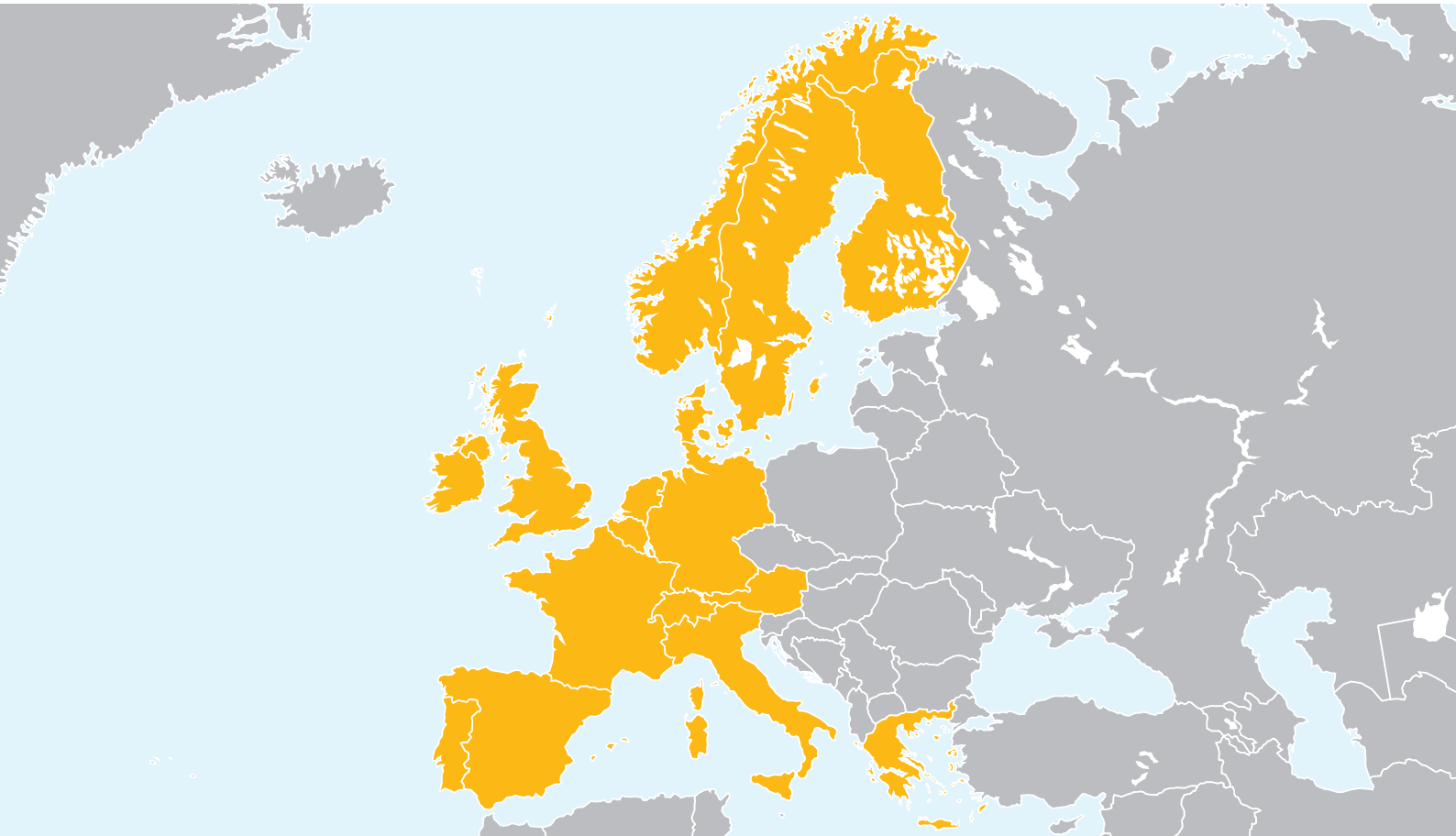


ANNUAL REVIEW

The construction equipment industry in

# EUROPE

APRIL 2020 | ISSUE 459



**Off-Highway**  
RESEARCH

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ANNUAL REVIEW

The construction equipment industry in Europe

# A REVIEW OF 2019 AND FORECAST TO 2024

April 2020 | Issue 459

## CONTENTS

Summary	5
Sales by country	6
2019 versus long-term trends	9
Country analysis and forecasts	10
Austria	12
Belgium	13
Denmark	14
Finland	15
France	16
Germany	17
Ireland	18
Italy	19
Netherlands	20
Norway	21
Portugal	22
Spain	23
Sweden	24
Switzerland	25
UK	26
Equipment analysis and forecast to 2024	28
Forecast to 2024	30
Production analysis	33
Production by country	33

Production by equipment type	35
International perspectives	37
Sales	37
China	38
North America	40
India	39
Japan	39
Production	41
China	42
India	43
Japan	43
North America	44

## SUMMARY

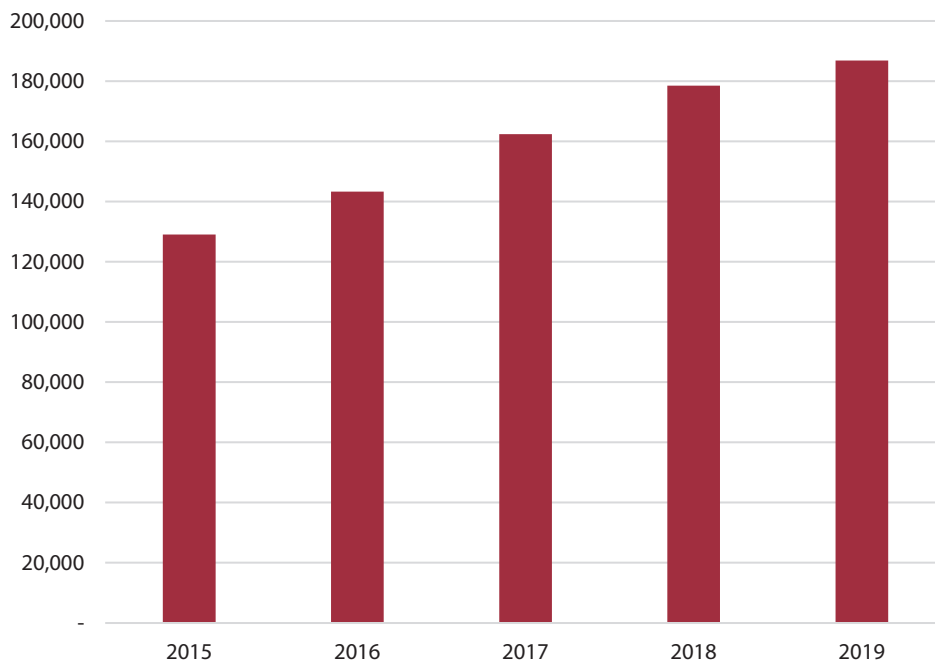
**Table 1. Western Europe: Sales of construction equipment by country, 2015-2019 (units)**

	2015	2016	2017	2018	2019	% Change 2018-2019	% of Total 2019
<b>Austria</b>	2,314	2,472	2,863	3,185	3,202	+1	2
<b>Belgium</b>	4,632	4,875	5,940	6,554	7,036	+7	4
<b>Denmark</b>	2,902	2,966	3,747	4,203	4,091	-3	2
<b>Finland</b>	1,812	2,219	2,311	2,582	3,003	+16	2
<b>France</b>	20,132	25,496	30,136	32,860	35,505	+8	19
<b>Germany</b>	32,132	38,137	39,491	43,644	47,390	+9	25
<b>Ireland</b>	1,853	1,788	1,921	2,365	2,495	+5	1
<b>Italy</b>	9,915	12,438	14,307	16,293	18,965	+16	10
<b>Netherlands</b>	5,375	5,305	6,546	7,334	7,459	+2	4
<b>Norway</b>	4,273	4,602	4,788	4,849	5,038	+4	3
<b>Portugal</b>	923	1,011	1,417	1,655	1,979	+20	1
<b>Spain</b>	2,633	3,098	4,342	5,847	6,414	+10	3
<b>Sweden</b>	3,998	4,654	5,290	5,341	5,291	-1	3
<b>Switzerland</b>	3,589	3,639	3,830	3,507	3,184	-9	2
<b>United Kingdom</b>	32,570	30,603	35,431	38,270	35,772	-7	19
<b>Total</b>	<b>129,053</b>	<b>143,303</b>	<b>162,360</b>	<b>178,489</b>	<b>186,824</b>	<b>+5</b>	<b>100</b>
<b>% Annual Change</b>	+2	+11	+13	+10	+5		

Note: Products included in the above are itemised in Table 20

Source: Off-Highway Research

**Chart 1. Western Europe: Sales of construction equipment by country, 2015-2019 (units)**



Source: Off-Highway Research

The construction equipment industry in Europe grew again in 2019, although the 5 per cent rise to 186,824 units sold was a slower rate of increase than was seen from 2016-2018. Demand grew in the majority of countries, and in several cases there was a rise above the already historically high volumes seen in 2018.

This came against a backdrop of decelerating economic growth in the EU, with the rate of increase of GDP slowing from the peak of 2.7 per cent in 2017, to 2.1 per cent in 2018 and 1.5 per cent in 2019 (Eurostat figures). The increase in construction equipment sales against this weak backdrop is generally explained by high residential construction activity in key countries (most notably Germany), along with an improving climate of infrastructure development across Europe. Although this is good news, Off-Highway Research believes that in some countries demand has overheated and the region as a whole is at saturation point as far as equipment sales are concerned.

## **SALES BY COUNTRY**

Unlike 2018, when sales increased in every country apart from Switzerland, last year saw demand for equipment fall in an increased number of territories (although the majority saw an increase). **Switzerland** fell again, while **Denmark** turned down and **Sweden** saw a moderate decline.

Most significant in terms of the number of machines sold was the 7 per cent drop in sales in the **UK**. This was driven by the worsening economic picture and uncertainty surrounding Brexit, along with a slowdown in housebuilding activity. Having said that, equipment volumes in the UK remain at a good level, as is also the case in the rest of northern and mid-Europe. At 35,772 machines sold last year, the size of the UK market was the second highest it has been since the 2008 financial crisis, with only the peak year of 2018 seeing higher demand.

The same point could be made about both Sweden and Denmark which dropped only modestly from extremely good volumes in 2018. This is true to a lesser extent in Switzerland, where volumes are still good, but the downturn has been longer and steeper. A key influence here has been consolidation in the construction industry.

In terms of growth, the Southern markets of **Italy**, **Portugal** and **Spain** stood out again, with double-digit increases in sales. All three countries were slow to emerge from the global financial crisis and are now enjoying a belated recovery. Italy, the fourth largest market in Europe, made the biggest contribution in terms of increased sales volumes.

The other high growth market last year was, rather surprisingly, **Finland**, where equipment sales grew 16 per cent. This ran very much against expectations and the trend in the wider Nordic region. The rapid growth of rental in Finland was one

driver, as was the unusually harsh winter, which boosted sales of equipment for snow clearance.

Elsewhere in the Nordic region, demand grew again in **Norway**, taking sales over 5,000 units for the first time.

Of the larger volume markets in Europe, both **Germany** and **France** enjoyed good growth last year. Germany was particularly notable, with sales rising to 47,390 units. This was the highest volume on record, surpassing even the post-reunification boom of the early 1990s. A major initiative to build large amounts of affordable housing in Germany continued to drive the sale of smaller equipment, while a buoyant infrastructure market was useful for sales of some, but not all, larger machine types.

Infrastructure investment in France lifted demand as did the tail end of the 'Macron Law' providing tax incentives.

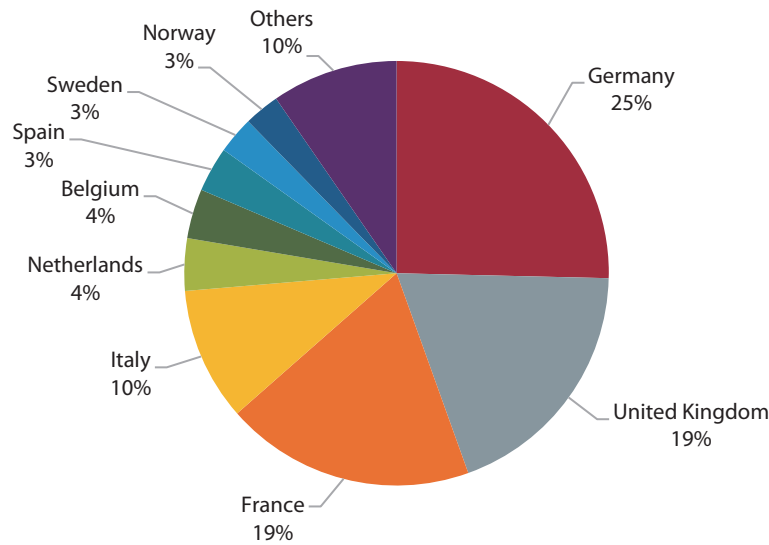
In addition to those mentioned above, many of the mid-sized and smaller markets in Europe such as **Austria**, **Belgium**, **Ireland** and the **Netherlands** enjoyed good volumes in their terms last year, with modest growth taking sales to the highest levels seen since the crisis years of the late 2000s.

