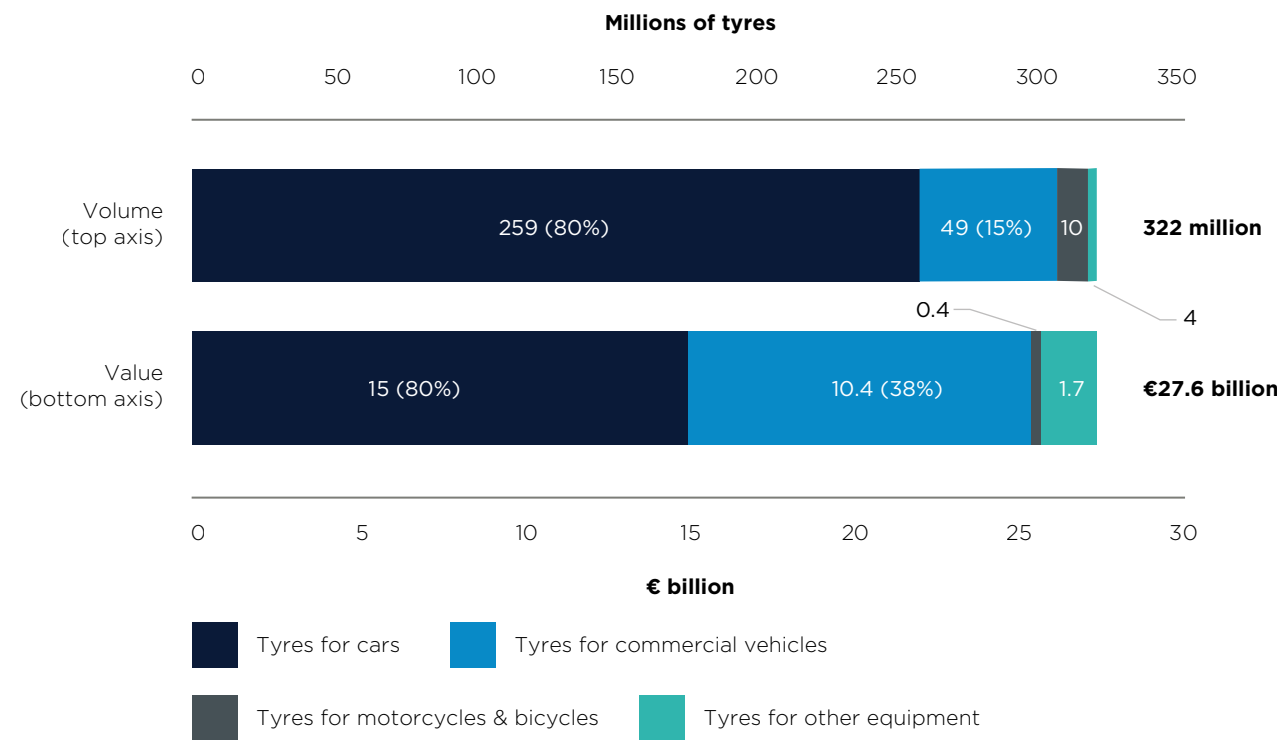
Source: Oxford Economics

3.1 EU TYRE PRODUCTION BY TYPE AND MAJOR CUSTOMER GROUP

In 2024, an estimated 322 million tyres were produced in the EU. The vast majority of these (80%) were tyres for cars, with tyres for commercial vehicles accounting for a further 15%.<sup>15</sup> Tyres for motorcycles and bicycles, and those for other vehicles and equipment—for instance aircraft, farm tractors, excavators, some military vehicles, and caravans—made up the remainder.

322 million  
The number of tyres produced in the EU in 2024.

Fig. 9: Production of tyres in the EU in 2024



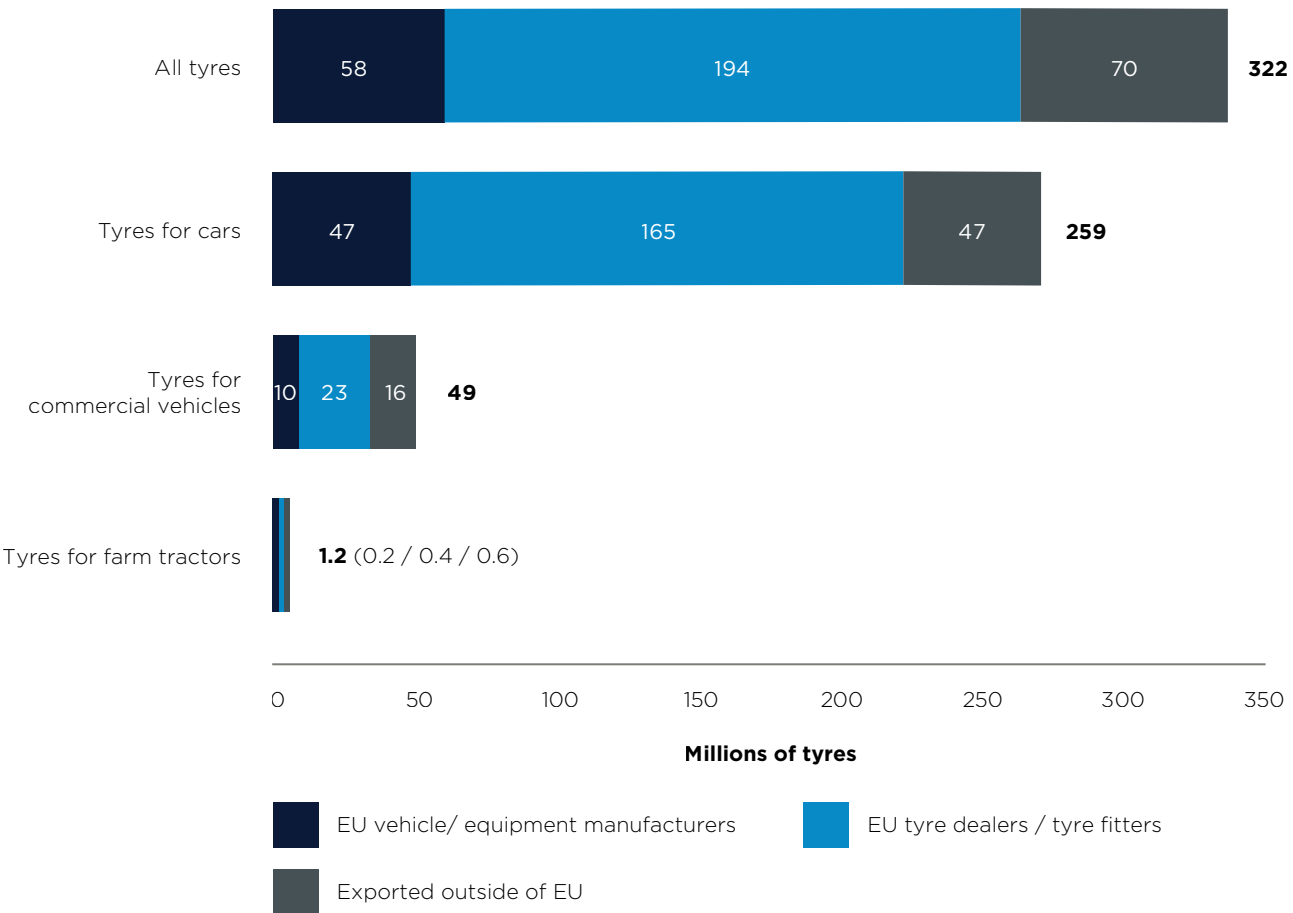
Source: Eurostat, Europool, Tyres Europe, Oxford Economics

In volume terms, 22% of tyres in the same year were exported to customers outside of the EU, while 18% were sold to EU vehicle and machinery manufacturers of various kinds (see Fig. 10). The remaining 60% were replacement tyres sold to EU-based dealers, where they were purchased

by households, businesses, and public sector end-users across the EU. This will have included tyres fitted to vehicles by specialist businesses and other vehicle maintenance and repair enterprises.

<sup>15</sup> Note the value in Fig. 9 reflects the “factory gate” price received by the manufacturers (i.e., excluding VAT and the margin made by tyre dealers). It can be seen in the chart that in value terms there was a more equal split between those for cars (54%) and those for commercial vehicles such as lorries, vans, and buses (38%), as tyres for commercial vehicles are typically more expensive than for cars.

Fig. 10: Newly produced tyres by major customer group in volume terms



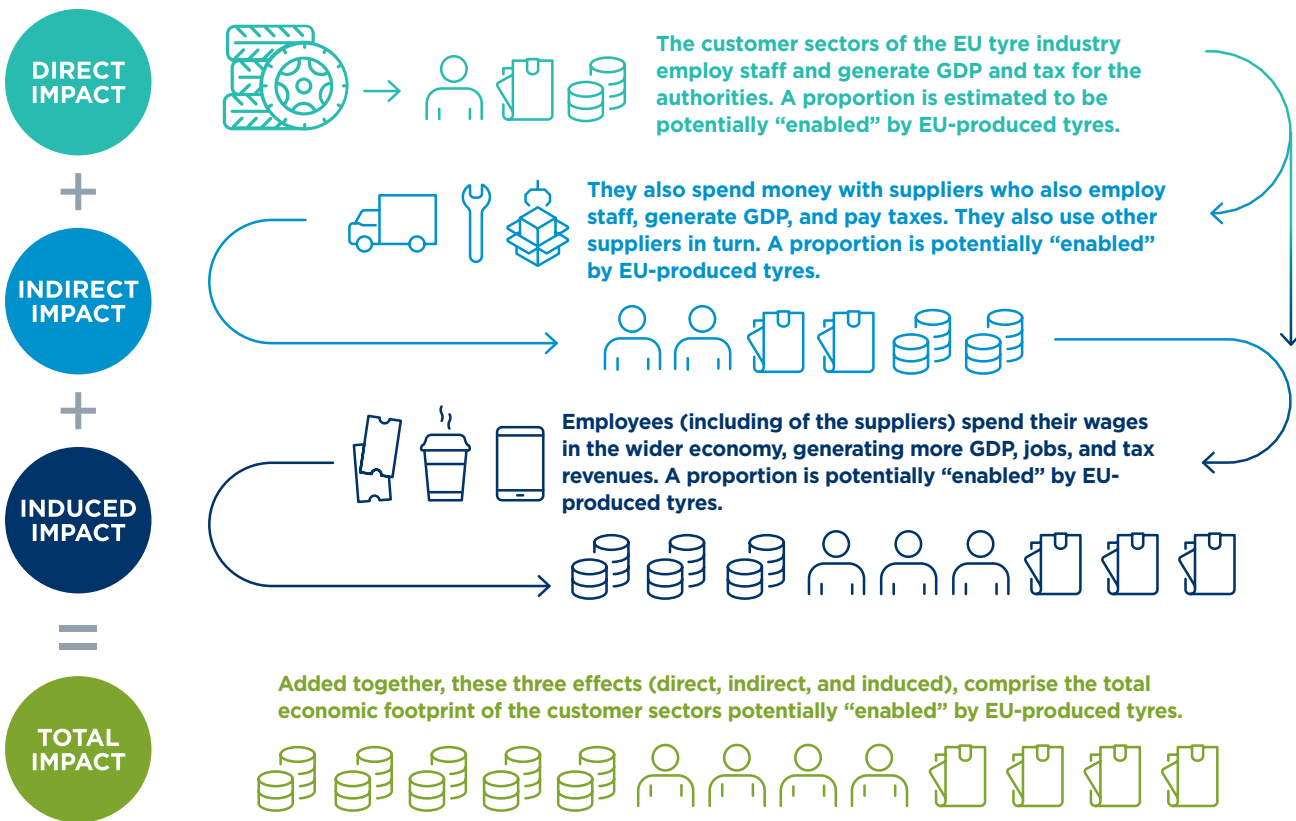
Source: Eurostat, Europool, Tyres Europe, Oxford Economics

3.2 HOW WE QUANTIFY THE ECONOMIC FOOTPRINT OF CUSTOMER SECTORS

Using a consistent economic framework to our 2024 study, we measure the GDP, employment, and tax footprint of the manufacturers of passenger cars, commercial road vehicles, and farm tractors that is potentially “enabled” by EU-produced tyres. Additionally, we assess the footprint of dealers in each of those types of tyre. This is measured across three channels of impact:

- **Direct impact:** Relating to the customer sector’s own EU operations. These three customer sectors collectively accounted for 98% of all purchases of EU-produced tyres by EU customers.<sup>16</sup>
- **Indirect impact:** Relating to the activity sustained by the customer sector along its entire EU supply chain.
- **Induced impact:** Relating to the activity stimulated in the wider economy as workers in the customer sector and its supply chain spend their earnings.

Fig. 11: An overview of the economic impact assessment framework



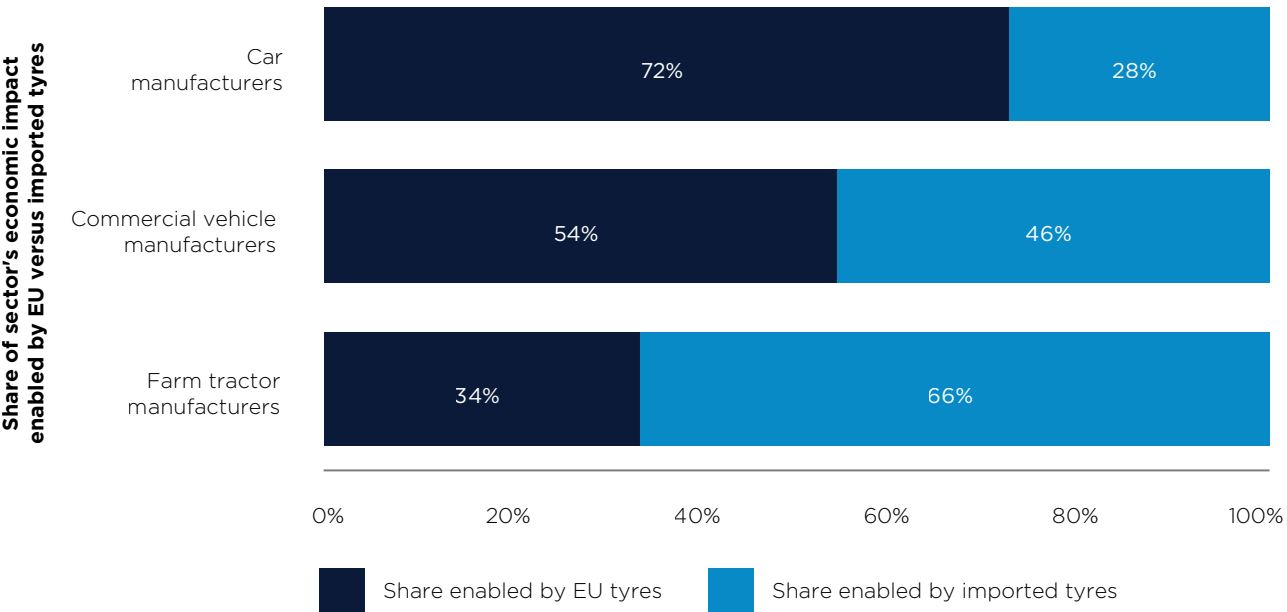
Source: Oxford Economics

3.2.1 ENABLED SHARE FOR VEHICLE MANUFACTURERS

As it is not possible to produce a functional vehicle without tyres, we can say that EU-produced tyres enable a significant share of the total value of EU vehicle production. The enabled share is estimated by analysing the share of EU-produced tyres used by EU vehicle manufacturers, compared to imports.

