

**UNECE**United Nations Economic Commission for Europe

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**Embargo:  
20 October 2004,  
11:00 hours (Geneva time)**

Press Release ECE/STAT/04/P06  
Geneva, 20 October 2004

## **In 2003, robot investment in the United Kingdom surged by 48% but robot use in the United Kingdom is still lagging far behind the rest of Europe**

***After years of steady increase in robot investment, it fell like a stone in 2002 but recovered strongly in 2003...***

Between 1998 and 2001, investment in industrial robots steadily increased, reaching 1,941 units, 26% over 2000 (see figure 1). In 2002, however, investment dropped by as much as 61% compared with 2001. This was, however, a temporary set-back because in 2003 investment surged by 48%.

At the end of 2003, the estimated stock of robots in use in the United Kingdom amounted to about 14,000 units, an increase of 3% over 2002. By the end of 2007, the stock is projected to grow to over 16,000 units, which is hardly an impressive increase.

### ***United Kingdom lagging behind...***

For every 10,000 persons employed in the United Kingdom manufacturing industry at the end of 2003, there were 39 industrial robots, compared with 148 in Germany, 116 in Italy, 72 in Spain, and 71 in France (see figure 2). In the United Kingdom motor vehicle industry there are some 660 robots per 10,000 production workers, which is also far behind the above densities in the above-mentioned countries (see figure 3).

### ***Robot prices are down, labour costs are up...***

Between 1990 and 2003 prices of industrial robots fell from index 100 to 52, without taking into account that robots installed in 2003 had a much higher performance than those installed in 1990 (see figure 4). If quality changes had been taken into account, it was estimated that the index would have fallen to 22. In other words, an average robot sold in 2003 would have cost less than a fourth of what a robot with the same performance would have cost in 1990 if it had been possible to produce such a robot in that year. In the last few years, however, the price decline has levelled out.

.../

At the same time, the index of labour compensation in the United Kingdom business sector increased from 100 to 183. This implies that the relative prices of robots have fallen from 100 in 1990 to 28 in 2003 without quality adjustment, and to 12 when taking quality improvements into account.

### ***How much do the robots cost?***

Of the 1,111 robots installed in 2003, about 39% were valued at between £10,000 and £30,000. Robots in the range of £30,000 to £50,000 accounted for 57% of the supply.

At the high end, robots with a unit cost between £50,000 and £100,000 made up only 4% of the 2003 supply.

### ***Welding and plastic moulding are the dominant application areas***

Of the total 2003 stock of operational robots, welding accounted for 49%. With 13%, plastic moulding was the second largest application area, followed by material handling with 8%.

### ***The motor vehicle industry dominates...***

The motor vehicle industry was by far the largest user of industrial robots in the United Kingdom. At the end of 2003, this industry accounted for 61% of the total stock of operational robots. With 15% of the operational stock, the chemical industry was the second largest user. The food industry, fabricated metal products, machinery and electrical machinery industries each accounted for only between 2% and 4% of the total stock.

<p>For the global development of industrial robots and service robots, see a parallel press release (ECE/STAT/04/P01) issued on the same day as the present one.</p>
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Figure 1a. Estimated operational stock of robots at year-end and shipments during the year