**Table 2. Western Europe: Sales of construction equipment by country, 2015-2019**  
(% of total)

	2015	2016	2017	2018	2019
<b>Germany</b>	25	27	24	24	25
<b>United Kingdom</b>	25	21	22	21	19
<b>France</b>	16	18	19	18	19
<b>Italy</b>	8	9	9	9	10
<b>Netherlands</b>	4	4	4	4	4
<b>Belgium</b>	4	3	4	4	4
<b>Spain</b>	2	2	3	3	3
<b>Sweden</b>	3	3	3	3	3
<b>Norway</b>	3	3	3	3	3
<b>Denmark</b>	2	2	2	2	2
<b>Switzerland</b>	3	3	2	2	2
<b>Austria</b>	2	2	2	2	2
<b>Finland</b>	1	2	1	1	2
<b>Ireland</b>	1	1	1	1	1
<b>Portugal</b>	1	1	1	1	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Off-Highway Research

**Chart 2. Western Europe: Sales of construction equipment by country, 2015-2019 (% of total)**



Source: Off-Highway Research

Germany remained the largest construction equipment market in Western Europe last year, accounting for 25 per cent of regional sales. The decline in UK demand and rise in France meant that these two countries were of a similar size, with the UK just ahead.

However, the table above illustrates how the UK has slid in relative terms over the last five years as demand has softened, while Germany and France strengthened. In 2015, the UK accounted for 25 per cent of regional sales and was a similar size to Germany. The gap between Germany and the UK has widened since then, while France has caught up with the UK in volume terms.

The table also highlights the recovery of the Italian market, which accounted for 10 per cent of regional sales in 2019 compared to 8 per cent in 2015. Demand almost doubled in that five-year period and equipment volumes in Italy are now approaching a more healthy and natural level.

The next largest markets in Europe are Belgium and the Netherlands, which are each of a similar size. They remain ahead of Spain, a much larger country in terms of population and area, and in the pre-2008 era a much larger market. The table illustrates that Spain has increased its relative share over the last five years, rising from 2 per cent of the European total to 3 per cent in 2017-2019. However, it remains below its potential.

There has been little change in the relative shares of the smaller countries in Europe, although two years of declining sales in Switzerland against a broader backdrop of growth have seen it fall below Denmark.



## 2019 VERSUS LONG-TERM TRENDS

**Table 3. Western Europe: 10 year average sales, 2010-2019 (units)**

	2010 - 2019 average (units)	2019 (units)	2019 vs 10-year average (%)
<b>Austria</b>	2,350	3,202	+36
<b>Belgium</b>	4,916	7,036	+43
<b>Denmark</b>	2,930	4,091	+40
<b>Finland</b>	2,041	3,003	+47
<b>France</b>	26,081	35,505	+36
<b>Germany</b>	35,074	47,390	+35
<b>Ireland</b>	1,389	2,495	+80
<b>Italy</b>	12,069	18,965	+57
<b>Netherlands</b>	5,094	7,459	+46
<b>Norway</b>	4,079	5,038	+23
<b>Portugal</b>	1,166	1,979	+70
<b>Spain</b>	3,056	6,414	+110
<b>Sweden</b>	3,973	5,291	+33
<b>Switzerland</b>	3,650	3,184	-13
<b>United Kingdom</b>	29,914	35,772	+20
<b>Total</b>	<b>137,781</b>	<b>186,824</b>	<b>+36</b>

Source: Off-Highway Research

The table above illustrates how high the European market has risen compared to the preceding years. Sales in 2019 were 36 per cent above the 10-year average overall, with only the relatively flat Swiss market showing relative weakness in 2019.

Markets which have grown particularly steeply include the Southern countries of **Italy**, **Spain** and **Portugal**, along with **Ireland**. However, these are not overheating – it is more a case that they had a late recovery (from the mid-2010s) from particularly low levels.

Other countries which saw sales significantly above the 10-year average in 2019 included **Belgium**, **Denmark**, **Finland** and the **Netherlands**. As previously discussed, these are believed to be at their peaks and are displaying unusually high volumes.

The same is true of **Germany** and perhaps also **France**, although their growth versus the 10-year average is on trend with Europe as a whole. This is part of the nature of them representing such a large proportion of the total – together they make up 46 per cent of European demand.

This also highlights that at 20 per cent higher than the European average, the UK has not been as robust. As previously discussed, peak demand in the UK passed in 2018 and since then economic weakness and uncertainty around Brexit have seen sales of equipment fall away.

## COUNTRY ANALYSIS AND FORECASTS

The following forecasts were compiled in late February and early March, and as such **do not take account of the impact that the Covid-19 outbreak** and subsequent measures to limit its spread may have on the European market. At the time of writing in late March it was too early to say what effect the situation would have on the European economy as a whole and the construction equipment market in particular. **Off-Highway Research will reassess the situation and update its forecasts when the impact is better understood and also in light of any stimulus measures** which governments put in place to help economic activity recover.

**Table 4. Western Europe: Forecast sales of construction equipment by country, 2019-2024, pre-Covid-19 (units)**

	2019	2020	2021	Forecast			% Change 2020-
				2022	2023	2024	2024
<b>Austria</b>	3,202	3,078	2,960	2,861	2,842	2,924	-5
<b>Belgium</b>	7,036	6,080	5,265	5,005	5,055	4,656	-23
<b>Denmark</b>	4,091	3,997	3,830	3,828	3,922	3,087	-23
<b>Finland</b>	3,003	2,654	2,502	2,423	2,442	2,557	-4
<b>France</b>	35,505	34,100	31,050	30,870	31,405	32,080	-6
<b>Germany</b>	47,390	44,460	41,700	39,960	39,215	38,765	-13
<b>Ireland</b>	2,495	2,377	2,254	2,632	2,680	2,715	+14
<b>Italy</b>	18,965	20,120	20,635	20,670	20,918	21,348	+6
<b>Netherlands</b>	7,459	7,211	6,740	6,215	6,655	7,090	-2
<b>Norway</b>	5,038	5,038	5,044	4,802	4,718	4,781	-5
<b>Portugal</b>	1,979	1,958	2,044	2,057	2,021	2,104	+7
<b>Spain</b>	6,414	6,402	6,621	6,310	6,457	6,745	+5
<b>Sweden</b>	5,291	5,091	4,994	4,742	4,710	4,938	-3
<b>Switzerland</b>	3,184	3,205	3,368	3,505	3,371	3,400	+6
<b>United Kingdom</b>	35,772	34,029	33,042	33,662	33,447	34,100	+
<b>Total</b>	<b>186,824</b>	<b>179,800</b>	<b>172,049</b>	<b>169,542</b>	<b>169,858</b>	<b>171,290</b>	<b>-5</b>
<b>% Annual Change</b>	+10	-4	-4	-1	-	+1	-5

Source: Off-Highway Research

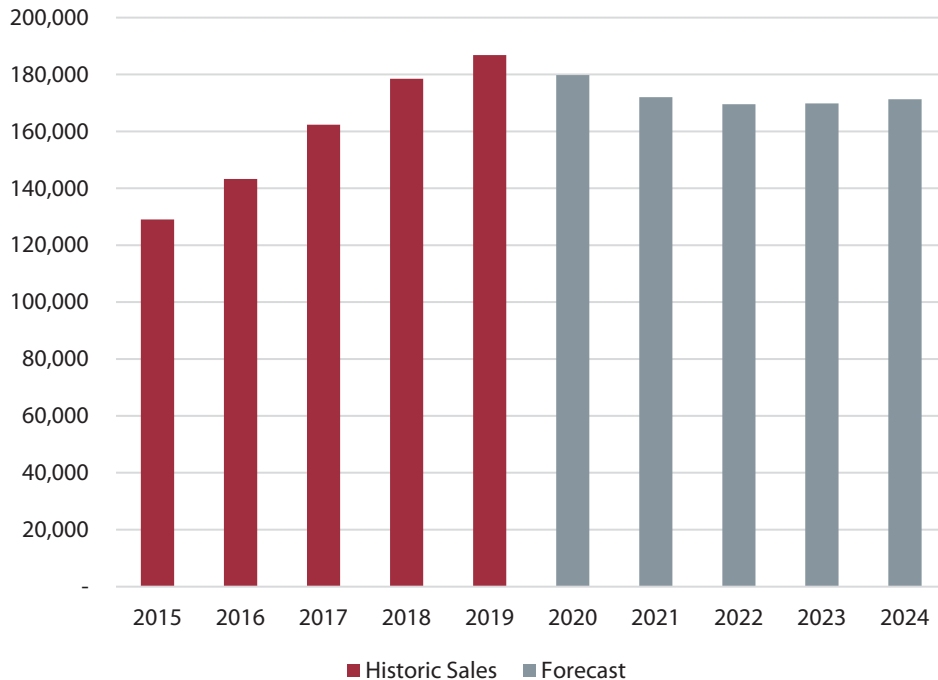
Even without the impact of Covid-19, it is clear that the European equipment market had reached a cyclical peak in 2019. Volumes reached unprecedented levels in many countries, and the rate of growth slowed – two typical indicators of peak sales.

The forecast prior to the outbreak was for a mild downturn. Although construction activity was showing signs of a slowdown, infrastructure investment in Europe remained strong in 2019. The long-term nature of infrastructure work means activity was expected to be maintained at a reasonable level and would support equipment sales.

Even in light of Covid-19, this remains the case to some extent. While construction activity will be temporarily affected by isolation measures around Europe, Off-Highway Research believes activity will resume as the restrictions ease. Once started construction projects tend to be completed even under difficult economic circumstances, because it is in no-one's financial interest for projects to lie unfinished with no prospect of paying back on its investment. Even in cases where a party to

the project becomes insolvent, liquidators attempt to find ways of bringing it to completion to release value for creditors.

**Chart 3. Western Europe: Forecast sales of construction equipment by country, 2019-2024, pre-Covid-19 (units)**



Source: Off-Highway Research

Off-Highway Research also believes that following the lifting of isolation requirements and movement restrictions, governments around Europe and EU institutions are likely to launch monetary and fiscal **stimulus measures** to reinvigorate economic growth. The widespread impacts of the current situation mean stimulus measures are likely to be broad, and the experience of the 2009 European Economic Recovery Plan does not suggest any special treatment or meaningful targeted measures will be directed towards the construction or the construction equipment segments. However, the industry should benefit from any general initiatives to stimulate growth.

In this sense, the Covid-19 outbreak has the potential to be a short, sharp shock with a relatively quick rebound for the industry.

That is the best-case scenario, and it has to be recognised that the current situation is unprecedented in modern history. It remains to be seen how severe the outbreak is in terms of infection and mortality rates. It also remains to be seen how long government restrictions on movement and travel last, and what economic impact they have. Sectors such as entertainment, hospitality and travel & tourism will be hit hard, and in that sense, the construction sector should be one of the less impacted sections of the economy.

But while there may be limited direct impacts, it should also be appreciated that construction activity flows from general economic growth and prosperity. If Europe tips into recession there are likely to be indirect impacts on the construction industry due to reduced private spending in particular.

## AUSTRIA

**Table 5. Austria: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	45	45	40
<b>Asphalt Finishers</b>	28	28	25
<b>Backhoe Loaders</b>	24	26	28
<b>Crawler Dozers</b>	29	28	28
<b>Crawler Excavators</b>	810	780	750
<b>Crawler Loaders</b>	-	5	5
<b>Mini Excavators</b>	840	820	800
<b>Motor Graders</b>	17	15	18
<b>Rigid Dump Trucks</b>	6	3	3
<b>RTLTs - Masted</b>	2	3	3
<b>RTLTs - Telescopic</b>	343	340	340
<b>Skid-Steer Loaders</b>	117	100	100
<b>Wheeled Excavators</b>	189	175	170
<b>Wheeled Loaders &lt; 80 HP</b>	400	380	350
<b>Wheeled Loaders &gt; 80 HP</b>	352	330	300
<b>Total</b>	<b>3,202</b>	<b>3,078</b>	<b>2,960</b>
<b>% Annual Change</b>	+1	-4	-4

\* Forecast

Source: Off-Highway Research

Economic activity has picked up significantly in recent years, supported by fiscal reform, strong private consumption and low interest rates. The positive outlook has been mirrored to some extent in the construction equipment sector, which saw sales of new machinery reach 3,200 units in 2019, a similar level to that recorded in 2018, and only the second year since 2007 in which volumes have exceeded 3,000 units.