Fig. 12 shows the estimated enabled shares for this analysis for each customer sector.<sup>17</sup> To estimate the economic footprint of the vehicle manufacturers potentially enabled by EU tyres, the direct, indirect, and induced economic activity is multiplied by these enabled shares. We also adjust the indirect and induced impacts downwards to exclude the impact of purchases of tyres.<sup>18</sup>

Fig. 12: Share of customer sectors’ total economic impact “enabled” by EU-produced tyres



Source: Oxford Economics

3.2.2 TYRE DEALERS’ MARGIN

For the tyre dealer impacts for each customer sector, tyre dealers make money by selling tyres to end-users. This “gross margin” is equivalent to the economic value of the dealers.<sup>19</sup> Using Eurostat data,

we estimate the gross margin is around 30% of the original cost of the tyres sold on.<sup>20</sup> The economic activity supported by tyre dealers’ activities is quantified on this basis in this section, in the case of dealers in tyres for cars, commercial vehicles, and farm tractors.<sup>21</sup>

17 The “enabled share” used in the analysis is based on the volume of tyres.

18 Note, in this analysis we are not suggesting that this activity would necessarily disappear were it not for EU tyres. But it would mean that these users would be more reliant on imported tyres.

19 The technical economic term for all these values is “output”. A sector’s contribution to national gross domestic product (GDP) can then be calculated as output minus purchases of supplies from third party entities.

20 This assumes the margin made by tyre dealers is similar to that made, on average across the EU, by dealers in vehicle parts of all kinds. This is based on Eurostat “Business Structural Statistics” data for the “Sale of motor vehicle parts and accessories” sector.

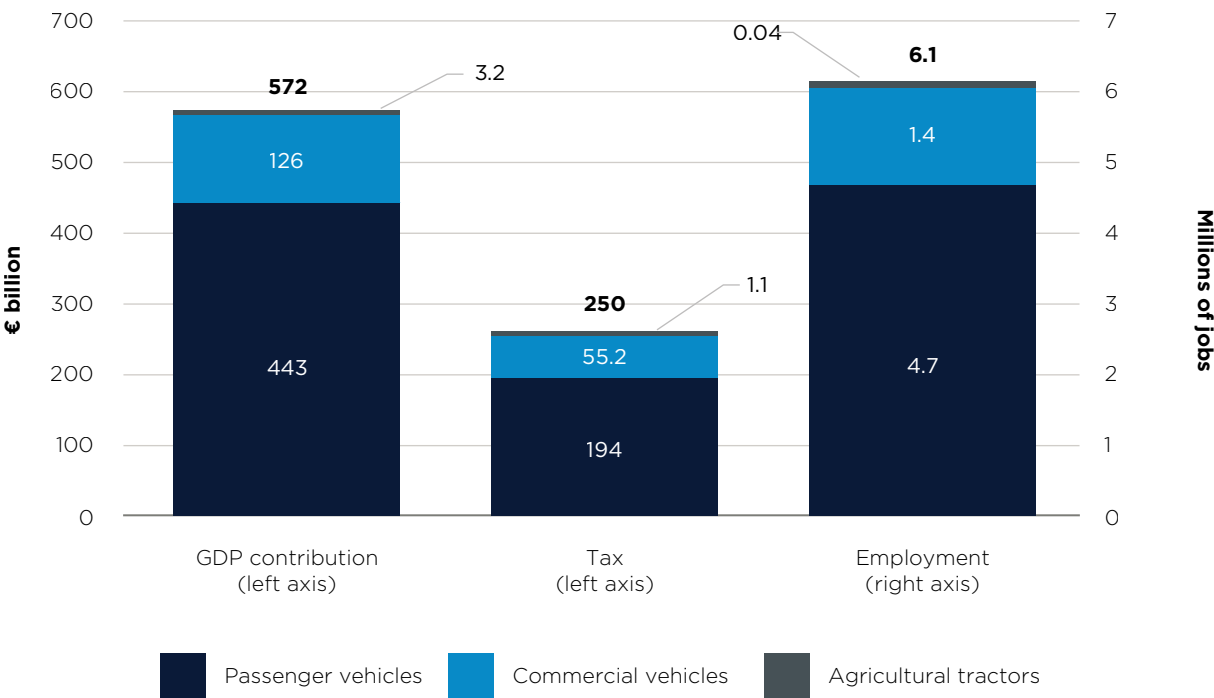
21 Where these tyres are fitted to customers’ vehicles by a specialist tyre-fitting company, or by another vehicle repair and maintenance enterprise, the overall effective margin made by the service provider will be higher still, to reflect the additional value of the services performed.

3.3 CUSTOMER SECTOR ECONOMIC FOOTPRINT: KEY HEADLINES

Across the passenger car, commercial road vehicle, and farm tractor customer sectors, we estimate the EU tyre manufacturing industry potentially enabled a €572 billion contribution to EU GDP and an estimated 6.1 million jobs in 2024. The GDP and employment contributions were equal to 3.2% of EU GDP and 2.8% of the EU labour force in 2024, respectively. Additionally, the economic footprint of the customer sectors potentially enabled by EU tyres was estimated to have supported a total tax contribution of around €250 billion across the EU in the same year, equal to 3.3% of government revenue across the 27 EU member states in 2024.

3.2%  
Total contribution to EU  
GDP potentially enabled by  
EU tyres in 2024.

Fig. 13: Potential customer-related impacts enabled by EU tyres by sector, 2024



Source: Oxford Economics, Tyres Europe, Eurostat  
Note: Totals do not sum due to rounding

Note, this customer impact is additional to the €43.9 billion total GDP contribution, 498,000 jobs, and €12.2 billion in tax revenues stimulated in 2023 by the EU tyre industry and its upstream supply chain, as documented in our previous study. It also excludes the substantial amount of activity enabled by the end-users of tyre-using vehicles

and machinery, such as the logistics activity carried out by the road freight sector, the wide range of manufacturing and retail work made possible by that freight activity, and the agricultural work enabled by the use of farm tractors, amongst much else. The economic significance of these activities is explored in section 4.

3.4 IMPACT BY EU CUSTOMER SECTOR

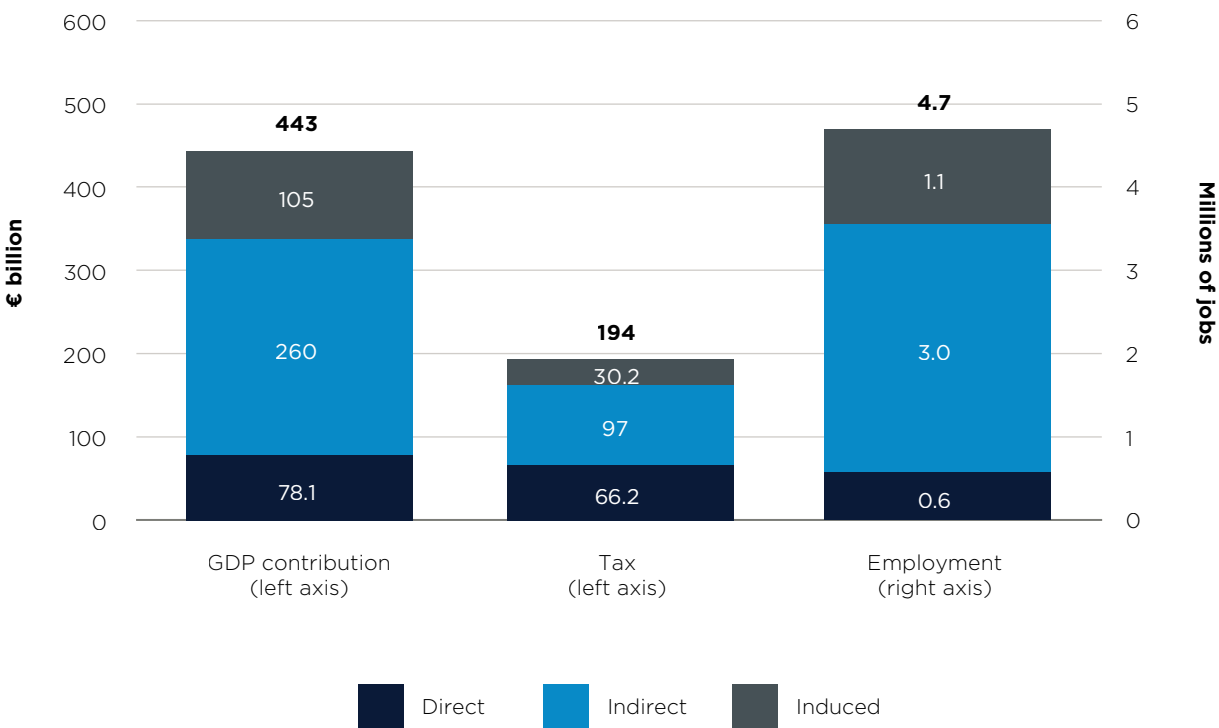
3.4.1 PASSENGER CARS

In 2024, an estimated 47 million new EU-manufactured passenger car tyres were sold to EU automakers. In the same year, around 11.8 million new passenger car vehicles were produced in the EU. A further 165 million new tyres were sold to EU-based dealers in the replacement market, which were then purchased by consumers and businesses (such as taxis, car rentals, and company cars).

Our analysis finds the sale of EU tyres to the EU passenger car sector potentially enabled a €443 billion total contribution to GDP in 2024. This economic activity was associated with 4.7 million jobs and €194 billion in tax revenues. The GDP and employment contributions were equivalent to 2.5% of EU GDP and 2.2% of the EU labour market, respectively.

By channel of impact, we estimate EU tyres directly enabled a €78.1 billion contribution to EU GDP (18% of the total impact), alongside 580,000 jobs in the passenger car sector in 2024. We estimate a further €260 billion (59% of the total), as well as 3 million jobs were supported in the indirect channel. This reflects the sector's extensive supply-chain expenditure with EU suppliers spanning from car parts and accessories to the interiors bought from wholesalers. Finally, an additional €105 billion contribution to GDP (24%) and 1.1 million jobs were stimulated in the induced channel of impact, as workers in the customer sector and its supply chains spent their earnings.

Fig. 14: EU passenger cars' economic footprint enabled by EU tyres, 2024



Source: Oxford Economics, Tyres Europe, Eurostat  
Note: Totals do not sum due to rounding

3.4.2 COMMERCIAL ROAD VEHICLES

In 2024, an estimated 10 million new EU-manufactured commercial road tyres were sold to EU automakers. Around 2 million new commercial vehicles were produced in the EU in the same year. A further 23 million new commercial road tyres were sold to EU-based dealers in the replacement market.

We estimate the sale of EU tyres to the EU commercial road vehicle sector potentially enabled a €126 billion total contribution to EU GDP in 2024. This economic activity was associated with 1.4 million jobs and €55.2 billion in tax revenues.<sup>22</sup> This was equivalent to 0.7% of EU GDP and 0.6% of the EU labour market.

By channel of impact, around €23.1 billion of the contribution to GDP (18% of the total impact) and 191,000 jobs were supported in the direct channel. A further €73.3 billion (58% of the total) and 838,000 jobs were supported in the indirect channel of impact, reflecting the sector’s supply-chain expenditure with other EU suppliers. Finally, an estimated €30.0 billion contribution to EU GDP (24% of the total) and 328,000 jobs were supported in the wage-induced channel.

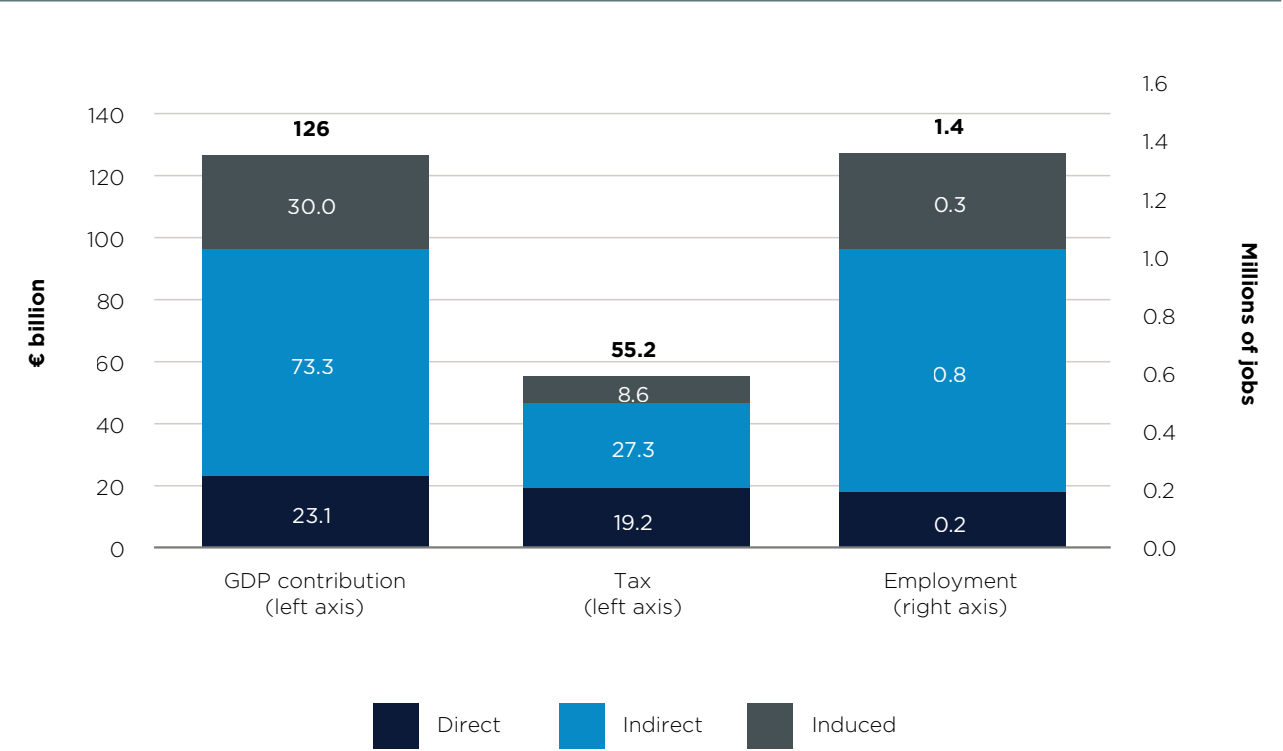
These vehicles are used for road-based passenger transport (such as public buses and coaches), and some postal and courier services, as well as road freight. Their role in supporting the movement of people and goods across the economy is examined further in section 4.