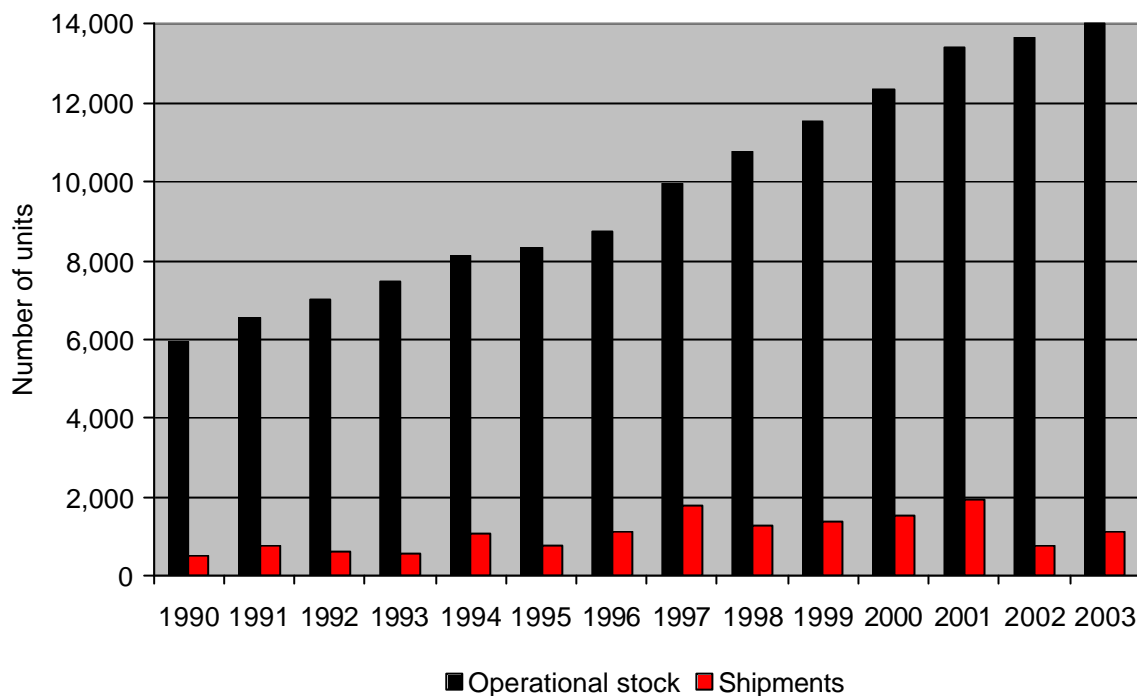
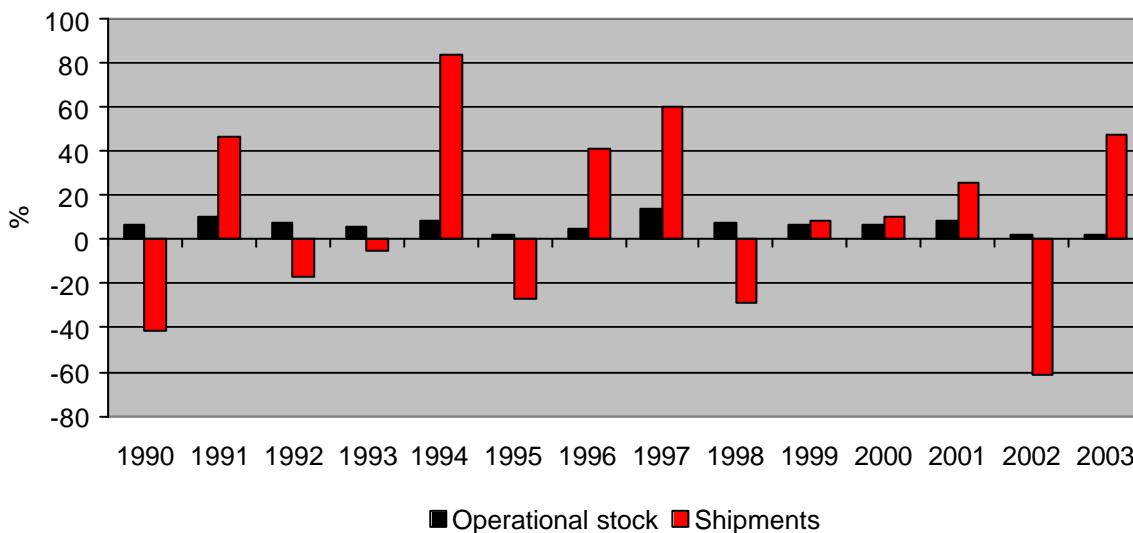


Figure 1b. Yearly percentage change in estimated operational stock and in shipments