Increased government spending on infrastructure projects and a buoyant house-building sector during the last three years have precipitated a welcome increase in sales of new machines. Demand for mini and standard size excavators reached their second highest levels for over ten years in 2019, whilst all other product sectors remained relatively stable.

The Austrian construction industry has experienced a slow but systematic improvement during the last three years in particular, and all three major construction segments – residential construction, non-residential construction and civil engineering – have exhibited significant production gains. However, economic growth is projected to edge down during 2020 as the global slowdown and trade tensions weaken export growth and business investment.

Combined with the inevitable uncertainty surrounding the potential impact of the Covid-19 pandemic, most suppliers now expect sales of construction equipment to decline marginally in the short term at least.

## BELGIUM

Last year was good overall but the actual figures hide an underlying concern. Sales were falling throughout the year due to economic factors. However, the last quarter of the year saw changes to tax laws that resulted in many rental companies bring forward orders from 2020 to 2019. This has resulted in the increase shown in the table. However, the positive end to 2019 resulted in a negative beginning to 2020 with the order bank much lower than has been the case in recent years. A very wet winter added to the Covid-19 epidemic has conspired to increase the negativity.

**Table 6. Belgium: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	58	50	45
<b>Asphalt Finishers</b>	22	27	25
<b>Backhoe Loaders</b>	8	10	15
<b>Crawler Dozers</b>	64	30	35
<b>Crawler Excavators</b>	1,300	1,000	900
<b>Crawler Loaders</b>	-	1	-
<b>Mini Excavators</b>	2,630	2,350	2,000
<b>Motor Graders</b>	4	2	3
<b>Rigid Dump Trucks</b>	19	15	12
<b>RTLs - Masted</b>	56	45	40
<b>RTLs - Telescopic</b>	1,275	1,100	900
<b>Skid-Steer Loaders</b>	220	200	190
<b>Wheeled Excavators</b>	400	375	325
<b>Wheeled Loaders &lt; 80 HP</b>	565	500	450
<b>Wheeled Loaders &gt; 80 HP</b>	415	375	325
<b>Total</b>	<b>7,036</b>	<b>6,080</b>	<b>5,265</b>
<b>% Annual Change</b>	<b>+7</b>	<b>-14</b>	<b>-13</b>

\* Forecast

Source: Off-Highway Research

After three exceptional years of sales, the expectation is for a correction. The current boom has passed and sales are expected to decline over the next one to two years. The outlook for the construction sector as a whole is relatively good, but several warning signals are being given for road construction, traditionally a major buyer of machines.

Finding good service engineers remains one of the biggest challenges for the equipment sector. The situation is so dire that some companies have had to lower the bar to acceptance. There are simply no candidates. Young people are less willing to make extra efforts than before and in combination with the record number of machines that are being supplied, this creates a heavier workload for the existing employees.

The forecast level of demand is expected to remain above the average over the last decade, but will fall and remain below the levels seen over the last three years.

## DENMARK

Overall construction activity in the country is quite limited. The major infrastructure works of the last few years are largely at or near completion and it has been the building and housebuilding sectors which have kept demand for construction equipment at its current above-normal levels.

During the year it looked like the market would fall steeply and so the eventual 3 per cent decline looks like a positive result. A correction in the market was fully expected but many felt it would occur in 2020 not 2019. The market is dominated by the mini excavator and the rental sector and so sudden movements are not unexpected.

**Table 7. Denmark: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	35	30	25
<b>Asphalt Finishers</b>	17	20	27
<b>Backhoe Loaders</b>	100	100	110
<b>Crawler Dozers</b>	19	20	20
<b>Crawler Excavators</b>	445	425	450
<b>Crawler Loaders</b>	-	-	-
<b>Mini Excavators</b>	1,580	1,600	1,500
<b>Motor Graders</b>	-	2	3
<b>Rigid Dump Trucks</b>	-	-	-
<b>RTLs - Masted</b>	15	10	10
<b>RTLs - Telescopic</b>	550	500	450
<b>Skid-Steer Loaders</b>	25	30	35
<b>Wheeled Excavators</b>	50	50	50
<b>Wheeled Loaders &lt; 80 HP</b>	1,000	950	900
<b>Wheeled Loaders &gt; 80 HP</b>	255	260	250
<b>Total</b>	<b>4,091</b>	<b>3,997</b>	<b>3,830</b>
<b>% Annual Change</b>	-3	-2	-4

\* Forecast

Source: Off-Highway Research

The outlook is more promising than negative but with uncertainty, the scene may change quickly. The country is in a lockdown for several weeks to alleviate problems with the Covid-19, but uncertainty remains and the projected volumes for 2020 may prove to be optimistic, but this may result in the 2021 outlook not being as weak as projected in March 2020.

## FINLAND

Much to the surprise of many involved in the industry, Finland saw a 16 per cent increase in sales in 2019 compared to the previous year. Overall, sales of construction machinery reached a new historical high, exceeding the pre-crisis record of 2,596 units sold in 2007 and indeed breaching the 3,000-unit barrier for the first time.

There are two main reasons for this rapid and slightly unexpected expansion. The first was a 'good' winter at the start of 2019 which, in Finnish terms, meant a lot of snow that then needed clearing. The second was the continued expansion of the rental sector. These two factors combined to see a very rapid increase in demand for compact wheeled loaders – sales rose 60 per cent year on year. Not only are these typically used in the country for snow clearance and management work, they are also ideal for the rental industry as their usage is intense but seasonal; this has come to be accepted as a better way of providing the machines than outright ownership.

**Table 8. Finland: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	11	10	8
<b>Asphalt Finishers</b>	9	8	7
<b>Backhoe Loaders</b>	38	40	40
<b>Crawler Dozers</b>	4	5	3
<b>Crawler Excavators</b>	885	800	760
<b>Crawler Loaders</b>	-	1	-
<b>Mini Excavators</b>	452	425	400
<b>Motor Graders</b>	6	5	4
<b>Rigid Dump Trucks</b>	15	10	4
<b>RTLs - Masted</b>	3	-	1
<b>RTLs - Telescopic</b>	219	190	175
<b>Skid-Steer Loaders</b>	35	35	35
<b>Wheeled Excavators</b>	247	225	215
<b>Wheeled Loaders &lt; 80 HP</b>	606	475	450
<b>Wheeled Loaders &gt; 80 HP</b>	473	425	400
<b>Total</b>	<b>3,003</b>	<b>2,654</b>	<b>2,502</b>
<b>% Annual Change</b>	+16	-12	-6

\* Forecast

Source: Off-Highway Research

If these machines are taken out of the equation, overall sales rose by a still impressive 9 per cent compared to 2018. Once again, demand from an expansionist rental sector played a key role, in sales of telehandlers for example, but so too did growth in the country's mining industry. The impact on volumes was not as significant as the growth in rental, but this certainly helped increase the value of the industry.

In terms of outlook, such a high market volume and such a spike in demand for one of the key products seems to have created ideal conditions for a reduction in overall sales in the year to come. The winter thus far has been 'worse' (less snow) and the consolidation in the rental sector seems to have caused a hiatus in fleet expansion.

These factors, combined with concerns about the state of the construction industry and the lack, in particular, of investment in private non-residential projects, means

sales are expected to slow by 12 per cent in 2020. It should be noted, however, the fall for the market excluding the impact of the reduction of compact wheeled loaders from its peak last year will be 9 per cent, and leave a market only one per cent below that seen in 2018.

## FRANCE

The French construction equipment sector has seen sustained growth since 2016, although in common with most European countries, this growth has slowed, registering 27 per cent in 2016, but falling to 8 per cent in 2019. That said, at 35,505 units, demand exceeded expectations in 2019 and was at its highest level since it peaked at 38,784 machines in 2007.

Of the fifteen types of equipment under review, just three experienced a fall in demand: asphalt finishers, backhoe loaders and rigid dump trucks. Conversely, articulated dump trucks, rough terrain lift trucks, crawler dozers and loaders and skid-steer loaders all saw levels of demand higher than the market average.

**Table 9. France: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	309	305	275
<b>Asphalt Finishers</b>	197	195	155
<b>Backhoe Loaders</b>	446	420	400
<b>Crawler Dozers</b>	212	200	175
<b>Crawler Excavators</b>	4,613	4,575	4,100
<b>Crawler Loaders</b>	78	60	55
<b>Mini Excavators</b>	13,257	12,500	11,750
<b>Motor Graders</b>	50	45	40
<b>Rigid Dump Trucks</b>	35	35	30
<b>RTLs - Masted</b>	232	225	220
<b>RTLs - Telescopic</b>	9,965	9,500	8,250
<b>Skid-Steer Loaders</b>	780	750	700
<b>Wheeled Excavators</b>	2,192	2,175	2,000
<b>Wheeled Loaders &lt; 80 HP</b>	1,862	1,790	1,675
<b>Wheeled Loaders &gt; 80 HP</b>	1,277	1,325	1,225
<b>Total</b>	<b>35,505</b>	<b>34,100</b>	<b>31,050</b>
<b>% Annual Change</b>	+8	-4	-9

\* Forecast

Source: Off-Highway Research

Combined sales of wheeled, crawler and mini excavators reached over 20,000 units, equivalent to 57 per cent of total demand. Mini excavators increased 8 per cent, taking total sales to 13,257, the highest recorded level for this type of equipment, while demand for crawler excavators over 6 tonnes grew by 5 per cent to 4,613 units, its highest level since 2007. Similarly, wheeled excavator sales increased by 3 per cent to 2,192 units, also approaching the 2007 level of demand.

First quarter sales were supported by the final deliveries linked to the tax incentives under the 'Macron Law' which assisted the renewal of ageing equipment fleets. Demand was sustained not only by the ongoing large infrastructure projects



associated with the Grand Paris project, but also numerous works outside the capital, including the modernisation of motorways and railways, the high-speed broadband plan, and airport and port developments. The 2024 Olympic Games due to be held in Paris are also on the horizon, offering a boost to the construction sector, both in the form of new construction and repair and maintenance.

At the end of 2019, external factors, such as the effects of Brexit and the slowing of the German economy, in conjunction with internal factors including the contraction of investments in the run up to local elections due to be held in March 2020, had pointed to a slowing of the recent growth, with predictions of a slight contraction of the construction equipment market in 2020. Off-Highway Research had estimated the decline in demand to be in the region of 4 per cent in 2020, and a further drop of 9 per cent in 2021, however the Covid-19 virus will undoubtedly have a negative impact on the economy, the result of which is currently almost impossible to predict.

## GERMANY

**Table 10. Germany: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	320	300	240
<b>Asphalt Finishers</b>	234	235	235
<b>Backhoe Loaders</b>	58	35	35
<b>Crawler Dozers</b>	425	400	350
<b>Crawler Excavators</b>	5,630	5,290	4,700
<b>Crawler Loaders</b>	34	30	30
<b>Mini Excavators</b>	17,167	16,000	15,250
<b>Motor Graders</b>	73	65	55
<b>Rigid Dump Trucks</b>	88	70	60
<b>RTLTs - Masted</b>	57	50	45
<b>RTLTs - Telescopic</b>	5,090	4,750	4,500
<b>Skid-Steer Loaders</b>	381	360	350
<b>Wheeled Excavators</b>	4,137	3,850	3,750
<b>Wheeled Loaders &lt; 80 HP</b>	10,255	9,750	9,000
<b>Wheeled Loaders &gt; 80 HP</b>	3,441	3,275	3,100
<b>Total</b>	<b>47,390</b>	<b>44,460</b>	<b>41,700</b>
<b>% Annual Change</b>	+9	-6	-6

\* Forecast

Source: Off-Highway Research

Sales of new construction equipment rose by a further 9 per cent in 2019, the sixth consecutive year of growth, and exceeded 47,000 units, the highest level of demand ever recorded. Following an increase of 10 per cent in 2018 most suppliers expected the market to undergo a slight decline last year, although developments in 2019 have confounded even the most optimistic of forecasts.

Demand continues to be underpinned by a buoyant construction sector, currently one of the main growth drivers in the German economy, and in particular by the surge in residential construction as the country attempts to rectify the drastic shortage of affordable housing. Infrastructure construction, specifically road

construction and bridge refurbishment projects, also contributed significantly to the industry's growth, while record-low borrowing costs have encouraged both rental companies and private contractors to invest heavily in machinery fleets.