3.4.3 FARM TRACTORS

Finally, we estimate the sale of EU tyres to the EU farm tractor manufacturing sector potentially enabled a €3.2 billion contribution to EU GDP, along with 35,600 jobs and €1.1 billion in tax revenues in 2024. Around 27%—equal to €0.9 billion—of the total contribution to EU GDP in 2024 was supported in the direct channel of impact, associated with 9,300 jobs. An additional €1.3 billion (42%) and 14,900 jobs were supported as a result of the sector’s spending with EU businesses (indirect channel) from machinery to fabricated metal products. A further €1.0 billion (31%) and 11,400 jobs were supported through the wage-induced channel of impact.

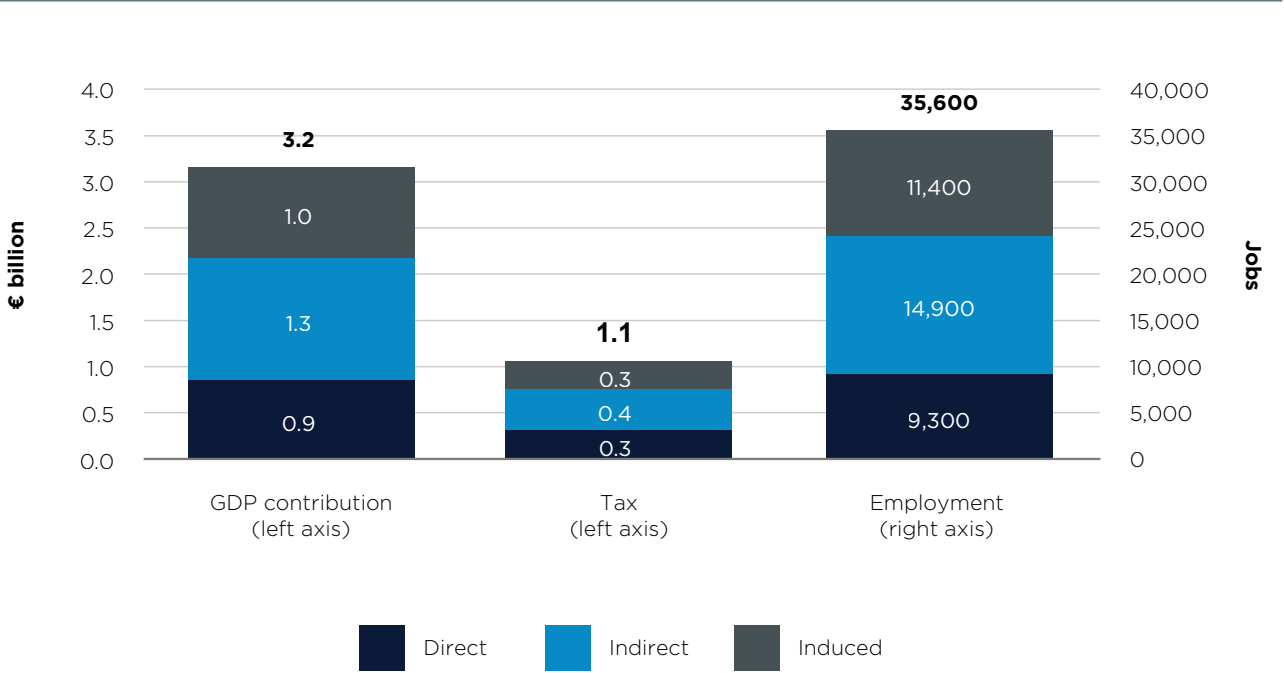
These tractors are used throughout the farming process, from soil preparation and planting to fertilisation and harvesting. A secure tyre supply thus supports operational efficiency on farms, and the resilience of food supply chains. We explore the economic significance of tractors for agriculture in section 4 of this report.

Fig. 15: EU road commercial vehicles’ economic footprint enabled by EU tyres, 2024



Source: Oxford Economics, Tyres Europe, Eurostat  
Note: Totals do not sum due to rounding

Fig. 16: EU agricultural tractors’ economic footprint enabled by EU tyres, 2024



Source: Oxford Economics, Tyres Europe, Eurostat  
Note: Totals do not sum due to rounding

22 The respective magnitude of the economic footprint enabled by EU tyres across the three customer sectors reflects the size of the economic footprint of each sector, and the share of economic impact enabled by EU tyres as opposed to imported tyres.

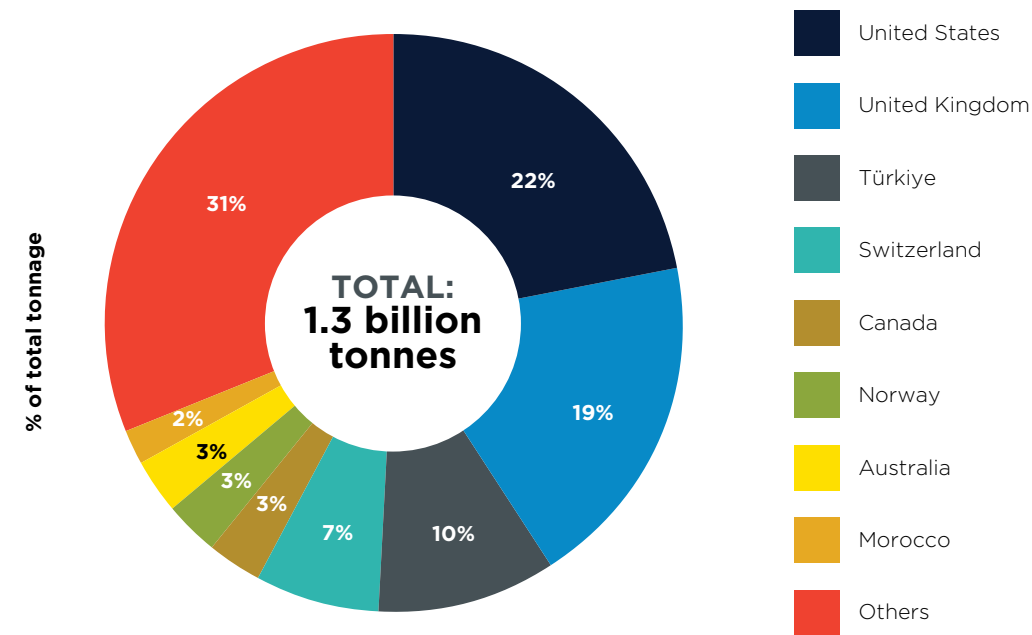
3.5 EXPORTS OF EU-PRODUCED TYRES

As well as enabling economic activity in EU customer sectors, and consequently across the wider EU economy, EU-produced tyres are also sold to clients overseas. This generates additional income for the EU tyre manufacturing sector and its suppliers, and positively contributes to the EU's trade balance with external partners. In total, some 70 million EU-produced tyres were exported to non-EU countries in 2024, valued at €7.5 billion.

Measured in terms of weight, the US (22% of all non-EU purchases of EU tyres) and UK (19%) are the most important markets, followed by Türkiye (10%), and Switzerland (7%) (see Fig. 17). Together, these four markets alone accounted for 58% of all

58%  
The US, UK, Türkiye, and Switzerland accounted for 58% of all exports of EU tyres to non-EU countries in 2024.

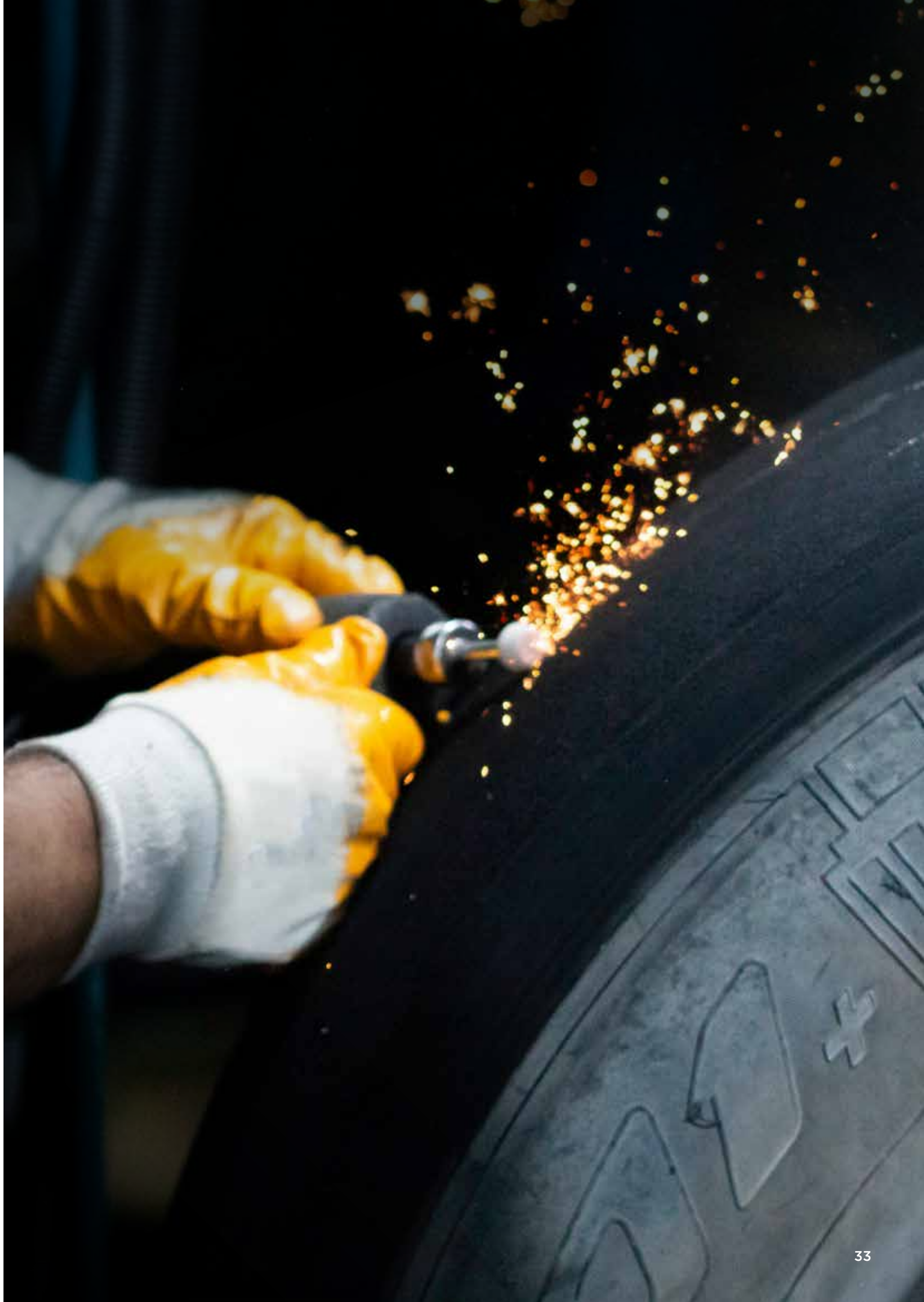
Fig. 17: Share of total tyre exports to non-EU countries in 2024, by weight and country of customer



Source: Eurostat, Oxford Economics

exports to non-EU countries in 2024. Beyond that, however, EU tyre exports to the outside world are spread widely, with 12 countries accounting for the next 26% of tonnage. The pattern of exports in value terms is very similar to the pattern by weight, with the same four countries also accounting for 58% of relevant sales on that basis.

Given the importance of the US market for exports, any future changes affecting trade in motor vehicle parts may impact EU tyre export revenues. Otherwise, exposure remains modest, given the geographically diverse nature of tyre exports to trading partners around the world.



## SECTION 4: THE END-USE OF TYRES IN THE EU

Section 3 quantified the immediate downstream customer sectors—passenger cars, commercial road vehicles, and farm tractors—whose operations depend on a reliable supply of EU-produced tyres, as well as their subsequent economic footprint. This section takes a further step downstream, examining the breadth of economic and social activity that ultimately depends on tyre-equipped vehicles, used daily across several sectors of the economy. On the lorries that move goods from factory to shelf, the aircraft that carry passengers and cargo,

the tractors that grow the continent's food, the buses that provide essential public transport, the construction machinery that builds homes and infrastructure, and the cars that give households access to work, healthcare, and everyday life.

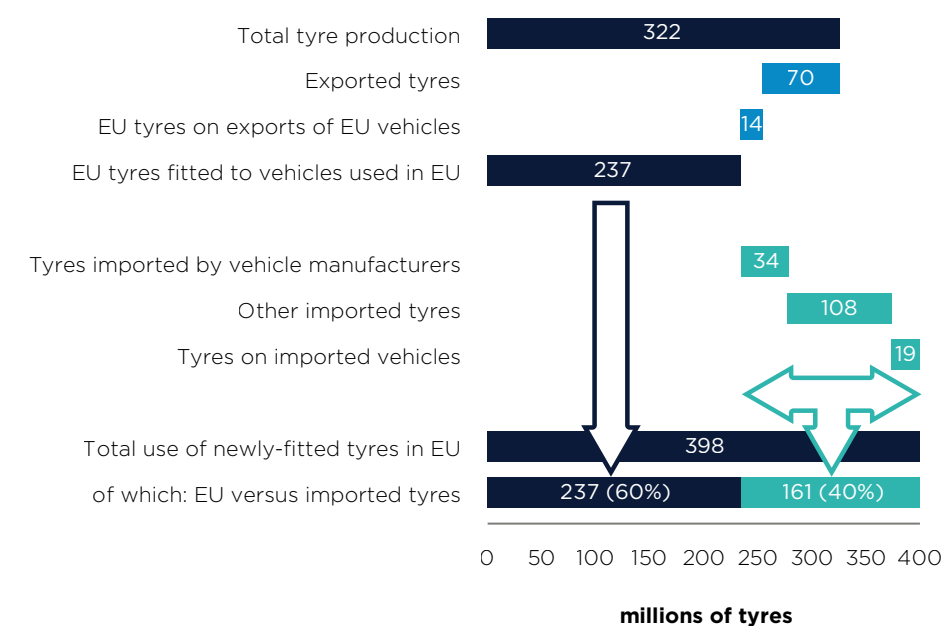
Whilst it is not possible to directly attribute the enabled economic footprint of tyres to each of these end-use sectors, in section 5 we quantify the impact of a hypothetical disruption to the tyre industry on the EU economy as a whole.