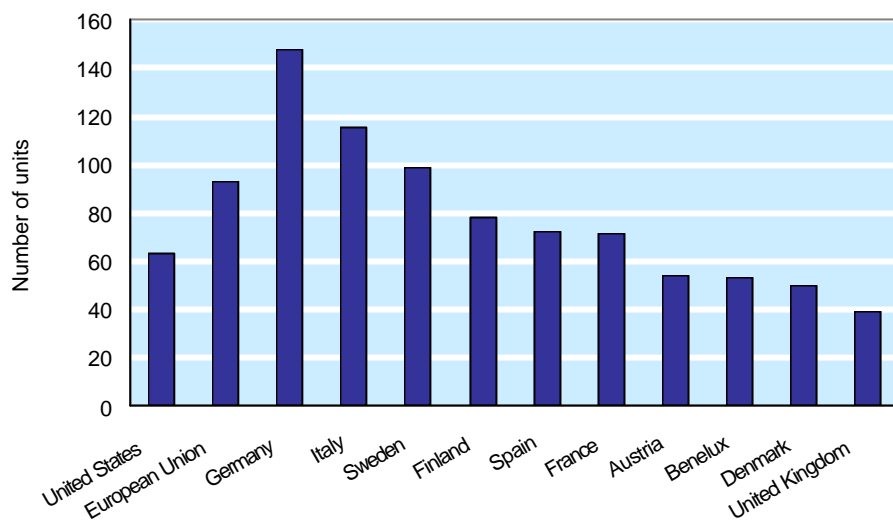
	2003
Japan a/	322
Rep. of Korea b/	138
<b>United States</b>	<b>63</b>
<b>European Union</b>	<b>93</b>
Germany	148
Italy	116
Sweden	99
Finland	78
Spain	72
France	71
Austria	54
Benelux	53
Denmark	50
United Kingdom	39
Australia	36
Norway	24
Portugal	15
Czech Rep. a/	12

Sources: UNECE and IFR.

a/ Up to and including 2000, data for Japan include all types of robots. As from 2001, data exclude dedicated robots, except for dedicated machining robots. As from 2001, Japanese statistics are therefore much more comparable with those of other countries.

b/ All types of industrial robots.

Figure 2. Number of robots per 10,000 persons employed in the manufacturing industry in 2003



	2001	2003
France	720	910
Germany	760	1,000
Italy	1,040	1,400
Japan	1,300	1,400
Spain	650	800
Sweden	560	560
United Kingdom	580	660
United States	640	740

Sources: UNECE and IFR.

Figure 3. Number of robots per 10,000 production workers in the motor vehicle industry, 2001 and 2003