Growth was recorded in all compact and heavy equipment sectors, with only minor declines in crawler dozers (-11 per cent) and motor graders (-6 per cent). In volume terms, compact wheeled loaders and mini excavators recorded the largest increase in demand (+15 and +6 per cent respectively), although significant percentage gains were seen in articulated dump trucks (+49 per cent), rigid dump trucks (+35 per cent) and, from an admittedly low base, backhoe loaders (+66 per cent). Crawler excavators above six tonnes and wheeled loaders above 80 horsepower also posted significant increases of 6 and 10 per cent respectively.

While the outlook for the construction sector remains optimistic, it is clear that such high volumes of new machine sales cannot be sustained indefinitely. Following six years of continued growth, and in the light of uncertainties surrounding the impact of Brexit, trade tensions and the Covid-19 pandemic, suppliers now believe that the market will finally undergo a decline of around 6 per cent in 2020.

## IRELAND

**Table 11. Ireland: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	32	30	35
<b>Asphalt Finishers</b>	12	15	15
<b>Backhoe Loaders</b>	54	50	60
<b>Crawler Dozers</b>	17	15	15
<b>Crawler Excavators</b>	435	400	450
<b>Crawler Loaders</b>	-	-	-
<b>Mini Excavators</b>	1,300	1,200	1,000
<b>Motor Graders</b>	1	-	2
<b>Rigid Dump Trucks</b>	2	2	2
<b>RTLTs - Masted</b>	8	5	5
<b>RTLTs - Telescopic</b>	400	425	425
<b>Skid-Steer Loaders</b>	19	20	25
<b>Wheeled Excavators</b>	40	35	35
<b>Wheeled Loaders &lt; 80 HP</b>	40	40	45
<b>Wheeled Loaders &gt; 80 HP</b>	135	140	140
<b>Total</b>	<b>2,495</b>	<b>2,377</b>	<b>2,254</b>
<b>% Annual Change</b>	+5	-5	-5

\* Forecast

Source: Off-Highway Research

Ireland is unfortunately inextricably linked with the UK and in 2019 this meant its performance was affected by uncertainty around Brexit. This had a negative impact on demand. Following the general election held in February, the result created further uncertainty. No single party gained an overall majority and with two of the leading parties, the traditional governing parties, refusing to join with the third

major party, Sinn Fein, formation of a strong government is proving difficult which will only prolong uncertainty.

The demand for more housebuilding and infrastructure spending is significant but decisions on implementing a policy that can meet that demand has been derailed by factors often outside the control of the Government.

The Government has announced a huge €116 billion programme, Project Ireland 2040, linking planning to investment, which includes significant spending on public transport. Should this plan get fully implemented, it should result in a buoyant Irish market over the next decade after 10 years of weak demand

If the political situation can be successfully solved the outlook is positive but negative influences outside the control of the country – Brexit and the impacts of Covid-19 – are likely to depress demand.

## ITALY

**Table 12. Italy: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	61	60	55
<b>Asphalt Finishers</b>	181	180	175
<b>Backhoe Loaders</b>	187	200	190
<b>Crawler Dozers</b>	49	50	45
<b>Crawler Excavators</b>	2,909	3,200	3,300
<b>Crawler Loaders</b>	20	12	10
<b>Mini Excavators</b>	10,026	11,000	11,500
<b>Motor Graders</b>	2	3	2
<b>Rigid Dump Trucks</b>	9	10	8
<b>RTLs - Masted</b>	78	75	70
<b>RTLs - Telescopic</b>	2,449	2,250	2,250
<b>Skid-Steer Loaders</b>	1,250	1,275	1,250
<b>Wheeled Excavators</b>	327	340	330
<b>Wheeled Loaders &lt; 80 HP</b>	324	340	350
<b>Wheeled Loaders &gt; 80 HP</b>	1,093	1,125	1,100
<b>Total</b>	<b>18,965</b>	<b>20,120</b>	<b>20,635</b>
<b>% Annual Change</b>	+16	+6	+3

\* Forecast

Source: Off-Highway Research

Italy experienced its sixth consecutive year of growth in demand for construction machinery in 2019, the longest expansionary period since the turn of the Millennium. In total, 18,965 units were sold in the country last year, an increase of 16 per cent compared to 2018. This also represents growth of 170 per cent since the bottom of the market in 2013 and the highest total since more than 23,000 units were sold in 2008.

The largest beneficiaries of this increase in demand in volume terms were mini excavators, of which over 1,200 more machines were sold in 2019 than the previous year, even if demand increased slightly slower than the total growth rate – 14 per cent compared to 16 per cent for the wider market. Sales of crawler excavators, skid-

steer loaders and telehandlers increased significantly in both volume terms and proportionately.

Indeed, sales of telehandlers grew by 26 per cent year on year, benefiting from specific stimuli – a sustained period of high cheese prices encouraged demand from agriculture – and general trends such as growing rental demand and the impact of financial incentives. Other notable increases came in the small volume markets for crawler dozers and asphalt finishers, the latter inspired by the issuance of road maintenance contracts by road authority ANAS.

In the forecast period, continued expansion in demand but at a slower pace is widely expected. The benefits of growing rental demand and continued fiscal support from the government are likely to be partially offset by reduced demand from agriculture (for some products) and a cooling construction sector. Here, investment is forecast to grow 1.7 per cent in 2020 compared to 2.3 per cent estimated for 2019, even if long overdue public infrastructure investment is set to increase. Overall, a sales increase of around 5-6 per cent is deemed feasible, which would total sales to more 20,000 units for the first time in more than a decade.

## NETHERLANDS

**Table 13. Netherlands: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	61	60	55
<b>Asphalt Finishers</b>	181	180	175
<b>Backhoe Loaders</b>	187	200	190
<b>Crawler Dozers</b>	49	50	45
<b>Crawler Excavators</b>	2,909	3,200	3,300
<b>Crawler Loaders</b>	20	12	10
<b>Mini Excavators</b>	10,026	11,000	11,500
<b>Motor Graders</b>	2	3	2
<b>Rigid Dump Trucks</b>	9	10	8
<b>RTLs - Masted</b>	78	75	70
<b>RTLs - Telescopic</b>	2,449	2,250	2,250
<b>Skid-Steer Loaders</b>	1,250	1,275	1,250
<b>Wheeled Excavators</b>	327	340	330
<b>Wheeled Loaders &lt; 80 HP</b>	324	340	350
<b>Wheeled Loaders &gt; 80 HP</b>	1,093	1,125	1,100
<b>Total</b>	<b>18,965</b>	<b>20,120</b>	<b>20,635</b>
<b>% Annual Change</b>	+16	+6	+3

\* Forecast

Source: Off-Highway Research

The situation in the Netherlands is similar to that of Belgium. Demand for new equipment has been very strong and is being led by the rental sector as the number of infrastructure schemes declines. The dominant force in the Dutch rental industry is Sittard-based Boels, which has operations throughout much of Northern and Central Europe. However, a major force in the rental sector in recent months have been the equipment dealers themselves.

This is resulting in an entirely different landscape for the market. Netherlands was always known as one of the most stable European markets but as the rental sector plays an ever-increasing role, volatility rather than stability could become the norm.

As has been mentioned in other countries, political and economic uncertainty is growing and when uncertainty reaches a certain level history tells us that rental companies tend to become inactive in the marketplace and sales can fall very quickly. There is no certainty that this will happen in the Netherlands, but the likelihood is greater now than it was six months ago. The Dutch market is heavily influenced by what is happening in Germany and any negativity there will be reflected in the Dutch market.

## NORWAY

Another year, another new record for sales of construction machinery in Norway. A 4 per cent rise in overall sales saw the country record total demand in excess of 5,000 units for the first time. Perhaps even more impressively the market has now recorded 10 consecutive years of growth from the bottom of the market in 2009, when sales had fallen to fewer than 2,000 units in the aftermath of the financial crisis; growth has thus exceeded 150 per cent in the past decade.

**Table 14. Norway: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	149	145	150
<b>Asphalt Finishers</b>	37	45	45
<b>Backhoe Loaders</b>	7	5	5
<b>Crawler Dozers</b>	32	30	25
<b>Crawler Excavators</b>	1,874	1,875	1,850
<b>Crawler Loaders</b>	-	3	1
<b>Mini Excavators</b>	1,192	1,250	1,225
<b>Motor Graders</b>	11	12	15
<b>Rigid Dump Trucks</b>	15	20	18
<b>RTLTs - Masted</b>	5	3	5
<b>RTLTs - Telescopic</b>	247	200	225
<b>Skid-Steer Loaders</b>	58	50	55
<b>Wheeled Excavators</b>	337	350	350
<b>Wheeled Loaders &lt; 80 HP</b>	393	375	400
<b>Wheeled Loaders &gt; 80 HP</b>	681	675	675
<b>Total</b>	<b>5,038</b>	<b>5,038</b>	<b>5,044</b>
<b>% Annual Change</b>	+4	-	-

\* Forecast

Source: Off-Highway Research

In volume terms, growth was led last year by increased sales of mini excavators, although total sales of just under 1,200 units remain below the previous peak seen in 2016 and 2017. There were bigger proportionate increases in demand for telehandlers, up 20 per cent, and compact wheeled loaders, up 19 per cent. The main catalyst for this growth was increased demand from the rental sector. Elsewhere,

continued investment in infrastructure saw demand for crawler dozers rise 19 per cent and equal the record sales level established in 2017.

The expectation for this year and next is of continued high volumes of sales, although not necessarily of further expansion. Public infrastructure investment is strong, indeed at record levels, in spite of some political upheaval and the rental market retains scope for further development. That said, changes to local government have led to a delay in some projects, as has a re-organisation of the Statens Vegvesen, the state road authority, even if there is a belief that the industry will benefit from these changes in the long term.

## PORTUGAL

Demand for construction equipment in Portugal grew for the sixth consecutive year, increasing by 20 per cent to just under 2,000 units in 2019, and trebling sales compared with the sector's low point in 2013, when just 645 machines were sold. All types of equipment experienced growth, with the exception of small volume segments such as asphalt finishers and rigid dump trucks, which saw a decline in sales.

**Table 15. Portugal: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	12	11	12
<b>Asphalt Finishers</b>	14	14	15
<b>Backhoe Loaders</b>	320	315	310
<b>Crawler Dozers</b>	17	15	18
<b>Crawler Excavators</b>	382	380	400
<b>Crawler Loaders</b>	-	-	-
<b>Mini Excavators</b>	677	660	675
<b>Motor Graders</b>	4	5	5
<b>Rigid Dump Trucks</b>	-	3	4
<b>RTLTs - Masted</b>	17	20	30
<b>RTLTs - Telescopic</b>	204	210	220
<b>Skid-Steer Loaders</b>	162	165	185
<b>Wheeled Excavators</b>	60	55	60
<b>Wheeled Loaders &lt; 80 HP</b>	24	25	25
<b>Wheeled Loaders &gt; 80 HP</b>	86	80	85
<b>Total</b>	<b>1,979</b>	<b>1,958</b>	<b>2,044</b>
<b>% Annual Change</b>	+7	-1	+4

\* Forecast

Source: Off-Highway Research

Sales of wheeled loaders under 80 horsepower saw the largest increase in percentage terms, while rough terrain lift trucks, motor graders, articulated dump trucks and wheeled excavators all experienced growth rates higher than the market average. Demand for the ever-popular mini excavator increased by the largest number in unit terms, reaching 677 units, the highest level recorded in the Portuguese market to date. In contrast to most Western European markets, where demand is gradually

declining, backhoe loaders saw a 19 per cent increase in sales to 320 units, although this falls far short of the levels experienced at the start of the new millennium.

The construction sector was forecast to continue to grow in 2020, albeit at a slower pace. Due to the recent level of fleet replacement, initial predictions for the Portuguese construction equipment sector are for a decrease in demand of 1 per cent in 2020, followed by a return to growth the following year; however this is likely to be revised in the light of recent developments surrounding the Covid-19 virus.

## SPAIN

The seventh consecutive year of growing sales in Spain has seen demand increase from the low point of 1,150 units in 2012 to 6,414 units in 2019, representing an increase of 458 per cent over the last seven years and approaching a level last seen in 2008 when 7,126 units were sold. The year-on-year rate of growth is however slowing, from 35 per cent in 2018 to 10 per cent in 2019.