### 4.1 OVERVIEW OF EU VERSUS IMPORTED TYRES

Fig. 18 below maps the relationship between tyre production in the EU and the use of newly fitted EU-produced tyres on vehicles active within the EU. Through mapping the flows of imports and

exports we estimate that from all newly fitted tyres on vehicles used in the EU, 60% were manufactured within the EU, and 40% in the rest of the world.

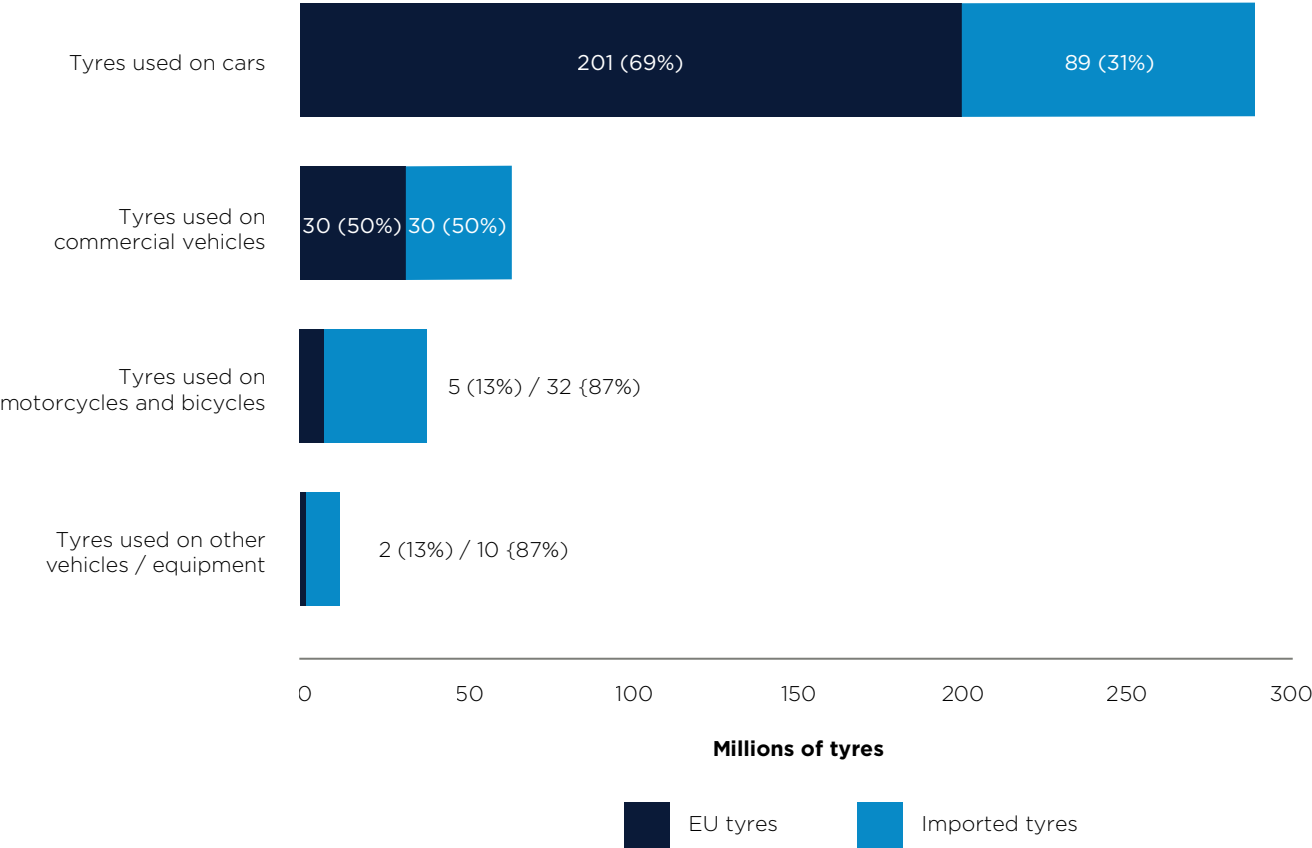
Fig. 18: Tyre production and use in the EU, volume terms, 2024



Source: Eurostat, Europool, Tyres Europe, Oxford Economics

Fig. 19 shows how this split varies significantly by type of tyre, with EU tyres accounting for 69% of tyres used on cars, and 50% of tyres used on commercial vehicles, but for only 13% of tyres used on motorcycles and bicycles, and 13% of all other tyre types.

Fig. 19: Newly fitted tyre uses in the EU by type and origin: volume terms, 2024



Source: Eurostat, Europool, Tyres Europe, Oxford Economics

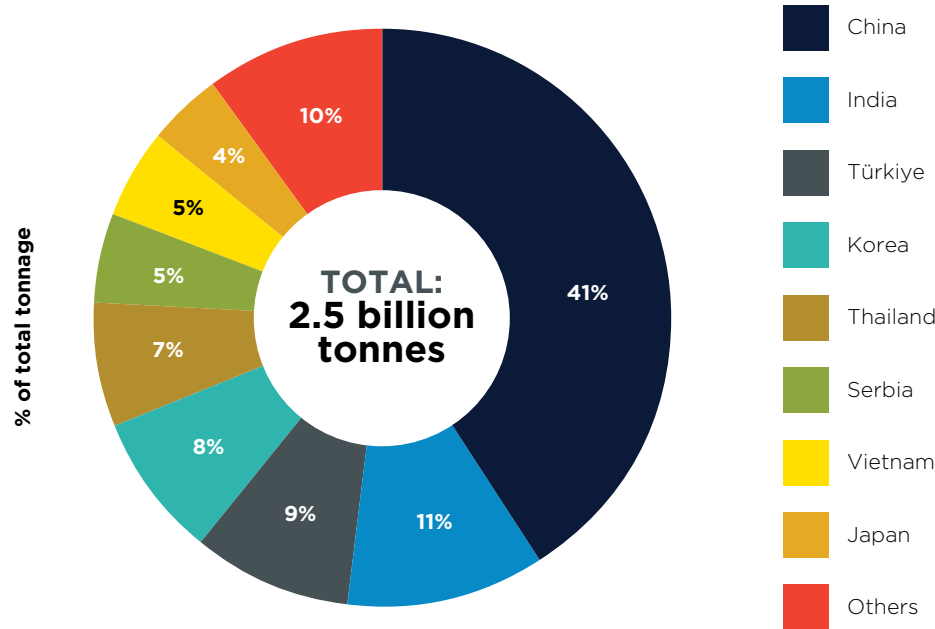
However, the picture in value terms differs, as imported tyres are typically cheaper than EU-produced tyres. This is partly due to the type of tyre concerned, with imports dominating the low-value motorcycle and bicycle tyre category, while having a smaller presence in the car tyre and commercial vehicle tyre markets. But it is also true that imported tyres are cheaper than EU tyres, on average, for each of the four categories.

4.1.1. KEY SOURCES OF IMPORTS

As Fig. 20 shows, 41% of imports by weight came from China.<sup>23</sup> If we combine this with the finding in the previous section that 40% of all newly fitted tyres used in the EU in 2024 were imported, then broadly one in six of all newly fitted tyres brought into use in the EU in 2024 could have originated from China. In total, 90% of tyre imports in that year were accounted for by just eight countries, with India (11% of tonnage), Türkiye (9%), Korea (8%), and Thailand (7%) the next most significant after China.

In the event of a disruption to EU tyre manufacturing capacity, these established import markets would likely play a role in maintaining continuity of supply to EU vehicles. The degree to which these countries could scale exports further, however, would depend on global demand conditions, trade policy settings, shipping capacity, and production headroom within each exporting market.

Fig. 20: Share of total tyre imports into the EU in 2024, by weight, by country of origin



Source: Eurostat, Oxford Economics

23 In volume terms, data on total tyre imports by country of origin are available in terms of weight rather than absolute number. This analysis relates to imports of new pneumatic rubber tyres, excluding retreaded tyres which are not particularly significant for imports. Tyres fitted to imported cars are also excluded.

4.2. COMMERCIAL ACTIVITIES AND PUBLIC TRANSPORT

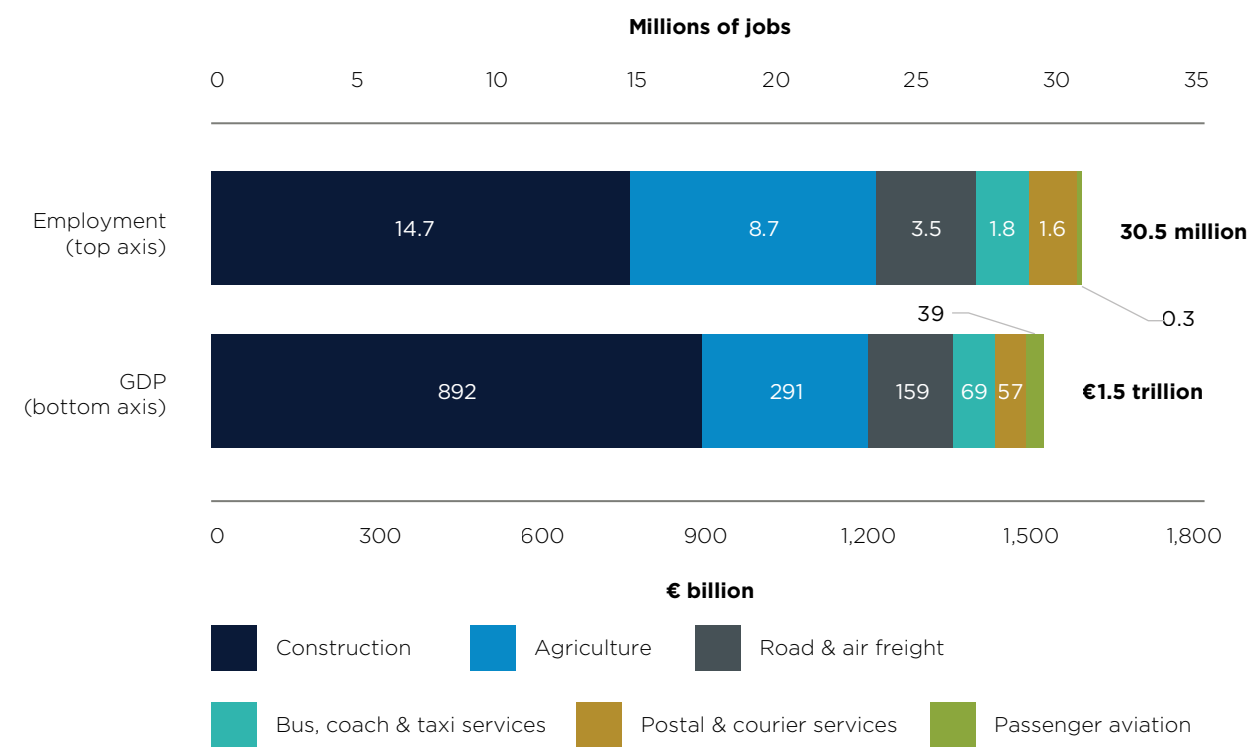
Across the EU economy, tyre-dependent vehicles and equipment are essential enablers of economic activity and public welfare. They are used by industries of all types, encompassing primary activities such as agriculture and mining, secondary activities such as construction, and tertiary activities such as transportation of people and goods. Enterprises across a range of other tertiary sectors—including professional services, business services, and consumer services—also rely on fleets of tyre-using vehicles to carry out their operations. The following subsections examine a range of key end-users of tyres, drawing on sector-level economic data to illustrate their scale. (Road and air freight is then focused on in greater detail in section 4.3.)

As Fig. 21 shows, six major sectors of EU industry that are heavily reliant on tyre-using vehicles and machinery—construction, agriculture, road and air freight, passenger transport by road, postal and courier services, and passenger aviation—employed

13% of EU employment  
Share of the EU labour market accounted for by the major end-users of tyres.

30.5 million individuals in 2024, and directly supported €1.5 trillion of GDP. That was equivalent to 13% of all EU employment in that year, and 9% of total EU GDP.<sup>24</sup>

Fig. 21: Employment and GDP in key tyre-using sectors in 2024



Source: Eurostat, Europool, Tyres Europe, Oxford Economics  
Note: Totals may not sum due to rounding

4.2.1. CONSTRUCTION

Construction activity relies extensively on heavy equipment such as excavators, loaders, dump trucks, and mobile cranes—all of which depend on specialised tyres. These machines support the construction and maintenance of critical infrastructure (such as roads, railways, and energy networks), commercial buildings, and housing. As such, tyre-equipped construction equipment underpins economic development, urban expansion, and the delivery of public infrastructure projects.

In 2024, the EU construction sector employed 14.7 million workers, producing €2.5 trillion worth of buildings, structures, and repair work. This was associated with €892 billion of direct GDP.<sup>25</sup> Some 33% of the value of production related to residential and non-residential buildings, 16% to civil engineering projects, and 51% to specialised construction activities including plumbing, electrics, other installation, completion, and repair and maintenance activities. Across the EU, building permits issued in 2024 allowed for the construction of 329 million square metres of floor space, split evenly between residential and non-residential buildings.

However, the critical importance of tyres for construction is arguably quite moderate, relative to other sectors of the economy. For instance, unlike agriculture (explored below), construction operations are generally not subject to irreversible time-sensitive loss in the same way. A day's delay on a construction programme is costly, but it is typically recoverable through accelerated working or programme resequencing in ways that a lost harvest window is not. Also, many construction projects have some flexibility in sequencing activities, meaning that the grounding of one piece of equipment does not necessarily halt all site work simultaneously.

329 million m<sup>2</sup>  
Useful floor area enabled across the EU in 2024 by building permits, to be constructed with the help of excavators.

38 24 These figures exclude the economic activity that these sectors, in turn, enable in their own customer sectors.

25 Unless otherwise stated, all statistics quoted in section 4.2 are sourced from the Eurostat online database.

4.2.2. AGRICULTURE

Modern agriculture depends heavily on tyre-equipped machinery, particularly farm tractors and harvesting equipment. Tractors are used throughout the production cycle—from soil preparation and planting to fertilisation and harvesting—making them indispensable to domestic food production.