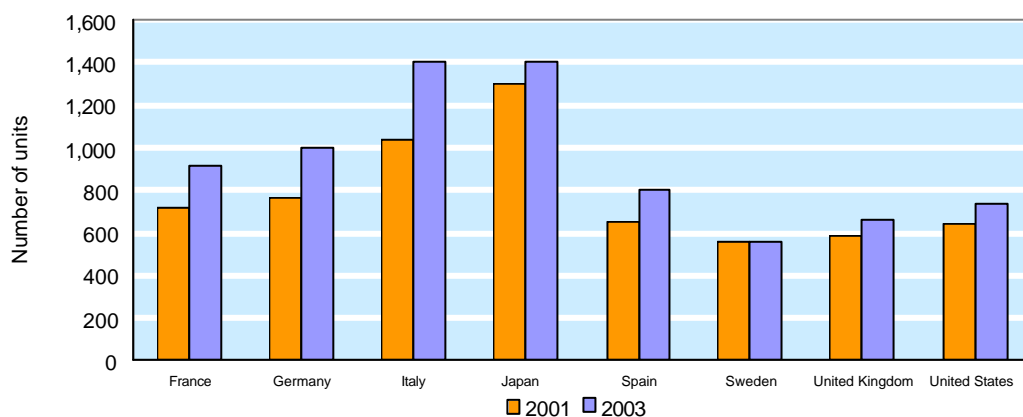
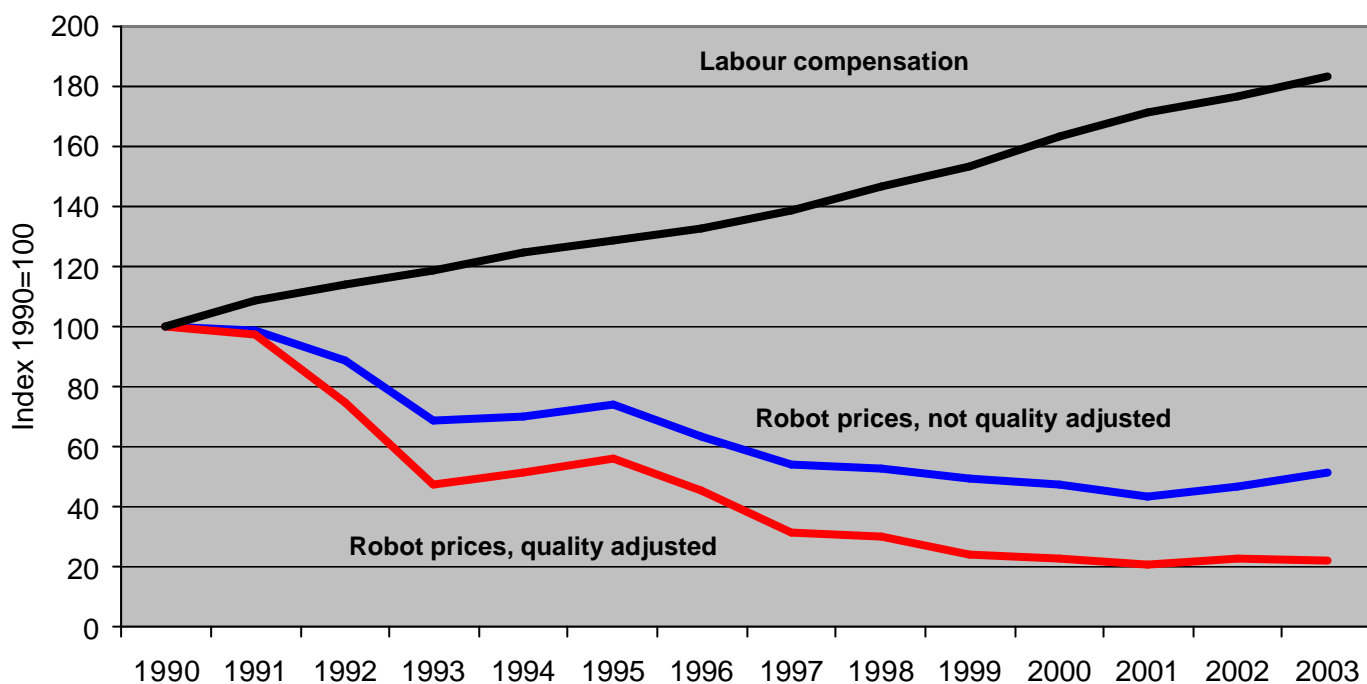
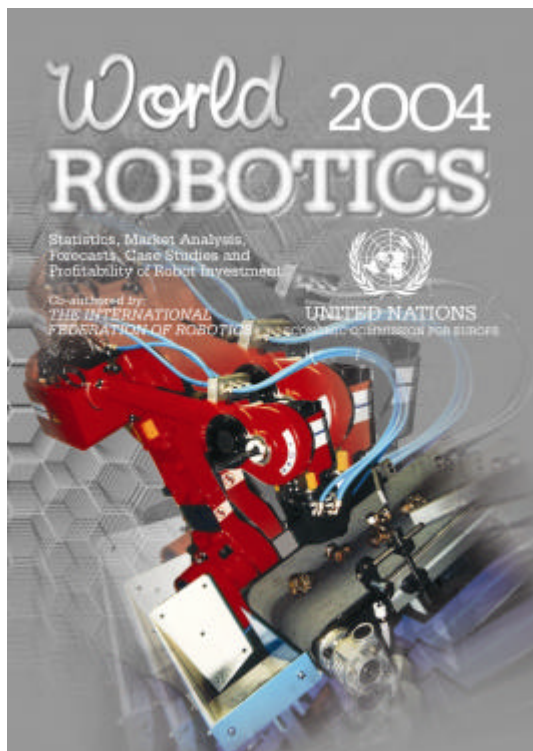


Figure 4.  
Price index of industrial robots in the United Kingdom, with and without quality  
adjustment. Index of labour compensation in the United Kingdom business sector



The publication **World Robotics 2004 – Statistics, Market Analysis, Forecasts, Case Studies and Profitability of Robot Investment** is available, quoting Sales No. GV.E.04.0.20 or ISBN No. 92-1-101084-5, through the usual United Nations sales agents in various countries or from the United Nations Office at Geneva (see address below), priced at US\$ 150:



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