**Table 16. Spain: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	45	45	47
<b>Asphalt Finishers</b>	36	36	38
<b>Backhoe Loaders</b>	613	605	595
<b>Crawler Dozers</b>	26	26	30
<b>Crawler Excavators</b>	690	700	730
<b>Crawler Loaders</b>	-	-	1
<b>Mini Excavators</b>	1,549	1,550	1,590
<b>Motor Graders</b>	11	10	15
<b>Rigid Dump Trucks</b>	15	15	25
<b>RTLs - Masted</b>	552	550	575
<b>RTLs - Telescopic</b>	1,400	1,400	1,450
<b>Skid-Steer Loaders</b>	647	640	650
<b>Wheeled Excavators</b>	291	290	310
<b>Wheeled Loaders &lt; 80 HP</b>	54	55	65
<b>Wheeled Loaders &gt; 80 HP</b>	485	480	500
<b>Total</b>	<b>6,414</b>	<b>6,402</b>	<b>6,621</b>
<b>% Annual Change</b>	+10	-	+3

\* Forecast

Source: Off-Highway Research

There was a wide variation in levels of demand, with both heavy earthmoving equipment and compact machinery experiencing increases and decreases in demand. The majority of machine types continued to experience growth with just four categories seeing a decline in sales. The absence of any large orders for rigid dump trucks resulted in an 80 per cent drop in sales, while demand for wheeled loaders under 80 horsepower declined by 23 per cent. Sales of masted rough terrain lift trucks fell by 3 per cent, while mini excavators, fell back slightly in 2019, declining by 2 per cent. Given that mini excavator sales had increased by more than 60 per cent in 2018, reaching 58 per cent of the peak demand experienced during the boom period, this levelling of demand was not entirely unexpected.

The largest proportionate increases in sales were in telescopic handlers and wheeled excavators, although articulated dump trucks, motor graders and crawler dozers all experienced good levels of growth.

2019 had started well, with an increase of 30 per cent in equipment sales in the first half year, before demand began to falter. Municipal elections in March were a driver of investment in the construction sector in the early part of the year, however two inconclusive general elections had prolonged the political deadlock the country had suffered since 2018, making it impossible to pass the state budget plan and public spending on any major infrastructure remained woefully inadequate.

Spain finally formed a coalition government for the first time in 80 years at the end of 2019, however the political instability combined with the uncertainties in the international environment (e.g. Brexit, US-China relations, slowing of the German economy) meant that the country could not fully reap the benefits of the upturn in the economy.

At the end of 2019, the consensus was that demand in the construction equipment sector would flatten in 2020, as both the fleet replacement cycle and the overall growth in the construction sector would slow down. Currently, Spain is experiencing the second highest incidence of the Covid-19 virus in Europe after Italy, with the country locked down as a result. This will have an impact on the economy, and consequently on the construction sector. Off-Highway Research will provide more updates as the situation becomes clearer.

## SWEDEN

**Table 17. Sweden: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	84	70	60
<b>Asphalt Finishers</b>	53	40	45
<b>Backhoe Loaders</b>	123	120	120
<b>Crawler Dozers</b>	18	15	20
<b>Crawler Excavators</b>	977	950	925
<b>Crawler Loaders</b>	-	-	-
<b>Mini Excavators</b>	1,094	1,025	1,000
<b>Motor Graders</b>	16	12	10
<b>Rigid Dump Trucks</b>	4	10	7
<b>RTLs - Masted</b>	4	4	2
<b>RTLs - Telescopic</b>	235	240	225
<b>Skid-Steer Loaders</b>	50	55	55
<b>Wheeled Excavators</b>	724	700	700
<b>Wheeled Loaders &lt; 80 HP</b>	644	600	600
<b>Wheeled Loaders &gt; 80 HP</b>	1,265	1,250	1,225
<b>Total</b>	<b>5,291</b>	<b>5,091</b>	<b>4,994</b>
<b>% Annual Change</b>	-1	-4	-2

\* Forecast

Source: Off-Highway Research



Although sales of construction machinery declined slightly in Sweden in 2019 the fall was only small. Overall, sales dropped just 1 per cent compared to 2018, generating a market of 5,289 units, only the third time the total market has been above 5,000 units since Off-Highway Research's records began in 1980.

The most significant fall in demand came for wheeled excavators. The market for these still-popular machines was down 9 per cent, albeit in the context of three years of sales that had been more than 50 per cent higher than the previous record level; a downturn in residential construction work is a factor in this decline. Sales of mini excavators also declined, falling by 6 per cent, while those of crawler excavators fell by 1 per cent, in line with the industry average. In contrast, sales of wheeled loaders grew noticeably. Both compact wheeled loaders and larger models above 80 horsepower saw demand increase by 8 per cent.

The next two years are likely to see continued strong demand for machinery, even if a slight fall from the volumes seen last year is widely expected. Customers have become more hesitant in their new machinery purchasing decisions while the volume of trade-in machines has also increased sharply; demand for young second-hand machinery has also been reported to be strong. That said, there are numerous large infrastructure projects in the pipeline, and even a market 4 per cent below the level of 2019 will remain at historically high levels.

## SWITZERLAND

**Table 18. Switzerland: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	34	28	30
<b>Asphalt Finishers</b>	29	30	30
<b>Backhoe Loaders</b>	-	-	-
<b>Crawler Dozers</b>	21	20	25
<b>Crawler Excavators</b>	595	580	620
<b>Crawler Loaders</b>	6	6	8
<b>Mini Excavators</b>	1,388	1,400	1,500
<b>Motor Graders</b>	1	1	2
<b>Rigid Dump Trucks</b>	1	1	-
<b>RTLTs - Masted</b>	3	4	3
<b>RTLTs - Telescopic</b>	323	350	350
<b>Skid-Steer Loaders</b>	62	55	60
<b>Wheeled Excavators</b>	278	300	320
<b>Wheeled Loaders &lt; 80 HP</b>	260	250	240
<b>Wheeled Loaders &gt; 80 HP</b>	183	180	180
<b>Total</b>	<b>3,184</b>	<b>3,205</b>	<b>3,368</b>
<b>% Annual Change</b>	-9	+1	+5

\* Forecast

Source: Off-Highway Research

The peaks and troughs of demand for new construction equipment prevalent in many other countries have never been a feature of the Swiss market and the ready availability of credit, together with low interest rates and buoyant construction

activity in recent years, have combined to ensure a relatively stable level of demand for earthmoving equipment.

Following a slowdown in the Swiss economy and consolidation in the construction sector in 2019, demand for new construction machinery underwent a modest decline of 9 per cent, although remained at a comparatively healthy level of 3,200 units. Nearly all product sectors have contributed to the high volume of sales over the last six years, although the leading performers continue to be mini excavators and crawler excavators. In 2019 these two product sectors alone accounted for some 62 per cent of the total market.

Uncertainty surrounding the potential economic impact of the Covid-19 pandemic understandably makes it more difficult for suppliers to accurately forecast developments in the construction equipment market during 2020. However, it seems inevitable that some contraction in demand will take place. The situation may be further exacerbated by the fact that only Stage V emission compliant machines can be sold in Switzerland from 2020, and not all suppliers are yet in a position to meet these criteria.

## UK

**Table 19. UK: Sales of construction equipment, 2019-2021\* pre-Covid-19 (units)**

	2019	2020*	2021*
<b>Articulated Dump Trucks</b>	530	550	850
<b>Asphalt Finishers</b>	143	140	160
<b>Backhoe Loaders</b>	596	550	525
<b>Crawler Dozers</b>	278	240	275
<b>Crawler Excavators</b>	8,754	8,500	8,000
<b>Crawler Loaders</b>	57	25	20
<b>Mini Excavators</b>	14,050	13,500	12,500
<b>Motor Graders</b>	5	4	7
<b>Rigid Dump Trucks</b>	34	30	35
<b>RTLs - Masted</b>	117	125	170
<b>RTLs - Telescopic</b>	8,775	8,200	8,400
<b>Skid-Steer Loaders</b>	467	400	425
<b>Wheeled Excavators</b>	515	475	475
<b>Wheeled Loaders &lt; 80 HP</b>	325	300	300
<b>Wheeled Loaders &gt; 80 HP</b>	1,126	990	900
<b>Total</b>	<b>35,772</b>	<b>34,029</b>	<b>33,042</b>
<b>% Annual Change</b>	-7	-5	-3

\* Forecast

Source: Off-Highway Research

2019 was a difficult year for the UK construction equipment sector. Sales were down 7 per cent compared to the previous year and much of this occurred in the last three months of the year when rental companies cancelled orders for delivery in 2020 and beyond.

The conclusion of the Brexit negotiations, together with the return of a Government with a greatly enhanced majority at the general election in December, has changed the mood amongst customers. Recent surveys have all shown enhanced confidence

in the future. The budget announced in March 2020 promised greatly increased spending on infrastructure over the next five years which will allow companies to either expand or renew their current machine population. A total of GB £600 billion will be invested in new roads, housing and rail projects over the next five years.

Despite some good news recently, the advent of the coronavirus epidemic and continuing uncertainty over post Brexit negotiations will dampen some of the confidence among suppliers. Off-Highway Research believes there will be a correction in demand after many years of excellent growth. The forecast downturn over the next couple of years is expected to be minimal. and overall sales are likely to remain at historically high levels with an increasing number of larger machines purchased in the future as infrastructure projects start to come on stream.

Any improvement in the housing sector will result in the telescopic handler market remaining buoyant, while the improvement to broadband and the repairs to millions of potholes should ensure plenty of work for rental companies with fleets of mini excavators. The increase in roadbuilding announced in the budget will also ensure healthy sectors for crawler excavators, articulated dump trucks and crawler dozers.

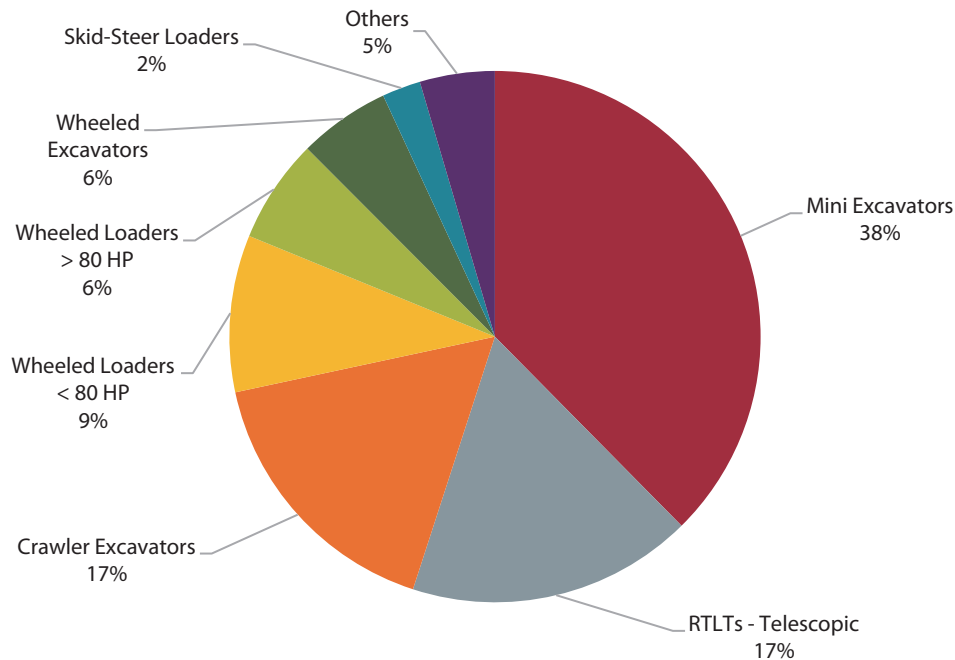
## EQUIPMENT ANALYSIS AND FORECAST TO 2024

**Table 20. Western Europe: Sales of construction equipment by type, 2015-2019 (units)**

	2015	2016	2017	2018	2019	% Change 2018-2019	% of Total 2019
<b>Articulated Dump Trucks</b>	1,273	1,400	1,538	1,593	1,741	+9	1
<b>Asphalt Finishers</b>	971	984	1,036	1,076	1,038	-4	1
<b>Backhoe Loaders</b>	2,584	2,419	2,544	2,687	2,576	-4	1
<b>Crawler Dozers</b>	911	966	1,191	1,191	1,231	+3	1
<b>Crawler Excavators</b>	24,019	25,397	28,035	30,925	31,079	-	17
<b>Crawler Loaders</b>	100	126	132	176	195	+11	-
<b>Mini Excavators</b>	47,915	56,060	62,878	68,367	70,252	+3	38
<b>Motor Graders</b>	177	163	180	194	206	+6	-
<b>Rigid Dump Trucks</b>	194	189	202	272	243	-11	-
<b>RTLs - Masted</b>	796	1,037	1,213	1,217	1,299	+7	1
<b>RTLs - Telescopic</b>	20,726	21,835	26,681	29,929	32,500	+9	17
<b>Skid-Steer Loaders</b>	2,845	3,267	3,469	4,044	4,383	+8	2
<b>Wheeled Excavators</b>	6,846	8,068	9,680	10,065	10,412	+3	6
<b>Wheeled Loaders &lt; 80 HP</b>	10,810	12,114	13,521	15,609	17,852	+14	10
<b>Wheeled Loaders &gt; 80 HP</b>	8,886	9,278	10,060	11,144	11,817	+6	6
<b>Total</b>	<b>129,053</b>	<b>143,303</b>	<b>162,360</b>	<b>178,489</b>	<b>186,824</b>	<b>+5</b>	<b>100</b>
<b>% Annual Change</b>	<b>+2</b>	<b>+11</b>	<b>+13</b>	<b>+10</b>	<b>+5</b>	<b>+5</b>	<b>-</b>

Source: Off-Highway Research

**Chart 4. Western Europe: Sales of construction equipment by type, 2015-2019 (units)**



Source: Off-Highway Research

The genuinely high-volume products in Europe are the various types and sizes of excavator, wheeled loaders and telescopic handlers, which last year accounted for 94 per cent of unit sales, a slight increase on the figure of 93 per cent of sales in 2018.