In 2024, 8.7 million workers were employed by the EU agricultural sector, in employee and self-employed roles. They produced €644 billion worth of output, associated with €291 billion of direct GDP. Some 8% of produce by value was exported outside of the EU, with 30% going to EU consumers (via the wholesale and retail network), 55% to the EU food, drink and tobacco manufacturing sector, and 8% to other sectors of EU business including catering.<sup>26</sup> In that year, 100 million hectares of EU land were used to produce 400 million tonnes of harvested crops, and EU farmers also produced 28 million tonnes of beef and pork, and 156 million tonnes of cow's milk.

4.2.3. PASSENGER TRANSPORT BY ROAD

Road-based passenger transport—including buses, coaches, and taxis—provides essential connectivity for large segments of the EU population, particularly in suburban and rural areas where rail and other alternatives are limited or absent. These vehicles enable a range of day-to-day activities. Public bus fleets in particular are foundational to inclusive mobility: they serve passengers who cannot drive, cannot afford a private vehicle, or live in areas underserved by other modes. In recognition of this the European Commission has designated transport as an essential service.<sup>27</sup>

In 2024, EU bus, coach, and taxi operations employed 1.8 million individuals, providing €133 billion worth of services associated with €69 million of direct GDP. The majority of these services are likely to have been provided to final EU household

400mn tonnes  
Weight of crops harvested  
by EU farmers in 2024,  
helped by the use of  
tractors.

A secure tyre supply supports operational efficiency on farms, and supply chain resilience of food supply. Any sustained disruption could affect planting or harvesting cycles, with potential knock-on effects for food availability, prices, and the incomes of rural communities.

300 billion km  
Distance travelled by bus  
and coach passengers in  
the EU in 2024.

consumers, although EU businesses and non-EU visitors will also have benefited. In 2024, passengers travelled over 300 billion kilometres on bus or coach journeys within the EU.<sup>28</sup>

4.2.4. POSTAL AND COURIER SERVICES

While internet communication has resulted in a reduction in the use of postal services for letters over the past two decades, website-based retail activity has resulted in a significant increase in the delivery of parcels. More recently, courier services have played an important part in the delivery of food, drink, and other groceries to household consumers. In 2024, the EU postal and courier services sector employed 1.6 million individuals, providing services worth €119 billion, supporting €57 billion of direct GDP.

4.2.5. PASSENGER AVIATION

Aircraft tyres underpin the safe operation of every commercial flight. Without a reliable supply of aviation-grade tyres, airlines would eventually face grounding of fleets or costly delays. The consequences would be felt across the economy: commercial aviation connects businesses, workers, and consumers across Europe and the globe, enabling tourism, trade, and investment.

In 2024, the EU passenger aviation sector employed 275,000 people, producing €154 billion worth of services and supporting €39 billion of direct GDP. In the same year, around 775 million passenger journeys departed from airports in the EU, with a similar number arriving at those airports.

4.2.6. CARS FOR BUSINESS USE

Some passenger cars are owned by businesses and used for internal business purposes. Many enterprises rely on vehicle fleets to operate effectively. For instance, maintenance and utility companies responding to service calls; and estate agents taking clients to property viewings, amongst many other examples. In these cases, tyre-equipped vehicles are productive capital assets. Their availability directly affects business continuity, service delivery, and labour mobility.

These services will include deliveries by light commercial vehicles, and sometimes cars, but courier services delivering food and groceries are heavily reliant on motorcycles. These vehicles are also used to deliver important documents, as well as vital health-related services including the transport of human organs and blood.

775 million  
Aircraft passengers  
departing from EU airports  
in 2024.

<sup>26</sup> After adjusting the value of sales to exclude transactions within the agricultural sector.

<sup>27</sup> European Commission, [Enhancing EU resilience: A step forward to identify critical entities for key sectors](#), accessed February 2026.

<sup>28</sup> As the available data only cover 15 countries, with Spain and Poland amongst the 12 countries excluded, the true total could easily exceed 400 billion kilometres.

4.3. EU FREIGHT

Freight movement is the connective tissue of the EU economy. This section examines road freight, which dominates the inland movement of goods in volume and reach, and air freight, which underpins the time-sensitive and high-value supply chains that road transport alone cannot serve. Both depend on reliable tyre supply.

4.3.1. SCALE AND STRUCTURE OF EU FREIGHT

In 2024, the road freight sector transported 13 billion tonnes of goods, accounting for 88% of all goods transported within the EU (i.e., excluding shipping). Considering distance travelled as well, the sector supported 1.9 trillion tonne-kilometres of activity across the EU member states, accounting for 78% of all EU inland freight movements on that basis (see Fig. 22). Five individual countries accounted for two-thirds of this activity; Poland (20% of the EU total), Germany (15%), Spain (15%), France (9%), and Italy (8%). Altogether, these transport services generated €416 billion worth of revenue for the sector, associated with €155 billion of direct GDP, and 3.4 million jobs.

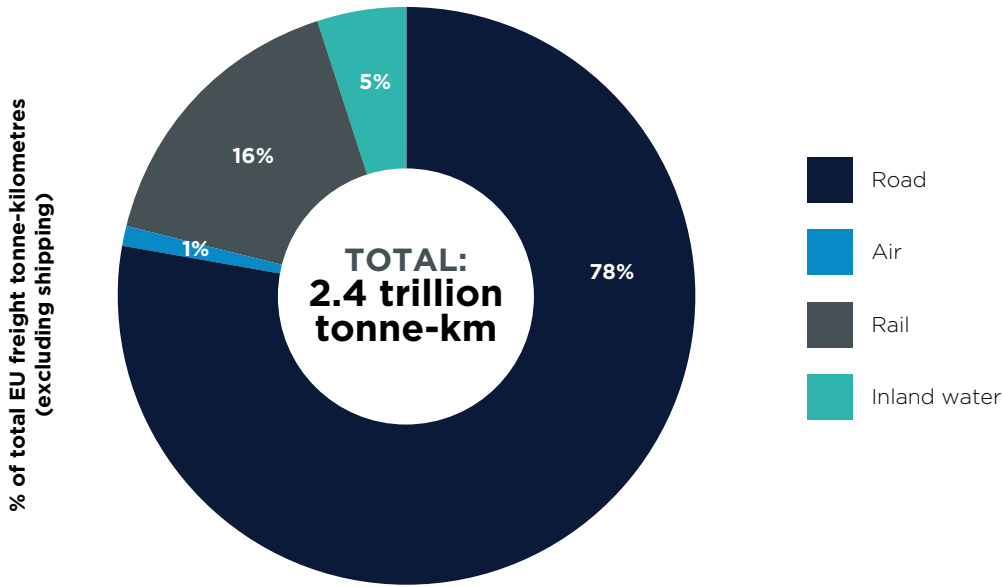
Air freight, while smaller in volume, serves an essential and distinct function. In 2024, 7.7 million tonnes of freight and mail were loaded onto aircraft leaving EU airports, with 8.1 million tonnes unloaded from flight arrivals.

But the air freight sector’s share in terms of value of products moved is likely to be more significant, as the mode specialises in goods where speed, security, and reliability command a premium—such as medicines and electronics. Looking at the EU’s international trade with non-EU countries, air transport accounted for 23% of all exports by value, compared with just 1% of those exports in terms of weight.<sup>29</sup> Helped by this specialisation, the sector generated €14 billion in revenues in 2024, associated with broadly €4 billion of direct GDP, despite employing a relatively modest 25,000 people.

Together, road and air freight form a complementary system. Road freight delivers the breadth of coverage needed to move bulk goods across the EU’s 10-million-kilometre network of roads. Air freight delivers the speed needed to move high-priority consignments across international and intercontinental distances.

The World Bank publishes a Logistics Performance Index every few years, which the organisation describes as “a measure of countries’ ability to move goods across borders with speed and reliability”.<sup>30</sup> In the latest rankings, for 2023, seven EU Member States—Finland, Denmark, Germany, the Netherlands, Austria, Belgium, and Sweden—were among the top 13 globally (out of 140 countries included in the study). The EU nations performed especially well in the infrastructure quality category.

Fig. 22: Modal split in EU freight transport in 2023



Source: Eurostat, Oxford Economics

4.3.2. SUPPORT FOR THE WIDER ECONOMY AND SOCIETY

Road freight’s economic interdependencies are extensive. Key upstream suppliers include fuel providers, vehicle and tyre manufacturers, and maintenance and repair services. Downstream, the sector’s customers include goods producers, wholesalers, and retailers of all kinds, as well as final household consumers. Fig. 23 shows the types of good transported in terms of tonne-kilometres in 2024, giving an indication of the range of customer sectors served.

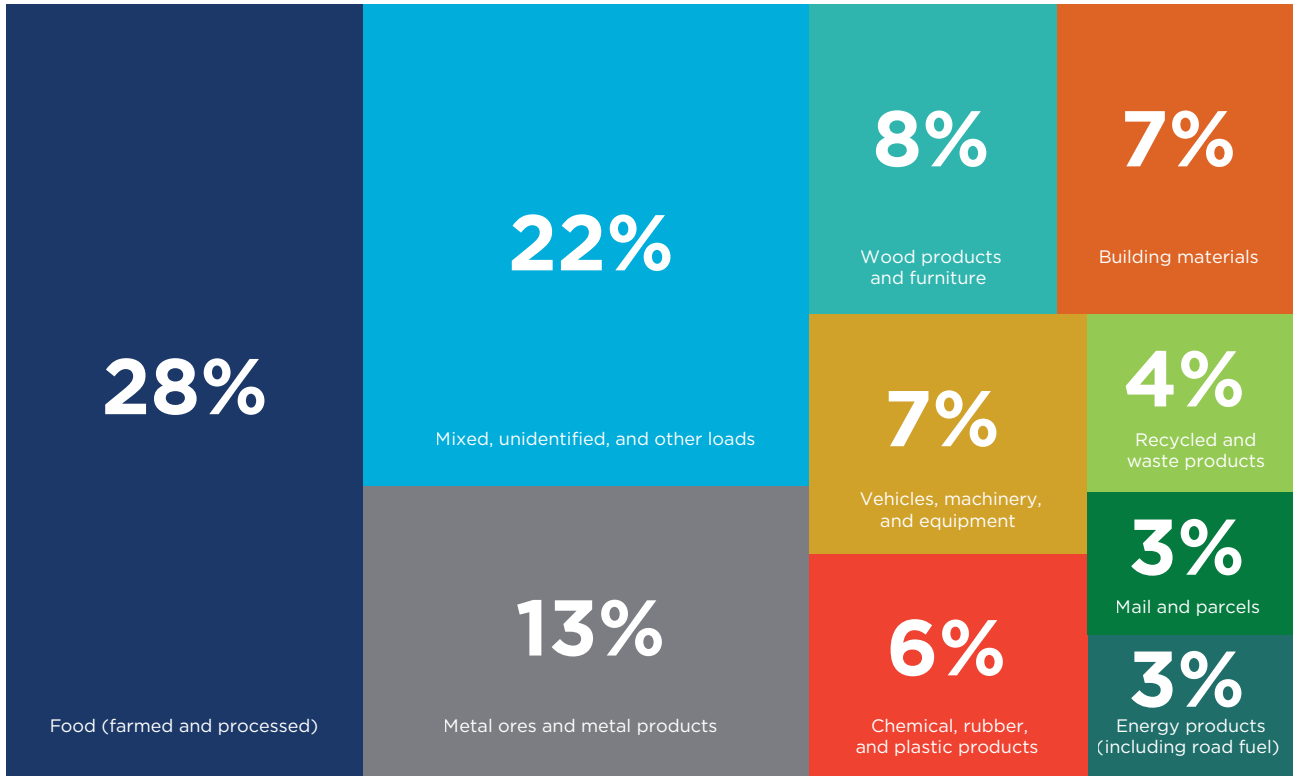
Road freight also delivers broad social value by ensuring the availability of everyday essentials to households across the EU. It is the primary means by which food, medicines, and household goods reach retail and distribution points. Indeed, 2.9 million tonnes of farmed and processed food were transported on EU roads in 2024.

Air freight’s economic dependencies, while narrower in scope, are concentrated in sectors of outsized strategic importance. Upstream, it relies on aircraft manufacturers, ground handling operators, and aviation-grade tyre suppliers. Downstream, its primary customers include pharmaceutical companies, medical device manufacturers, technology firms, and fresh food exporters—industries where delivery timelines are measured in hours and delays carry immediate consequences. For patients dependent on just-in-time medication supply, or for regions responding to public health emergencies, the reliable functioning of air freight has direct and immediate welfare implications.

Disruption to either mode—whether caused by tyre shortages, infrastructure failures, or supply chain shocks—would therefore affect not only commercial operations, but the daily lives and wellbeing of EU citizens, particularly the most vulnerable.

<sup>29</sup> This accounts for all modes of transport including shipping.  
<sup>30</sup> [PressRelease\\_Logistics Performance Index\\_April 21\\_2023](#)

Fig. 23: Breakdown of goods transport on EU roads in 2024, % of tonne-kilometres



Source: Eurostat, Europool, Tyres Europe, Oxford Economics

4.3.3. CONTRIBUTION TO LONG-TERM ECONOMIC GROWTH

To ensure that the EU economy continues to grow over the longer term, the region’s productive capacity needs to be continuously renewed and added to, through investment in physical assets such as transport infrastructure, factories, and machinery, as well as human capital and product and process innovation. The road freight sector plays an important part in enabling its customer sectors to invest in physical assets, with transport of building materials accounting for 7% of all EU road haulage tonne-kilometres in 2024, and transport of vehicles, machinery, and equipment for a further 7%. In that year, 1.6 billion tonnes of building materials were moved by the EU road freight sector, and 526 million tonnes of vehicles, machinery, and equipment.

The sector also undertakes a considerable amount of investment in fixed capital assets itself, investing some €33 billion in 2024—comprising €24 billion in plant and machinery, and €9 billion in buildings and structures. That is equivalent to 21% of sector’s GDP, which is above the equivalent ratio for the EU private sector services as a whole of 17%. To put this investment into context, it is equivalent to €9,700 per employee.

4.4. PUBLIC SERVICES

IN FOCUS: EMERGENCY VEHICLES

Emergency vehicles, including ambulances and firefighting vehicles, are a cornerstone of public safety in the European Union. They deliver time-sensitive medical care and disaster response that protect lives and property. High-performing tyres are essential to enable these vehicles to operate, with significant demands placed upon them, including high speeds and loads, resilience, and efficiency.

Europe’s ambulance fleet is a critical part of maintaining healthcare services, providing rapid response in life-threatening situations while also supporting wider medical logistics. In 2023, there were an estimated 65,000 emergency ambulance vehicles active in Europe, handling nearly 20 million emergency calls each year. Alongside frontline emergency response, additional healthcare vehicles transport patients, equipment, and medicines—providing essential support to the sector.