Although the proportion of sales for each type of equipment tends to change only marginally from year-to-year, there are clear long-term trends in the market. The key shift over the last two decades or so has been the growth of the mini and crawler excavator segments, along with telescopic handlers. In 1999 these three groups accounted for 47 per cent of the market, compared to 72 per cent today. Their rise has come at the expense of backhoe loaders – 15 per cent of the market in 1999, but 1 per cent today – and skid-steer loaders, which accounted for 9 per cent of the market 20 years ago, but just 2 per cent in 2019.

The share of the market claimed by wheeled excavators and loaders over the same period has changed little, although with the overall European equipment market in 2019 some 48 per cent higher than it was in 1999, the absolute numbers for these machines' sales have increased proportionately.

In terms of growth last year, one of the most striking areas was compact wheeled loaders (under 80 horsepower) – up 14 per cent, following a 15 per cent increase in 2018. Sales of this type of equipment reached an unprecedented high in 2019 thanks to the buoyancy of the German market and a total of 17,852 units were sold across Europe as a result.

Other areas of above trend growth included articulated dump trucks, both masted and telescopic rough terrain forklifts, skid-steer loaders and larger wheeled loaders above 80 horsepower. There was also good growth for the low volume crawler loader and motor grader segments.

Products which saw declines in sales last year were asphalt finishers, backhoe loaders and rigid dump trucks.

The European asphalt finisher market has been strong and stable at more than 1,000 units per year over the last three years, and the small downward correction in 2019 is not regarded as a serious change of fortune for this segment.

However, both the backhoe loader and rigid dump truck markets are seeing fundamental change. Backhoe loaders are in relative decline as customers turn increasingly to compact excavators for digging applications and telehandlers or small wheeled loaders for front-end bucket work. The selling point of the backhoe loader was always its multi-functional nature. This remains true, and it still has applications, but tastes have now moved to different types of equipment, such as excavators with a smaller footprint and the ability for all-round slewing.

Off-Highway Research also sees structural issues for the European rigid dump truck sector. These machines are also sold in small numbers, but their size and value make them a more interesting segment. With declining sales and a volume of just 243 units last year, the market is a shadow of what it was in the 2000s, when it totalled 550-630 units per year up until the 2008 crisis. With overall equipment demand now at a comparable level to the mid-2000s, rigid dump truck demand in Europe looks weak. Sales of these machines are strongly linked to the mining industry, which is in decline in Europe. In addition, there is pressure from the larger articulated dump trucks which have come onto the market in the last decade, offering higher payloads than before and better off-road performance than rigid trucks.

## FORECAST TO 2024

**Table 21. Western Europe: Forecast sales of construction equipment by type, 2020-2024\*, pre Covid-19 (units)**

	2019	2020	2021	2022	Forecast		% Change
					2023	2024	2020-2024
<b>Articulated Dump Trucks</b>	1,741	1,694	1,892	1,822	1,530	1,499	-12
<b>Asphalt Finishers</b>	1,038	1,043	1,027	1,048	1,041	1,080	+4
<b>Backhoe Loaders</b>	2,576	2,478	2,436	2,404	2,479	2,439	-2
<b>Crawler Dozers</b>	1,231	1,114	1,089	1,086	1,107	1,121	+1
<b>Crawler Excavators</b>	31,079	30,205	28,585	28,260	28,055	28,565	-5
<b>Crawler Loaders</b>	195	143	130	109	121	122	-15
<b>Mini Excavators</b>	70,252	68,080	65,190	63,750	64,835	66,305	-3
<b>Motor Graders</b>	206	185	183	185	188	190	+3
<b>Rigid Dump Trucks</b>	243	224	208	224	240	250	+12
<b>RTLs - Masted</b>	1,299	1,259	1,329	1,334	1,372	1,399	+11
<b>RTLs - Telescopic</b>	32,500	30,655	29,110	29,295	29,175	29,385	-4
<b>Skid-Steer Loaders</b>	4,383	4,235	4,215	4,255	4,190	4,290	+1
<b>Wheeled Excavators</b>	10,412	9,995	9,700	9,535	9,485	9,655	-3
<b>Wheeled Loaders &lt; 80 HP</b>	17,852	17,030	16,050	15,460	15,265	14,055	-17
<b>Wheeled Loaders &gt; 80 HP</b>	11,817	11,460	10,905	10,775	10,775	10,935	-5
<b>Total</b>	<b>186,824</b>	<b>179,800</b>	<b>172,049</b>	<b>169,542</b>	<b>169,858</b>	<b>171,290</b>	<b>-5</b>
<b>% Annual Change</b>	+5	-4	-4	-1	-	+1	

Source: Off-Highway Research

As previously stated, the forecasts above do not take into account the effects of the Covid-19 outbreak and containment measures which were coming into place at the time of writing in late March. As the impacts of these become better understood, along with any stimulus measures governments put in place to revitalise economic growth, Off-Highway Research will update its forecasts.

Notwithstanding those uncertainties, the current forecast and the factors underpinning it are worthy of discussions.

The slowing growth rate seen in 2019, along with the high volumes of equipment sold indicate that the European market as a whole had reached a cyclical peak. Some countries in Northern and mid-Europe had already begun to decline in 2019, while

others were levelling off. Growth was still in prospect in parts of Southern Europe, and this was set to offset some of the expected declines.

This is reflected in some of the anticipated trends for different equipment types. For example, skid-steer loaders, which are popular machines in both Italy and Spain were expected to benefit from strength in the South, with sales stabilising or growing modestly.

In terms of construction activity, the years preceding 2019 had been dominated by residential building, and the market had begun to pivot towards infrastructure investment, which is the normal cyclical pattern. Again, this was set to favour certain types of equipment associated with civil engineering, such as asphalt finishers, crawler dozers and motor graders.

In contrast, declines were forecast for some of the equipment categories which had boomed in the recent upturn – mini excavators and most notably compact wheeled loaders (under 80 horsepower), sales of which had risen to a high level on the back of the surge in German housebuilding activity.

The anomaly in the above table is the articulated dump truck segment. After a strong year in 2019, sales were expected to dip in 2020, before seeing a significant surge in 2021 and 2022. This is linked to the UK's HS2 high-speed rail project, the civil engineering phase of which is expected to require several hundred 'extra' haulers on top of the underlying European demand. This project received a boost in early 2020, when Prime Minister Boris Johnson's newly elected government gave its firm go-ahead for the project.

Notwithstanding the current Covid-19 outbreak, many of the drivers for the European construction segment should remain in place. The assumption is that the outbreak will be seasonal, with infection rates falling as the Northern Hemisphere summer approaches, and that lockdowns and travel restrictions will be eased around the same time.

Construction activity, equipment sales and machine production are likely to slow down significantly while restrictions are in place in Europe. However, Governments are also likely to stimulate their economies as the situation eases. That would make the Covid-19 outbreak a short, sharp shock, with the potential for a quick recovery. However, that would also be the best-case scenario.

The greater area of uncertainty is what the wider economic impacts will be. The greatest distress is being felt in industries outside construction such as entertainment, travel & tourism and hospitality. But while construction will not feel the worst direct effects, it should be recognised that construction activity flows from general economic prosperity and growth, and that the worst affected industries are also procurers of construction projects.

At the time of writing, it was impossible to quantify these impacts, but Off-Highway Research will continue to monitor the situation and provide updates to its clients as soon as possible.



## PRODUCTION ANALYSIS

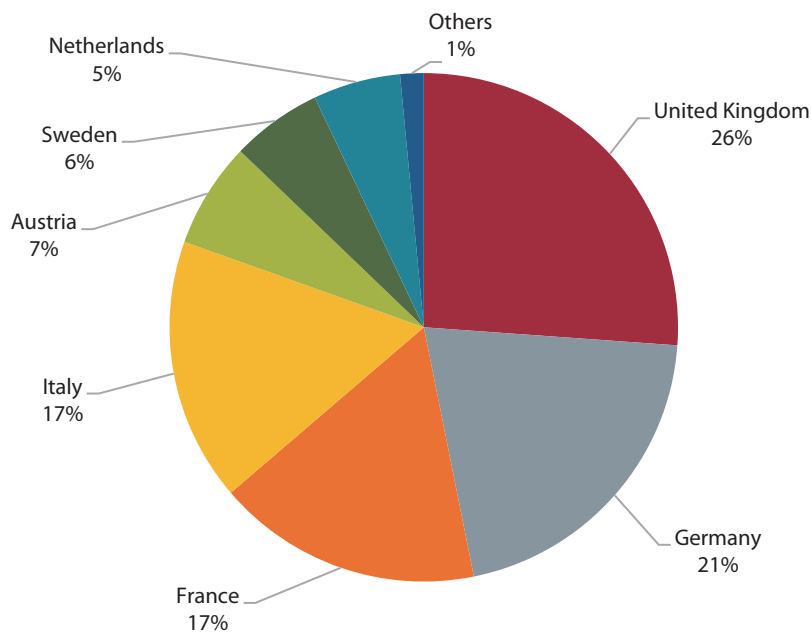
### PRODUCTION BY COUNTRY

**Table 22. Western Europe: Production of construction equipment by country, 2015-2019 (units)**

	2015	2016	2017	2018	2019	% Change 2018-2019
<b>Austria</b>	10,406	10,548	12,284	12,842	12,915	+1
<b>Belgium</b>	6,450	6,075	4,050	600	700	+17
<b>Denmark</b>	165	235	225	240	140	-42
<b>Finland</b>	348	376	394	393	528	+34
<b>France</b>	21,209	23,717	26,373	29,700	32,415	+9
<b>Germany</b>	29,476	30,728	34,733	38,283	39,762	+4
<b>Italy</b>	21,513	24,577	27,029	30,719	32,123	+5
<b>Netherlands</b>	6,575	6,915	8,190	9,685	10,675	+10
<b>Norway</b>	94	109	104	150	161	+7
<b>Spain</b>	664	695	1,060	1,064	1,338	+26
<b>Sweden</b>	9,485	9,520	10,825	11,760	11,070	-6
<b>Switzerland</b>	80	60	-	-	-	-
<b>United Kingdom</b>	42,043	39,148	44,953	51,632	50,167	-3
<b>Total</b>	<b>148,508</b>	<b>152,703</b>	<b>170,220</b>	<b>187,068</b>	<b>191,994</b>	<b>+3</b>
<b>% Annual Change</b>	-5	+3	+11	+10	+3	+3

Source: Off-Highway Research

**Chart 5. Western Europe: Production of construction equipment by country, 2019 (units)**



Source: Off-Highway Research

Equipment production in Europe rose 3 per cent last year to 191,994 units. This was higher than the sales volume in the region but at 3 per cent, the rate of growth in production was lower than the 5 per cent rise in regional sales.

Although Europe's position as a net exporter of equipment has diminished over the last decade due to increased production and exports from the major Asian economies, it remains an important global source for certain types of equipment,

particularly asphalt finishers, articulated dump trucks, backhoe loaders, telescopic handlers, wheeled excavators and wheeled loaders. The dynamics for these individual products are discussed in the following section, but worldwide demand for these types of equipment has a particular bearing on specific countries' outputs.

The UK remained the largest producer of construction equipment in volume terms last year, despite a 3 per cent fall in output to 50,167 units. A large part of this was represented by JCB's output, but the country is also the global sourcing point for Caterpillar's articulated dump trucks and backhoe loaders. Other key manufacturers include Komatsu, Mecalac and Volvo (Terex Trucks). Having said that, the 3 per cent fall in the UK's output against the overall trend of growth saw its share of the European total fall from 28 per cent in 2018 to 26 per cent last year.

The next largest producer was Germany, with an output of 39,762 units, a 4 per cent rise on 2018, which meant it accounted for 21 per cent of European equipment production, the same proportion as in 2018. Meanwhile, both France and Italy gained a percentage point in their relative shares of production, rising from 16 per cent each of the total in 2018 to 17 per cent in 2019.