Keeping these healthcare vehicles operating consistently depends on a steady supply of tyres built to demanding standards. While there are no specific EU regulations for the tyres that must be used, operators impose high standards to support high loads, intensive driving, and varied weather conditions. Commercial tyres are commonly used, with the kind of tyre depending on the specifics of the vehicle base.

Ageing populations across the EU are set to increase the demand for healthcare services, intensifying the need for healthcare vehicles and the tyres that keep them moving. Meanwhile, innovations such as a shift toward electric or automatic vehicles are unlikely to reduce this underlying requirement.

Firefighting vehicles also place significant demands on their tyres. These vehicles use heavy-duty commercial truck tyres, with specifications

varying according to their operational needs. Urban firefighting vehicles typically use all-position, on-road tyres designed for high load capacity, stability, and heat resistance during rapid emergency response. Wildland and brush fire trucks require more aggressive, mixed service, or off-road tread patterns to maintain traction on uneven and unpaved terrain. Airport rescue and firefighting vehicles form a specialised niche, combining extremely high loads with the ability to operate safely at higher speeds.

The mission-critical nature of firefighting, combined with low-mileage but high-stress usage, drives conservative specifications and a strong preference for premium products, with sustainability considerations typically secondary to operational reliability. Across all applications, firefighting tyres must deliver high load ratings, reinforced sidewalls, enhanced heat resistance, and strong wet weather traction.

Because vehicles may sit idle for extended periods before being deployed under extreme conditions, reliability is prioritised over tread wear, and tyres are often replaced based on age and safety standards rather than mileage. Tyre pressure monitoring systems (TPMS) are common, while central tyre inflation systems (CTIS) are not universal but increasingly utilised, particularly in wildland and severe duty use.

Tyre requirements are specified at the OEM level by chassis manufacturers and final stage apparatus builders. Long vehicle lifecycles mean that the replacement market is large. Procurement is often contract driven through co-operative purchasing agreements and authorised dealer networks. Rising vehicle weights, increased wildland fire activity, and growing use of digital fleet tools are shaping demand across the emergency and firefighting vehicle segments.

## IN FOCUS: DEFENCE

Armed forces across Europe depend on ground vehicles, and by extension a supply of tyres, to carry out their operations. A range of infantry fighting vehicles, armoured personnel carriers, and support vehicles are designed to operate in combat roles. Vehicles are also used extensively for logistics operations, transporting personnel and equipment over long distances to ensure that all branches of the military operate smoothly. Without assured access to high-performance tyres, military mobility, readiness, and sustainment would be significantly degraded.

Numerous requirements are made of these tyres. This includes the need to operate in extreme weather, from arctic to desert conditions, as well as across a wide variety of terrains. They must operate with high load factors, to support the increasing size and weight profiles of military vehicles, as well as at high speeds over extended periods of time. Tyres must also provide survivability, including the ability to run flat for significant distances, allowing them to keep operating even when multiple tyres have been punctured.

A common requirement of modern armed forces is a “one-size-fits-all” tyre solution, where a single tyre type can fulfil the requirements of different kinds of ground vehicles and conditions. This has the benefit of significantly reducing the logistical complexity of purchasing and supplying multiple kinds of specialist tyres, but places substantial technical and quality demands on manufacturers. Tyres are tested under strict requirements to ensure they can reliably operate in these conditions and protect the people or cargo that they are carrying.

One of the key innovations that is integrated into modern ground vehicles is Central Tire Inflation Systems (CTIS). These monitor and adjust tyre pressures to the levels required in different terrains,

weather conditions, and loads, ensuring that the vehicles that use them are adaptable, whilst also supporting “one-fits-all” solutions. The integration of CTIS means that tyres should not be seen as a whole solution, but as part of combined and integrated systems.

The defence sector procures tyres through a range of channels including deliveries to major defence contractors and smaller or generalist contractors, as well as the provision of replacement tyres to armed forces themselves or agencies that work on their behalf. Manufacturers of tyres also operate robust processes to maintain visibility and control over who the end user of their tyres is, in order to comply with international regulations.

The growth in defence spending from European governments and additional efforts to support Ukraine in its war efforts have driven increases in defence procurement. Whilst the demand for ground vehicles has not increased as rapidly as other areas, there has still been increased demand for tyres, including through higher replacement rates, highlighting the essential and recurring role of tyres in sustaining military preparedness.

Business continuity and supply-chain resilience are key strategic requirements of customers procuring defence-related equipment. Tyre manufacturers minimise the risk of any disruption from threats such as conflicts and global supply chain issues by maintaining manufacturing at multiple different sites across Europe and beyond. They also operate diversified supply chains, create strategic stockpiles, and retain the capacity to increase production if called upon. These capabilities position the European tyre industry as a critical contributor to Europe’s defence base and long-term security.

## 4.5. HOUSEHOLD USE OF MOTOR VEHICLES

Household use of motor vehicles results in a significant amount of economic activity across the EU, generating income for the manufacturers and distributors of the vehicles themselves, those involved in the production and sale of vehicle parts and accessories, and fuel and oil, plus suppliers of vehicle repair and maintenance services. Vehicle users also pay taxes related to using and keeping their vehicles, including petrol and diesel duties, licence fees, and road user taxes. These help to fund further economic activity in the roadbuilding and road maintenance sectors, as well as public services more generally.

However, the economic value of household vehicle use extends well beyond what is captured in economic statistics. A share of the benefits takes the form of “consumer surplus”—the difference between what households would be willing to pay for the mobility and flexibility that vehicles provide, and what they actually spend. This surplus is not captured in GDP or other standard economic measures, but it represents a real component of household welfare that would be diminished if tyres became unavailable or unaffordable.

For many households, access to a car is integral to everyday life. In rural areas in particular, private vehicles often provide the only practical means of transport. Even in urban areas with developed public transport networks, cars frequently offer flexibility, time savings, and reliability that are difficult to replicate.

Tyres, as essential components of all motor vehicles, are therefore embedded in a wide range of household economic and social activities. Any sustained disruption to tyre availability could also reduce household welfare in ways that are less visible in conventional economic metrics. In rural areas, where car dependency is highest and alternative transport options fewest, the welfare costs of restricted tyre availability would be most acutely felt. This makes tyre supply not merely an economic matter, but a question of social inclusion across the EU.

## SECTION 5: THE ECONOMIC CONSEQUENCES OF DISRUPTION TO THE SECTOR

The preceding sections of this report have documented the breadth of economic activity that depends on a reliable EU tyre supply, as well as the EU tyre industry's upstream vulnerabilities. This section quantifies how a sustained disruption to the EU tyre industry could impact the wider economy. We model a three-year scenario using Oxford Economics' Global Economic Model (GEM),

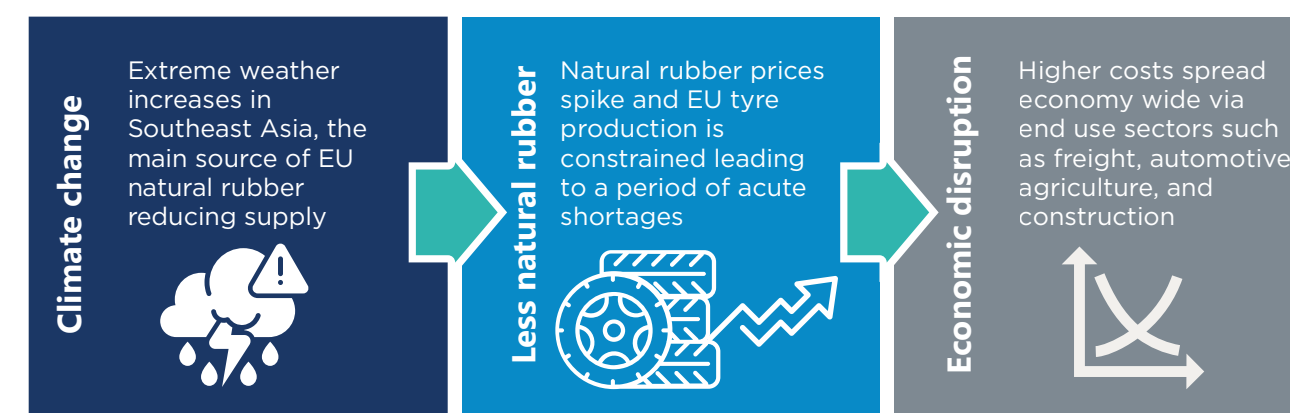
assessing the macroeconomic damage relative to a central no-disruption baseline. The scenario is structured around the single most acute upstream vulnerability identified in Section 2: a climate-driven shock to global natural rubber supply. We identify the key channels through which disruption has the most significant impact and then quantify how these effects build over the scenario horizon.

### 5.1. WHAT TYRE DISRUPTION COULD THE EU ECONOMY FACE?

The scenario centres on a sustained, climate-driven disruption to global natural rubber supply. As identified in Section 2, the EU is entirely reliant on imported natural rubber, with around 74% sourced from Southeast Asia, a region already experiencing climate-related disruption. The severe weather events of 2024 alone were associated with a 43% rise in global rubber prices. In addition, the spread of leaf disease across the region between 2016 and 2019 placed biological stress on a significant share of natural rubber supply. Our scenario models a more severe escalation of these dynamics: climate change intensifies the frequency and severity of extreme weather events across the region, with flooding, drought, and the spread of leaf disease progressively reducing rubber yields from 2027.

Drawing on historical episodes, we assume a 75% yield loss from disease affecting 10% of Southeast Asian tree stock is combined with a significant weather-driven output shock. **This leads to a projected 13% fall in global rubber supply and a 160% rise in global natural rubber prices by 2028.** In turn, this price spike constrains EU tyre production and precipitates an acute period of physical tyre shortages lasting approximately six months from Q4 2027 to Q1 2028. The length of the acute shortage reflects the gradual accumulation of replacement demand across the EU vehicle fleet and the absence of short-run substitutes for natural rubber. The full derivation of these assumptions is set out in Appendix B.

Fig. 24: Our scenario sees climate change disrupt the supply of natural rubber



Source: Oxford Economics

5.2 HOW TYRE DISRUPTION AFFECTS THE EU ECONOMY

Our macroeconomic analysis is structured around three modelled transmission channels, each selected to reflect where tyre dependency is highest and economic exposure most significant. First, higher rubber prices feed into tyre producer costs across all tyre-using sectors. Second, tyre shortages constrain the EU freight truck fleet—the backbone of goods movement across the EU as identified in Section 4—pushing up logistics costs that are embedded in the price of most physical goods in the economy. Third, shortages reduce output capacity in construction, automotive, and agriculture—sectors identified in this report as having high tyre dependency.

5.2.1. TYRE COSTS

In isolation, the direct tyre cost channel is modest. Tyres represent a small share of total vehicle manufacturing costs and roughly 1% of total EU manufacturing input costs, meaning that even a substantial tyre price increase generates only a limited expected direct margin impact. The modelled damage arises not from the cost of tyres themselves, but from what tyres connect to.

5.2.2. FREIGHT COSTS

Road freight is a critical amplifier. As quantified in Section 4, the sector accounted for 88% of all inland EU freight by tonnage. Under our scenario, a 13% fall in global rubber supply significantly constrains the availability of new tyre replacements in the EU.

Research indicates that tyres on long-distance trucks can achieve up to 600,000km before replacement<sup>31</sup>, while EU heavy trucks covering long-haul routes travel an average of up to 200,000km per year<sup>32</sup>. Together, this implies a replacement cycle of approximately every three years, meaning that in any given 12-month period around a third of the EU's 6 million heavy trucks could require new tyres. We assume a third of those replacement requirements cannot be met due to tyre scarcity, moderated by the ability of operators to adapt.

This removes an estimated 600,000 trucks from operation, leading to a projected 10% reduction in effective fleet capacity, meaning retailers, manufacturers, food producers, and the many other sectors identified in Section 4 as dependent on road-based logistics all face elevated costs that pass through into the prices of goods across the economy.

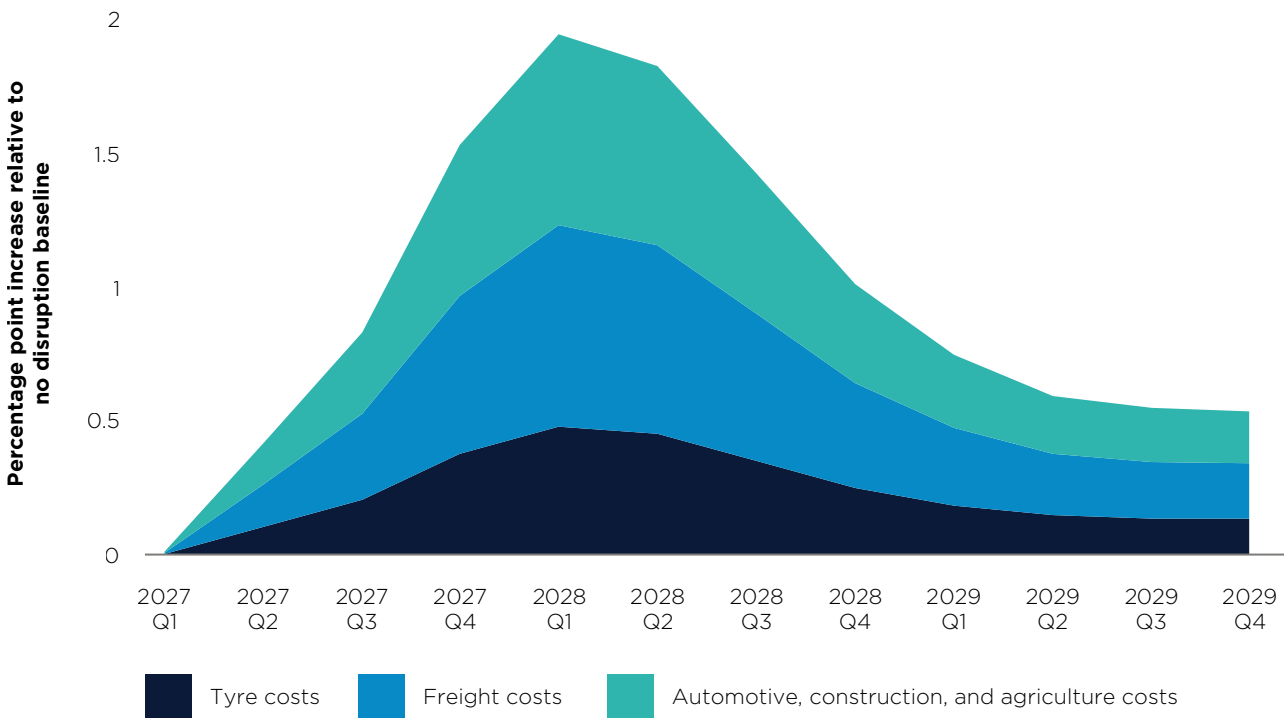
5.2.3. AUTOMOTIVE, CONSTRUCTION, AND AGRICULTURE COSTS

Beyond freight, three other sectors face the most significant output constraints from tyre scarcity. In automotive, shortages constrain final assembly and idle production lines, with EU vehicle output estimated to fall by 6%. In agriculture, near-total dependence on rubber-tyred machinery and the time-sensitivity of harvesting cycles result in an equipment constraint. Construction faces a smaller

constraint, reflecting its greater capacity to adapt through equipment sharing and project resequencing, as identified in Section 4.2.1, though the size of the sector means this still generates a material drag on wider economic activity.