The other three major equipment producing countries in Europe are Austria, Sweden and the Netherlands, with their output far in excess of the size of their domestic markets. This is due to them being the regional or global source for certain products for major international OEMs – Liebherr, and Wacker Neuson in Austria, Hitachi in the Netherlands and Volvo in Sweden. The Netherlands and Sweden also have a number of smaller specialist OEMs.

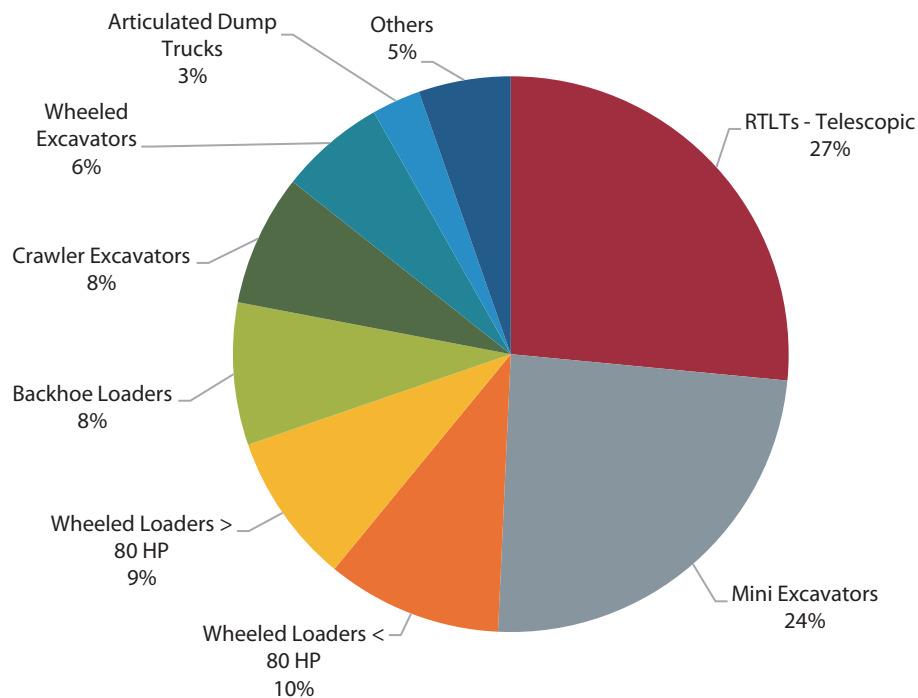
## PRODUCTION BY EQUIPMENT TYPE

**Table 23. Western Europe: Production of construction equipment by type, 2015-2019 (units)**

	2015	2016	2017	2018	2019	% Change 2018-2019
<b>Articulated Dump Trucks</b>	4,660	4,458	5,214	5,778	5,431	-6
<b>Asphalt Finishers</b>	3,062	3,185	3,303	3,635	3,210	-12
<b>Backhoe Loaders</b>	16,091	14,461	14,783	16,414	15,893	-3
<b>Crawler Dozers</b>	3,380	3,075	3,101	3,444	3,390	-2
<b>Crawler Excavators</b>	11,226	11,884	13,156	13,503	14,695	+9
<b>Crawler Loaders</b>	495	460	450	463	55	-88
<b>Mini Excavators</b>	34,487	38,096	42,635	45,467	46,495	+2
<b>Motor Graders</b>	221	200	225	215	279	+30
<b>Rigid Dump Trucks</b>	191	155	75	-	32	-
<b>RTLs - Masted</b>	1,791	2,069	2,306	2,450	2,751	+12
<b>RTLs - Telescopic</b>	37,645	37,887	43,391	49,631	50,906	+3
<b>Skid-Steer Loaders</b>	831	469	527	606	577	-5
<b>Wheeled Excavators</b>	7,220	8,491	10,102	11,070	11,830	+7
<b>Wheeled Loaders &lt; 80 HP</b>	12,842	13,600	15,755	17,351	19,605	+13
<b>Wheeled Loaders &gt; 80 HP</b>	14,366	14,213	15,197	17,041	16,845	-1
<b>Total</b>	<b>148,508</b>	<b>152,703</b>	<b>170,220</b>	<b>187,068</b>	<b>191,994</b>	<b>+3</b>
<b>% Annual Change</b>	-5	+3	+11	+10	+3	+3

Source: Off-Highway Research

**Chart 6. Western Europe: Production of construction equipment by type, 2015-2019 (units)**



Source: Off-Highway Research

The highest volume construction machine produced in Europe is the telescopic rough terrain lift truck (RTL), or telehandler. Last year output broke through the 50,000-unit barrier for the first time in history, at 50,906 units. Telescopic handlers have grown in popularity in Europe and worldwide in the last decade, so this figure even exceeded the peak of the boom in the mid-2000s, when production topped-out at just over 45,000 machines in 2007. Europe is the main production area for this type

of equipment, accounting for 75 per cent of global production in 2019. The other major region is North America.

The second highest volume product manufactured in Europe is the mini excavator, and output of this type of equipment rose 2 per cent last year to 46,495 units. Although this is a significant number, European demand for this type of machine was in excess of 70,000 units last year, with the balance being imported from Asia.

Wheeled loaders are also made in significant numbers in Europe. At 16,845 units, the above 80 horsepower category accounted for 9 per cent of total regional production last year, while output of compact wheeled loaders came to 19,605 units, or 10 per cent of demand.

When it comes to machines under 80 horsepower, most are sold in Europe, and this type of equipment is of course hugely popular in Germany. There are greater net exports of wheeled loaders above 80 horsepower, with many international OEMs building these machines in Europe for sale within the region, while a number of the large European groups – most notably JCB, Liebherr and Volvo – export wheeled loaders worldwide from their home factories.

Although fading in popularity in Western Europe, the region remains an important area for backhoe loader production. A total of 15,893 units were manufactured in Europe last year, a 3 per cent decline on the 2018 figure. The main end market for exports is North America – again a region where the backhoe loader is seeing a relative decline in popularity – but they are also important products in many emerging markets in Africa, Eastern Europe, the Middle East and Latin America.

At 8 per cent of regional production, or 14,695 units last year, relatively few crawler excavators are made in Europe. The regional production equates to less than half of European sales, with a large volume of machines being imported from Asia to meet demand.

In contrast, Europe is a net exporter of wheeled excavators, some 11,830 of which were made in the region last year. However, it should be noted that the main market for this type of machine is Europe itself, and export opportunities are limited.

Among the lower volume machines, Europe is also a net exporter of both articulated dump trucks and asphalt finishers.

## INTERNATIONAL PERSPECTIVES

### SALES

Table 24. Regional sales of construction equipment, 2019-2020\* pre-Covid-19

(units)

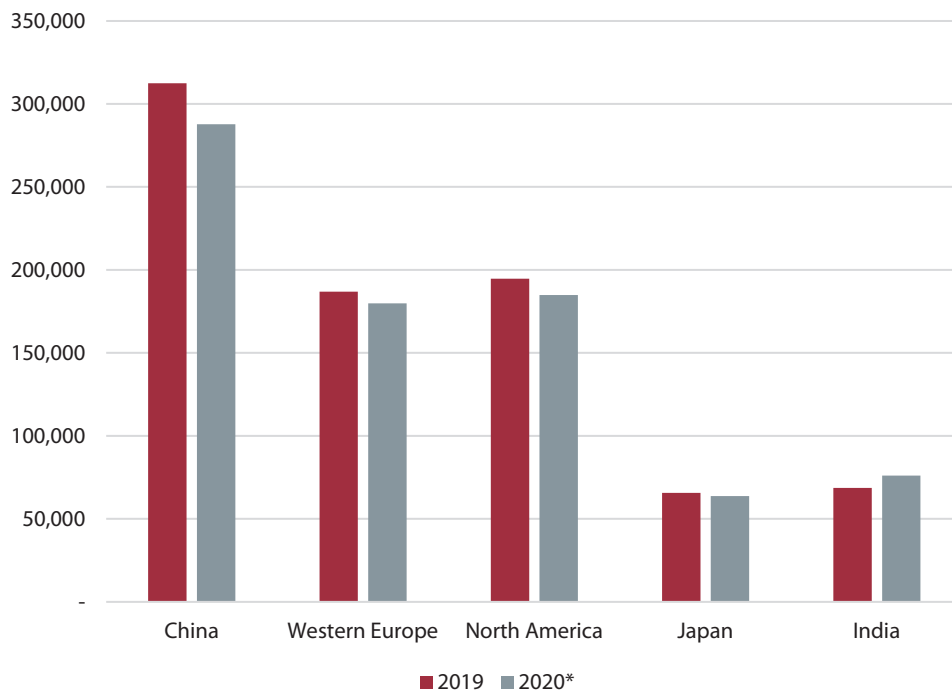
	China		Western Europe		North America		Japan		India	
	2019	2020*	2019	2020*	2019	2020*	2019	2020*	2019	2020*
<b>Articulated Dump Trucks</b>	13	10	1,741	1,694	3,675	4,000	80	80	1	-
<b>Asphalt Finishers</b>	2,600	2,300	1,038	1,043	1,925	1,850	500	450	1,121	1,200
<b>Backhoe Loaders</b>	130	110	2,576	2,478	11,225	10,600	-	-	39,671	42,000
<b>Crawler Dozers</b>	4,350	4,000	1,231	1,114	11,145	10,600	450	450	346	450
<b>Crawler Excavators</b>	135,600	120,000	31,079	30,205	31,800	30,500	25,100	23,500	20,155	24,000
<b>Crawler Loaders</b>	-	-	195	143	425	400	25	25	-	5
<b>Mini Excavators</b>	72,800	70,000	70,252	68,080	50,400	48,300	28,700	28,000	1,438	1,700
<b>Motor Graders</b>	1,596	1,400	206	185	3,450	3,250	100	100	1,111	1,400
<b>Rigid Dump Trucks</b>	129	140	243	224	445	420	90	80	532	550
<b>RTLs - Masted</b>	-	-	1,299	1,259	1,580	1,475	-	-	-	-
<b>RTLs - Telescopic</b>	35	40	32,500	30,655	25,800	23,300	5	5	323	400
<b>Skid-Steer Loaders</b>	1,805	2,000	4,383	4,235	28,128	26,600	550	500	618	700
<b>Wheeled Excavators</b>	1,880	1,700	10,412	9,995	775	825	50	50	-	-
<b>Wheeled Loaders</b>	91,500	86,000	29,669	28,490	23,875	22,700	10,000	10,500	3,379	3,700
<b>Total</b>	<b>312,438</b>	<b>287,700</b>	<b>186,824</b>	<b>179,800</b>	<b>194,648</b>	<b>184,820</b>	<b>65,650</b>	<b>63,740</b>	<b>68,695</b>	<b>76,105</b>
<b>% Annual Change</b>	+5	-8	+5	-4	-	-5	+3	-3	-15	+11

\* Forecast.

Source: Off-Highway Research

Chart 7. Regional sales of construction equipment, 2019-2020\* pre-Covid-19

(units)



\* Forecast.

Source: Off-Highway Research

As the table above illustrates, there was modest growth in construction equipment sales last year in China, Western Europe and Japan, while the North American market was flat. Meanwhile sales fell in India due to the disruption caused by the general election.

Forecasts for 2020 were established prior to the worldwide outbreak of Covid-19 and are therefore subject to future updates. However, they still illustrate the fundamental market trends. Demand for construction equipment reached its cyclical peak in China, Europe and North America in 2018-2019, and a downturn was always expected in 2020. That downturn may initially be more severe due to Covid-19 but depending on the length of the outbreak and containment measures around the world, along with policy responses such as large stimulus programmes, the bounce-back could be sharp.

## **CHINA**

The construction equipment market in China continued to grow in 2019, largely as a result of the contribution made by the excavator and mobile crane sectors. The total volume of sales was 25 per cent lower than when the market peaked in 2011, primarily as a result of the significant decline in wheeled loader volumes. It is important to note that the structure of demand has moved strongly to excavators and compact equipment, which have increased their share of the total market, and which underlines the growing maturity of demand. In the last four years, the market as a whole has grown by 1.7 times from the trough in 2015.

As a strategic change in its macro-economic policy, the Chinese government has been revising down the growth rate of investment activities, and personal consumption is being encouraged to increase its contribution to the economy. Although fixed-asset investment (FAI) saw a return to modest growth in 2019, and infrastructure development was improved in order to retain GDP growth, these do not represent fundamental changes in long-term policy. Therefore, the recovery of the construction equipment sector is thought to be a result of greater fleet replacement, as well as by additional demand that has been stimulated by stricter controls on the environment impacts and improved levels of mechanisation.