Together, these channels drive producer prices an estimated 2.0 percentage points above our no-disruption baseline, marking a substantial economy-wide cost increase (see Fig. 25).

Fig. 25: Economy-wide producer prices rise from three key channels: tyre, freight, and other key sectors



Source: Oxford Economics

-10% truck freight

Tyre shortages mean 10% of EU truck freight are unable to transport goods for six months during the scenario.

31 Francesco Valentini and Alessandro Pelegotti, [End-of-life options of tyres: A review](#), Advanced Industrial and Engineering Polymer Research, Volume 5, Issue 4, October 2022, Pages 203-213, accessed April 2026

32 BAS World, [How many kilometers can a truck drive?](#), accessed April 2026

5.3 THE MACROECONOMIC IMPACT OF EU TYRE DISRUPTION

We use Oxford Economics’ Global Economic Model [see Appendix B] to trace how these cost pressures propagate through the EU economy over the 2027 to 2029 scenario horizon. The model captures the full set of interactions between prices, output, employment, and central bank policy responses, allowing us to quantify the macroeconomic consequences of the disruption in a consistent framework.

5.3.1. PRICES AND MONETARY POLICY RESPONSE

Higher costs in freight, automotive, construction, and agriculture are passed on to consumers through higher goods prices. This erodes real household purchasing power as wages fail to keep pace with rising prices. As a result, core inflation rises above the European Central Bank’s 2% target<sup>33</sup>. Under our scenario, the ECB responds by raising interest rates 50 basis points above the no-disruption baseline in 2028. This response reflects the difficult trade-off facing policymakers. With inflation showing signs of persistence, the Bank acts to prevent a further spiral, but limits the size of the rise to 50 basis points to avoid amplifying the economic damage already underway. This monetary tightening nonetheless provides a secondary drag on investment and household spending at precisely the point when the economy is already under pressure.

5.3.2. ECONOMIC OUTPUT AND LABOUR MARKET

Our analysis suggests the impact on **GDP** builds and worsens over time. Over the three-year scenario window, the EU economy loses an estimated €250 billion in output relative to the baseline. This reflects three modelled reinforcing drags on economic activity.

- **Consumption** falls as grounded freight trucks mean some goods do not reach their destination, while broader price pressures erode household spending power.
- **Capital investment** contracts in automotive, construction, and agriculture as heightened uncertainty and lost output dampen business spending during the disruption period.
- A portion of the **EU tyre exports** identified in Section 3.5 are also lost—valued at approximately €5 billion—as scarce domestic production is prioritised for home markets over export.

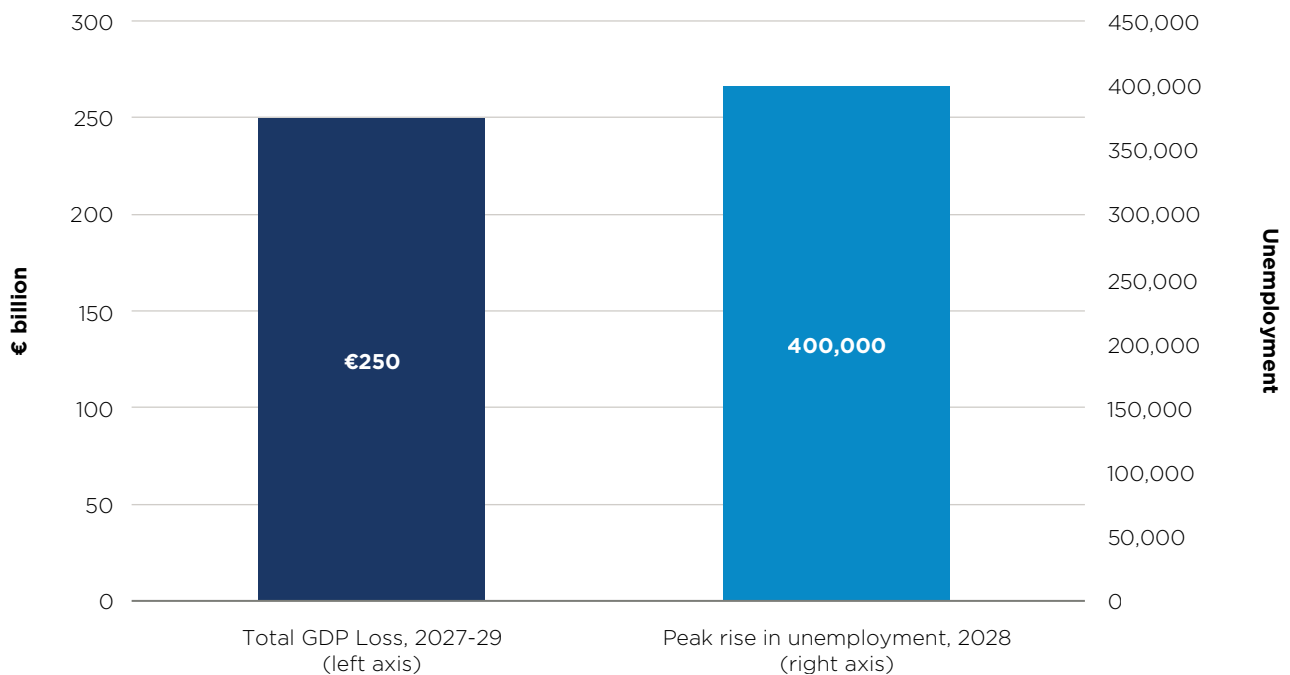
**-€230 avg. incomes**  
The average EU resident loses an estimated €230 in real purchasing power by 2028 due to rising prices and weaker income growth.

At the **household** level, the average EU resident loses an estimated €230 in real purchasing power by 2028, reflecting the compounding of weaker income growth and rising goods prices. **Labour markets** deteriorate in line with the broader slowdown, with slower growth reducing hiring and weighing on labour demand, particularly in automotive and construction. In 2028, EU unemployment is projected to be 400,000 higher than the no-disruption baseline. The employment impact lags behind the initial price shock as firms compress margins before cutting headcount.

Our modelling indicates the **fiscal** position of EU governments also worsens. Lower growth reduces tax receipts, while governments must respond to rising welfare spending from increased unemployment and weakening business activity. As a result, government debt is €120 billion higher in 2028 than expected in the no-disruption baseline, with the debt-to-GDP ratio increasing to 83% rather than falling to 82%.

The scale of these modelled impacts reflects a central finding of this report: that tyres are an important component of the supply chains, production systems, and household mobility on which EU economic activity depends. When tyre supply is disrupted, the effects do not stay contained within the industry. The result is lost economic activity and real costs for EU households.

Fig.26: Peak economic disruption in tyre scenario



Source: Oxford Economics

52 33 Core inflation is defined as the underlying rise in price growth that strips out volatile items like energy and food.



# SECTION 6. CONCLUSION

**The EU tyre industry occupies a position of critical strategic importance.** The industry sits at the centre of a complex, globally integrated value chain, exposed to supply chain vulnerabilities, while also enabling economic activity. Tyres are essential inputs for vehicle manufacturing, road transport, agriculture, construction, aviation, and public transport, as well as many other sectors that underpin economic and social wellbeing. **The analysis shows that EU-produced tyres support substantial activity throughout the automotive value chain and throughout key end-use industries.**

**As the automotive sector undergoes profound technological and competitive transformation, maintaining a strong tyre manufacturing base in the EU is an important component of broader industrial resilience.** Retaining this capability within the EU helps mitigate exposure to global disruptions, supports the stability of critical value chains, and reinforces the region's strategic autonomy.

**At the same time, the sector contributes to the EU's climate and sustainability objectives through investments in decarbonisation, the production of energy-efficient tyres, and circular practices such as retreading.** These activities reinforce the industry's contribution to both economic competitiveness and environmental performance.

Taken together, the EU tyre industry represents more than a manufacturing sector. It is a strategic enabler of mobility, a foundational component of the automotive ecosystem, and a key contributor to the EU's resilience, sustainability, and industrial competitiveness. Ensuring the continued strength of tyre production in the EU will be essential to safeguarding these benefits in an increasingly uncertain global environment.



APPENDIX A:  
RESULTS TABLES

Fig. 27. Tyre production in the EU in 2024, by type of tyre

|                                    | Volume,<br>millions of tyres | Value to tyre manufacturers,<br>€ billion |
|------------------------------------|------------------------------|-------------------------------------------|
| Tyres for cars                     | 258.7                        | 15.0                                      |
| Tyres for commercial vehicles      | 49.1                         | 10.4                                      |
| Tyres for motorcycles and bicycles | 10.1                         | 0.4                                       |
| Tyres for commercial vehicles      | 1.2                          | 0.6                                       |
| Tyres for farm tractors            | 2.4                          | 1.2                                       |
| All other pneumatic tyres          | 321.5                        | 27.6                                      |

Source: Eurostat, Europool, Tyres Europe, Oxford Economics.  
Includes new and re-treaded tyres.

Fig. 28. Tyre production in the EU in 2024, by type of tyre and major customer group

| Volume, millions of tyres          | Tyres sold to<br>EU vehicle<br>manufacturers | Tyres sold to EU<br>dealers | Exported tyres | Total tyres |
|------------------------------------|----------------------------------------------|-----------------------------|----------------|-------------|
| Tyres for cars                     | 46.8                                         | 165.3                       | 46.7           | 258.7       |
| Tyres for commercial vehicles      | 9.5                                          | 23.3                        | 16.2           | 49.1        |
| Tyres for motorcycles and bicycles | 1.1                                          | 3.9                         | 5.2            | 10.1        |
| Tyres for farm tractors            | 0.2                                          | 0.4                         | 0.6            | 1.2         |
| All other pneumatic tyres          | 0.3                                          | 0.8                         | 1.3            | 2.4         |
| Total pneumatic tyres              | 57.9                                         | 193.7                       | 70             | 321.5       |

Source: Eurostat, Europool, Tyres Europe, Oxford Economics.

Fig. 29. Potentially enabled GDP impact of the EU passenger car sector in 2024

| € billion                                         | Direct GDP | Indirect GDP | Induced GDP | Total GDP impact |
|---------------------------------------------------|------------|--------------|-------------|------------------|
| Total enabled impact                              | 78.1       | 260          | 105         | 443              |
| By industry of supplier:                          |            |              |             |                  |
| Car manufacturing <sup>34</sup>                   | 76.6       | -            | -           | 76.6             |
| Other vehicle-related manufacturing <sup>35</sup> | -          | 52.6         | 1.9         | 54.5             |
| All other manufacturing                           | -          | 61.1         | 12.8        | 73.9             |
| Dealers in car tyres                              | 1.5        | -            | -           | 1.5              |
| All other wholesale and retail services           | -          | 45.8         | 13.7        | 59.5             |
| Mining, utilities, construction & farming         | -          | 13.3         | 8.2         | 21.5             |
| Transport, IT & communication services            | -          | 18.7         | 9.5         | 28.2             |
| Finance & real estate services                    | -          | 21           | 27.4        | 48.4             |
| Professional & business support services          | -          | 30.8         | 8.6         | 39.3             |
| Catering, consumer & community services           | -          | 16.7         | 22.8        | 39.5             |

Source: Eurostat, Europool, Tyres Europe, Oxford Economics.  
Note: Totals do not sum due to rounding.

Fig. 30. Potentially enabled GDP impact of EU commercial road vehicle sector in 2024

| € billion                                         | Direct GDP | Indirect GDP | Induced GDP | Total GDP impact |
|---------------------------------------------------|------------|--------------|-------------|------------------|
| Total enabled impact                              | 23.1       | 73.3         | 30          | 126              |
| By industry of supplier:                          |            |              |             |                  |
| Commercial vehicle manufacturing <sup>36</sup>    | 22.2       | -            | -           | 22.2             |
| Other vehicle-related manufacturing <sup>37</sup> | -          | 14.7         | 0.5         | 15.2             |
| All other manufacturing                           | -          | 171          | 3.7         | 20.8             |
| Dealers in commercial vehicle tyres               | 0.9        | -            | -           | 0.9              |
| All other wholesale and retail services           | -          | 12.9         | 3.9         | 16.9             |
| Mining, utilities, construction & farming         | -          | 3.8          | 2.4         | 6.1              |
| Transport, IT & communication services            | -          | 5.3          | 2.7         | 8                |
| Finance & real estate services                    | -          | 6            | 7.9         | 13.8             |
| Professional & business support services          | -          | 8.7          | 2.5         | 11.2             |
| Catering, consumer & community services           | -          | 4.7          | 6.5         | 11.3             |

Source: Eurostat, Europool, Tyres Europe, Oxford Economics.  
Note: Totals do not sum due to rounding.

34 The manufacture of complete passenger cars.  
35 Mainly the manufacture of car parts.  
36 The manufacture of complete commercial vehicles.  
37 Mainly the manufacture of parts for commercial vehicles.

Fig. 31. Potentially enabled GDP impact of EU farm tractor sector in 2024

| € billion                                 | Direct GDP | Indirect GDP | Induced GDP | Total GDP impact |
|-------------------------------------------|------------|--------------|-------------|------------------|
| Total enabled impact                      | 0.9        | 1.3          | 1.0         | 3.2              |
| By industry of supplier:                  |            |              |             |                  |
| Farm tractor manufacturing <sup>38</sup>  | 0.8        | -            | -           | 0.8              |
| All other manufacturing <sup>39</sup>     | -          | 0.5          | 0.1         | 0.6              |
| Dealers in farm tractor tyres             | 0.0        | -            | -           | 0.0              |
| All other wholesale and retail services   | -          | 0.2          | 0.1         | 0.3              |
| Mining, utilities, construction & farming | -          | 0.1          | 0.1         | 0.2              |
| Transport, IT & communication services    | -          | 0.1          | 0.1         | 0.2              |
| Finance & real estate services            | -          | 0.1          | 0.3         | 0.4              |
| Professional & business support services  | -          | 0.2          | 0.1         | 0.3              |
| Catering, consumer & community services   | -          | 0.1          | 0.2         | 0.3              |

Source: Eurostat, Europool, Tyres Europe, Oxford Economics.  
Note: Totals do not sum due to rounding.

Fig. 32. EU exports of tyres to non-EU countries in 2024 by country of purchaser

|                                   | Volume in thousands of tonnes | % of total | Value in € billion | % of total |
|-----------------------------------|-------------------------------|------------|--------------------|------------|
| United States                     | 283                           | 22.10%     | 2.18               | 24.80%     |
| United Kingdom                    | 238                           | 18.60%     | 1.52               | 17.30%     |
| Türkiye                           | 131                           | 10.30%     | 0.73               | 8.30%      |
| Switzerland                       | 86                            | 6.70%      | 0.68               | 7.70%      |
| Canada                            | 42                            | 3.30%      | 0.29               | 3.30%      |
| Norway                            | 34                            | 2.60%      | 0.25               | 2.90%      |
| Australia                         | 32                            | 2.50%      | 0.23               | 2.60%      |
| Morocco                           | 32                            | 2.50%      | 0.17               | 1.90%      |
| Ukraine                           | 31                            | 2.40%      | 0.18               | 2.00%      |
| South Africa                      | 30                            | 2.40%      | 0.17               | 2.00%      |
| China                             | 29                            | 2.30%      | 0.22               | 2.50%      |
| Korea                             | 28                            | 2.20%      | 0.17               | 1.90%      |
| Mexico                            | 26                            | 2.00%      | 0.17               | 1.90%      |
| United Arab Emirates              | 21                            | 1.60%      | 0.17               | 1.90%      |
| Japan                             | 18                            | 1.40%      | 0.14               | 1.60%      |
| Brazil                            | 16                            | 1.20%      | 0.1                | 1.10%      |
| All others                        | 204                           | 15.90%     | 1.42               | 16.20%     |
| Total exports to non-EU countries | 1,280                         | 100.0%     | 8.79               | 100.0%     |

Source: Eurostat, Oxford Economics. New tyres only.

38 The manufacture of complete farm tractors.  
39 Includes manufacture of farm tractor parts.

Fig. 33. EU imports of tyres from non-EU countries in 2024 by country of origin

|                                     | Volume in<br>thousands of<br>tonnes | % of total | Value in € billion | % of total |
|-------------------------------------|-------------------------------------|------------|--------------------|------------|
| China                               | 1,021                               | 40.70%     | 3.39               | 33.70%     |
| India                               | 278                                 | 11.10%     | 0.94               | 9.30%      |
| Türkiye                             | 226                                 | 9.00%      | 0.97               | 9.70%      |
| Korea                               | 213                                 | 8.50%      | 1.19               | 11.80%     |
| Thailand                            | 172                                 | 6.80%      | 0.63               | 6.20%      |
| Serbia                              | 138                                 | 5.50%      | 0.61               | 6.10%      |
| Vietnam                             | 116                                 | 4.60%      | 0.36               | 3.60%      |
| Japan                               | 98                                  | 3.90%      | 0.55               | 5.50%      |
| Indonesia                           | 41                                  | 1.60%      | 0.19               | 1.90%      |
| United States                       | 34                                  | 1.30%      | 0.25               | 2.50%      |
| United Kingdom                      | 32                                  | 1.30%      | 0.25               | 2.50%      |
| All others                          | 140                                 | 5.60%      | 0.72               | 7.20%      |
| Total imports from non-EU countries | 2,508                               | 100.0%     | 10.05              | 100.0%     |

Source: Eurostat, Oxford Economics. New tyres only.





# APPENDIX B: METHODOLOGY

## EU TYRE PRODUCTION BY CUSTOMER GROUP

Oxford Economics sourced data on total EU production, imports, and exports, for tyres of different types, from the Eurostat PRODCOM database.<sup>40</sup> This includes new and retreaded pneumatic tyres. Values suppressed in the dataset (accounting for a modest share of the total value) were estimated by Oxford Economics, and the values were then grouped together into four categories: tyres for cars, tyres for commercial vehicles, tyres for motorcycles and bicycles, and other tyres (for aircraft, farm tractors, excavators, military vehicles, and other equipment).

As the export and import data are not strictly comparable to the production data, as they relate to sales including resales, those values were adjusted based on trade-to-output ratios for rubber and plastic products in the Eurostat “input-output table” for the EU—a dataset concerned with the production and use of products, ignoring intermediate sales activities.<sup>41</sup> All values were then rescaled again, so that the totals matched data on EU tyre production for the EU market sourced from Europool, and provided to Oxford Economics by Tyres Europe. Tyres Europe also reported data on domestic sales of tyres for agricultural tractors, allowing Oxford Economics to split those tyres out from the “other tyre” category.

The Europool dataset also split domestic sales of EU-produced tyres between tyres sold to vehicle manufacturers, and those for replacement purposes, for each tyre type. This allowed Oxford Economics to complete a breakdown of tyre production and sale, for each tyre type, as follows:

- EU production for export
- EU production for EU vehicle or machinery manufacturers
- EU production for EU tyre dealers and tyre-fitting businesses
- Tyres imported into the EU.

## THE ECONOMIC FOOTPRINT OF CUSTOMER SECTORS ENABLED BY EU TYRES

Data on the value of production, GDP, employment, employee costs, and purchases of inputs from third parties were sourced from the Eurostat Structural Business Statistics dataset for manufacturers of complete motor vehicles and vehicle engines (NACE group 29.1), and manufacturers of vehicle bodies and trailers (NACE group 29.2).<sup>42</sup> These values were then split into sub-categories based on the value of production of individual items, sourced from the Eurostat PRODCOM dataset, to arrive at values for the manufacture of passenger cars, and manufacture of commercial vehicles, as defined for the purposes of this study and illustrated below. The customer sectors are therefore confined to the manufacture of specific motor vehicles and trailers requiring tyres, excluding the separate production of engines, bodies, parts, and accessories.

<sup>40</sup> [Statistics | Eurostat](#)

<sup>41</sup> [Use table at basic prices](#)

<sup>42</sup> [Enterprises by detailed NACE Rev. 2 activity](#)

Fig. 34. Defining the car and commercial vehicle manufacturing sectors for this study

| Customer sectors in the study | Official industry classification                              |                                                         |                                                 |
|-------------------------------|---------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------|
|                               | Manufacture of motor vehicles and trailers (NACE division 29) |                                                         |                                                 |
|                               | Manufacture of motor vehicles (group 29.1)                    | Manufacture of vehicle bodies and trailers (group 29.2) | Manufacture of motor vehicle parts (group 29.3) |
| Cars                          | Cars                                                          |                                                         |                                                 |
| Commercial vehicles           | Lorries, buses, vans, etc                                     | Lorry trailers                                          |                                                 |
|                               | Vehicle engines                                               | Vehicle bodies                                          |                                                 |
|                               | Golf carts, etc                                               | Caravans                                                |                                                 |

Source: Oxford Economics  
Note: Aircraft, military fighting vehicles, motorcycles, and bicycles are classified to “other transport equipment” (division 30) rather than “motor vehicles”. Farm tractors and excavators are classified to “other machinery” (division 28).

This gave the direct GDP and employment impacts for each sector. Direct tax impacts were estimated from there, based on tax-to-income and tax-to-spending ratios taken from various official datasets. Purchases of inputs from third parties, and employee costs, were fed into the Oxford Economics Business Economic Impact Calculator (BEIC) to arrive at the indirect (supply chain) and induced (wage-funded spending) impacts. These impacts relate to the “upstream” portion of the vehicle manufacturers’ value chains, and do not reflect the substantial amount of economic activity enabled “downstream”, as described in the qualitative narrative in section 4 of this report. The upstream supply chains will include producers of vehicle engines, bodies, parts, and accessories.

Three adjustments were then made to the data, to arrive at the economic footprint that could be said to be enabled by the manufacture in the EU of tyres for cars and commercial vehicles respectively:

- The EU tyre industry was excluded from the vehicle manufacturers’ supply chain calculations, to arrive at the “additional” economic footprint (i.e., additional to the tyre industry’s own footprint, as estimated in the 2024 Oxford Economics report).
- The adjusted footprint was split between activity supported by EU tyres, and activity supported by imported tyres, based on the split between EU-produced tyres and imported tyres, in volume terms, in the respective “car tyres” and “commercial vehicle tyres” categories.
- The economic footprint of dealers in car tyres, and that of dealers in commercial vehicle tyres, were added to the respective sectors. These calculations were based on the value of replacement tyres sold by EU tyre manufacturers to EU dealers, and an assumption that the percentage gross margin made by the dealers on top of that was in line with the percentage for the wider “sale of motor vehicle parts and accessories” sector (NACE group 45.3), sourced from the Eurostat Structural Business Statistics database.

Estimates for the footprint of farm tractor manufacturers were worked out in a different way, due to data limitations and uncertainties. In this case, the starting point was the known number of EU tyres sold to EU customers. This was assumed to be split between sales to EU farm tractor manufacturers and EU dealers, in line with the Europool-sourced split for commercial vehicle tyres. This number of tyres sold to tractor manufacturers was then divided by four, to arrive at the approximate number of tractors manufactured that were fitted with EU-produced tyres. This was multiplied by the average price of newly produced EU tractors, as implied by the value and volume of production data for farm tractors in the Eurostat PRODCOM dataset, to arrive at the estimated value of production.

Direct GDP, employment, employee costs, and purchases from third parties were worked out from there, based on ratios for the agricultural and forestry machinery manufacturing sector (NACE group 28.3) in the Eurostat Structural Business Statistics dataset, and direct tax impacts, indirect impacts, and induced impacts from there. Estimates for EU dealers in farm tyres were then calculated, based on the estimated value of EU-produced farm tractor tyres for domestic use, and an assumption that the margins and ratios assumed to apply to dealers in car and commercial vehicle tyres were also relevant for dealers in these tyres.

MACROECONOMIC SCENARIO: OUR GLOBAL ECONOMIC MODEL

What is the Oxford Economics Global Economic Model?

Our Global Economic Model<sup>43</sup> is the world’s leading globally integrated macro model, relied upon by over 200 leading organisations around the world. The model replicates the world economy by interlinking 87 countries, six regional blocs, and the eurozone. Our economists set underlying global assumptions and ensure that the data, forecasts, and formulas in the model are fully up to date. With a 35-year track record, the model provides a rigorous and consistent structure for forecasting and performing scenario analysis.

Modelling approach

In applied economics, we often use eclectic models, combining elements of various approaches and model types.

The Global Economic Model is:

- **Partly estimated and partly calibrated:** we want to explain the data, but also to satisfy stylised facts, in particular how the model reacts to shocks.
- **Structural:** its equations represent our theory of how the economy works.
- **An equilibrium model:** Market clearing / accounting identities and behavioural equations consistent with optimal behaviour.

These features make the model useful both for forecasting but also for policy analysis. The extended country coverage and strong international linkages make it particularly useful for scenario analysis.

43 Oxford Economics [Global Economic Model](#), accessed April 2026

## MACROECONOMIC SCENARIO: CALIBRATING DISRUPTION USING OUR MODEL

To model the tyre disruption scenario, we translate the narrative into a set of quantified inputs for our Global Economic Model. The following section provides details of these inputs, with the final scenario results then determined by our model.

### Calibrating the rise in natural rubber price and its impact on EU tyre costs

We derive the price impacts underpinning our scenario from two historical episodes that establish the empirical relationship between supply disruption and rubber price movements. First, the spread of leaf disease across Southeast Asian rubber-producing nations between 2016 and 2019 provides a basis for estimating yield losses under conditions of biological stress affecting a significant share of the regional tree stock. We take the upper bound of research estimates indicating 75% yield loss due to disease on a coverage area of 10% of trees in Southeast Asian. Second, we take data from the severe weather events of 2024—documented in Section 2—that reduced global natural rubber production and were associated with a rise of approximately 40% in global rubber prices.

Our approach to translating supply shocks into price impacts scales this observed relationship: we calculate the ratio of the assumed global production shock to the 2024 benchmark shock and apply that scalar to the observed price increase. Together, these translate into a 13% fall in global rubber supply leading to a 160% rise in global natural rubber prices when utilising the upper bounds of plausible estimates for yield loss, coverage, and price impacts. Using manufacturer reports, our scenario implies passenger tyre producer prices rise by approximately 30% and commercial tyre prices by around 50%.

### Determining a plausible shortage

Embedded within our scenario timeline is an acute phase of physical tyre shortage lasting approximately six months, from Q4 2027 to Q1 2028. This reflects the gradual accumulation of replacement demand across the EU vehicle fleet, limited inventory buffers in the supply chain, and the absence of short-run substitutes for natural rubber. Beyond six months, supply and demand-side responses such as natural rubber supply from non-Asian producers mean the shortage is eased.

### Core channel assumptions

The sector-level output constraints are calibrated using comparable data on tyre usage and historical supply disruptions. Estimates for tyre wear length vary depending on the type of use and driving conditions. Academic research states that tyres on trucks for slow-speed runs and long distances can achieve up to 600,000km before replacement<sup>44</sup>. Estimates indicate these long-distance trucks which carry the majority of goods in the EU can reach mileage up to 200,000km in one year<sup>45</sup>. Together, this implies a replacement cycle of approximately every three years. This means we assume that in any given 12-month period, around a third of the EU's 6 million heavy trucks will require new tyres. Then, in our tyre disruption scenario, we assume a third of those requirements cannot be met because of tyre scarcity but moderated by operators' ability to adapt through measures such as reduced speeds to extend tyre life.

For automotive, the 6% output constraint is benchmarked against the 2021 semiconductor shortage and modelled as less severe as it affects only final assembly rather than components embedded throughout the vehicle. For agriculture and construction, output constraints reflect the dependence of both sectors on specialised rubber-tyred machinery, where shortages directly halt equipment use. The constraint is larger for agriculture given its near-total reliance on rubber-tyred machinery and the time-sensitivity of planting and harvesting cycles that cannot be deferred. For construction, the constraint is lower reflecting the sector's greater capacity to adapt through equipment sharing and project resequencing, as identified in Section 4.2.1, though the size of the construction sector in the wider economy means even a modest constraint generates a material drag on output.

44 Francesco Valentini and Alessandro Pelegotti, [End-of-life options of tyres: A review](#), Advanced Industrial and Engineering Polymer Research, Volume 5, Issue 4, October 2022, Pages 203-213, accessed April 2026

45 BAS World, [How many kilometers can a truck drive?](#), accessed April 2026.

# OXFORD ECONOMICS

## September 2026

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The modelling and results presented here are based on information provided by third parties, upon which Oxford Economics has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

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