Investment activities have been kept at high levels, even though the rate of growth is much lower than before, and this supports customers' confidence in the return on their purchase investment. With a policy to curb financial risks because of the heavy debt carried by local governments, controls were adopted on the infrastructure investment boom in 2018. In 2019, the budget for the issuing of local bonds was relaxed, and this is now under the control of the central government. To support the economy, the issuing of special local bonds was increased in the second half of the year, the proceeds of which were mainly directed to the infrastructure sector. The so-called New Infrastructures, including telecoms and the 5G network, have

increased their share of the total, but traditional infrastructure works have remained the major part of total infrastructure investment.

*Further detailed analysis can be found in the Chinese Annual Review which is now available.*

## **INDIA**

Construction equipment demand previously peaked in 2011, but sales declined successively for the next three years. In 2015 the trend reversed, and the market started growing due to government's renewed focus on infrastructure development and administrative reforms. By 2017 demand had exceeded the previous peak, and a further new sales record was set in 2018.

Last year there was significant disruption due to the general election, which is a regrettable and regular feature of the Indian industry. Once an election is announced, no public works contracts may be let due to the risk this may influence voters. The election process itself is lengthy, there is then a further delay as the government is formed and the monsoon season follows shortly afterwards. The several months of weaker sales which results for the construction equipment industry is impossible to make up in the rest of the year.

However, the re-election of Prime Minister Narendra Modi, again with an absolute majority, augers well for the industry. The general atmosphere for the infrastructure development in the country remains and is conducive for growth in construction and mining activities. Alongside this, reforms continue to be made to the bureaucratic hurdles in the way of bringing infrastructure projects to the market and the Indian government is introducing new initiatives and mechanisms to bring domestic and foreign private investment to the sector.

*Further detailed analysis can be found in the Indian Annual Review which is now available.*

## **JAPAN**

The Japanese equipment market has moved to a different rhythm to other regions of the world over the last decade. There was a boom in sales in the early 2010s as a result of Prime Minister Shinzo Abe's 'Abenomics' fiscal stimulus and there was a large spike in sales associated with reconstruction work following the 2011 earthquake and tsunami.

As a result, sales were generally flat for the second half of the decade as construction activity slowed and the fleet of relatively young used machines remained in the market blocking new purchases. That eased somewhat in 2017 and 2018, with the increased demand in Southeast Asia for used equipment from Japan, and this cleared the way for an increase in new sales at home.

However, this phenomenon has now passed, and demand in Japan is expected to dip as a result in 2020.

### **NORTH AMERICA**

The North American construction equipment market flattened-out in 2019 and prior to the Covid-19 outbreak, a small downturn of 5 per cent was forecast for 2020. As in 2016, the presidential election at the end of the year is expected to cause some uncertainty in the market, with equipment buying decisions being put off until after the poll.

Most equipment categories are expected to decline in North America in 2020, although growth is forecast for the articulated dump truck and asphalt finisher segments. This reflects a pivot in the region away from residential building towards greater infrastructure development. Increased infrastructure investment was a key election pledge for President Trump in his 2016 campaign, but it remains to be seen if he is able to fully follow-through on this. The long-standing frustration in the American equipment market is that while there is broad agreement that significant amounts need to be spent on infrastructure – particularly roads – a funding mechanism cannot be agreed in the polarised political climate.

The structure of the North American market has changed over the last decade, with backhoe loaders and skid-steer loaders falling out of favour to the benefit of the compact excavator and compact tracked loader segments. Compact tracked loaders are not currently part of Off-Highway Research's data coverage but will be added in due course.



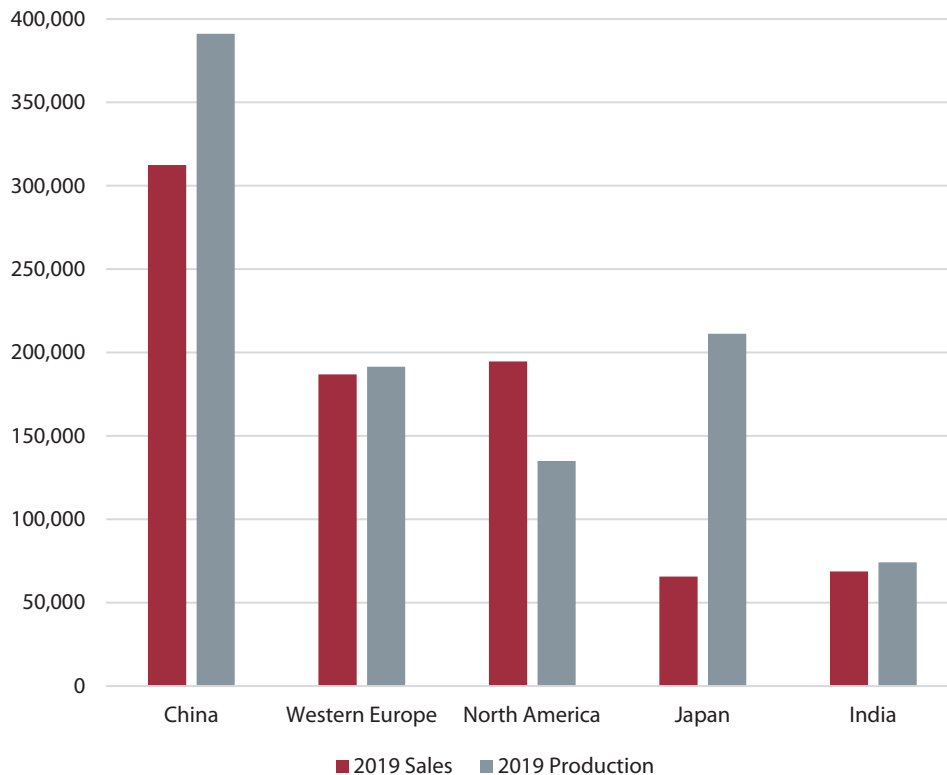
## PRODUCTION

**Table 25. Production by type and region, of construction equipment, 2018-2019**  
(units)

	China		Western Europe		North America		Japan		India	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
<b>Articulated Dump Trucks</b>	30	45	5,778	5,431	525	565	780	800	-	-
<b>Asphalt Finishers</b>	2,255	2,740	3,635	3,210	1,765	1,835	490	550	1,177	1,083
<b>Backhoe Loaders</b>	890	850	16,414	15,893	7,620	7,630	-	-	51,187	43,980
<b>Crawler Dozers</b>	8,430	6,975	3,444	3,390	10,460	10,650	3,800	4,500	259	178
<b>Crawler Excavators</b>	160,000	162,000	13,503	14,695	22,050	22,840	83,750	80,000	27,139	20,802
<b>Crawler Loaders</b>	2	-	463	55	170	200	-	-	-	-
<b>Mini Excavators</b>	64,070	84,300	45,467	46,495	21,500	21,300	109,700	111,000	548	828
<b>Motor Graders</b>	5,620	5,140	215	279	3,100	2,800	1,100	300	866	605
<b>Rigid Dump Trucks</b>	354	272	-	32	578	553	1,390	680	1,120	1,091
<b>RTLs - Masted</b>	-	-	2,450	2,751	1,400	1,300	-	-	-	-
<b>RTLs - Telescopic</b>	20	50	49,631	50,906	14,000	15,850	-	-	241	326
<b>Skid-Steer Loaders</b>	2,437	2,968	606	577	36,559	29,794	800	650	2,562	2,363
<b>Wheeled Excavators</b>	2,030	2,000	11,070	11,830	300	330	300	300	-	-
<b>Wheeled Loaders</b>	124,500	123,800	34,392	35,910	19,170	19,290	11,400	12,400	3,575	2,914
<b>Total</b>	<b>370,638</b>	<b>391,140</b>	<b>187,068</b>	<b>191,454</b>	<b>139,197</b>	<b>134,937</b>	<b>213,510</b>	<b>211,180</b>	<b>88,674</b>	<b>74,170</b>
<b>% Annual Change</b>	+40	+6	+10	+2	+13	-3	+8	-1	+33	-16

Source: Off-Highway Research

**Chart 8. Regional sales and production of construction equipment, 2019 (units)**



Source: Off-Highway Research

Construction equipment production in the five major regions under review totalled just over 1 million units in 2019, almost unchanged from 2018. This represented more than 90 per cent of global construction equipment output.

The chart above illustrates the levels of net imports and exports of equipment in these regions. The biggest net exporter in both volume and percentage of production terms remains Japan, with its core products being mini and crawler excavators. China has also developed into a significant net exporter of equipment in the last decade with both domestic and international OEMs using their capacity in the country to serve predominantly emerging markets around the world. India has a smaller annual trade surplus which has developed over the last five years, with international OEMs using their scale and facilities to build equipment for surrounding markets, predominantly neighbouring countries along with the Middle East and Eastern and Southern Africa.

Europe also has a small trade surplus, but this has fallen over the last ten years as production has shifted to China. However, in certain categories such as articulated dump trucks, asphalt finishers, backhoe loaders, crawler dozers, wheeled excavators and wheeled loaders it is a net exporter. These are largely offset by imports of mini and crawler excavators.

North America meanwhile is a significant net importer of construction equipment, predominantly mini excavators from Asia, with regional sales of most other categories of equipment being roughly in balance with local production.

## **CHINA**

Equipment production grew 6 per cent last year to 391,140 units, making it the largest producer in the world. Most of these machines were sold on the domestic market, but exports rose to a new record level of 78,909 units (including compaction equipment and mobile cranes), or 17 per cent of production.

Excavators of all classes became the largest export sector, amounting to 30,890 units and accounting for 39 per cent of total export. Wheeled loaders saw a drop in exports and accounted for a reduced share of 35 per cent foreign machine sales. Asphalt finishers rose substantially in export, and skid-steer loaders also posted a good record. Most other product sectors, however, recorded a fall in their overseas sales. Made-in-China products continued to increase their share in the international markets, through a concerted export drive by the OEMs as well as via Chinese contractors and Chinese-financed projects overseas

International manufacturers have made significant contributions to the export totals from their Chinese factories or partners including Caterpillar/SEM, Volvo/SDLG

and Bomag, Kubota and Sakai in their specialist sectors. Leading indigenous exporters from China include LiuGong, Sany, XCMG and Zoomlion.

*Further detailed analysis can be found in the Chinese Annual Review which is now available.*

## **INDIA**

Backhoe loaders stand out in the figures for Indian production. Output last year totalled 43,980 units, which was a 14 per cent decline on the record figure of 51,187 machines in 2018. Most of these are sold domestically to meet the enormous demand for backhoe loaders in India – sales of these machines in the country are far in excess of total backhoe loader demand in the rest of the world combined. Backhoe loaders are the main export product from India in volume terms.

The other genuine high-volume product in the Indian earthmoving sector is the crawler excavator, with 20,802 units produced last year, a drop of 23 per cent on 2018. The number of machines produced last year, was closely balanced to domestic sales in India.

Compared to backhoe loaders, crawler excavators and locally produced pick and carry mobile cranes, other equipment types in India are made in relatively low volumes. As is the case for crawler excavators, domestic production is balanced with sales in India, and the swings in sales and production are therefore in tune with each other.

The notable exception to this is the skid-steer loader, with Caterpillar in particular using its Indian production facilities to serve other markets around the world. Compactors are also exported in useful volumes by a number of manufacturers, most notably JCB.

*Further detailed analysis can be found in the Indian Annual Review which is now available.*

## **JAPAN**

With production of 211,180 units last year, a 1 per cent decline on 2018, and domestic sales of 63,740 machines, Japan's output of equipment is driven much more by export demand than local factors. Its key export products, which are also popular domestically, are crawler and mini excavators. Combined production of these total 191,000 units last year, against domestic sales of 53,800 units. This is to say that exports came to 137,200 units, or 72 per cent of production.

Japan also exports other products to a lesser extent, including articulated and rigid dump trucks, crawler dozers and wheeled loaders. Motor grader export by Komatsu, the sole OEM in Japan making this type of equipment, has fallen due to the relocation of some output to other southeast Asian facilities.

## **NORTH AMERICA**

Production in North America totalled 134,937 units last year, a 3 per cent decline on the 2018 figure. The high volume products in terms of production were generally those which sell in the biggest numbers domestically, which is to say backhoe loaders, crawler dozers, crawler excavators, mini excavators, telescopic RTLs (telehandlers), skid-steer loaders and wheeled loaders, and production of these machines was driven by local demand.

However, North America is the only one of the five major equipment producing regions which is a net importer of construction equipment. In volume terms, the most significant imports are mini excavators from Asia. However, also significant are the large numbers of articulated dump trucks which are sold in North America, which is by far the largest market in the world for this type of machine.







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