

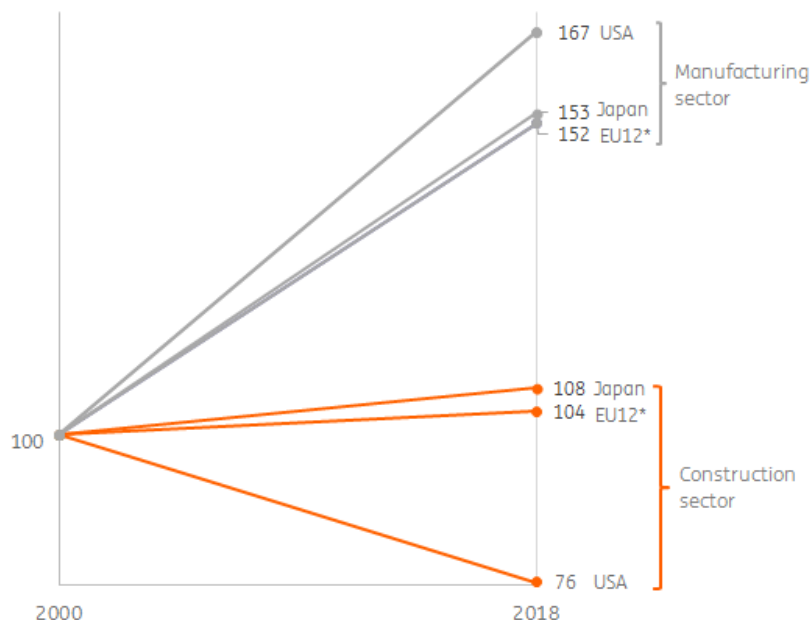
## Why construction prices are surging

Labour productivity in the construction sector is growing at a much slower rate than in other sectors such as manufacturing. As a result, higher wages and increasingly expensive materials cannot be absorbed and prices are rising fast



## Labour productivity growth in the construction sector is much slower than in manufacturing

Changes in labour productivity in terms of the added value (volume) per employee (index 2000=100)



Source: Oxford Economics & Eurostat, processed by ING Economics Department

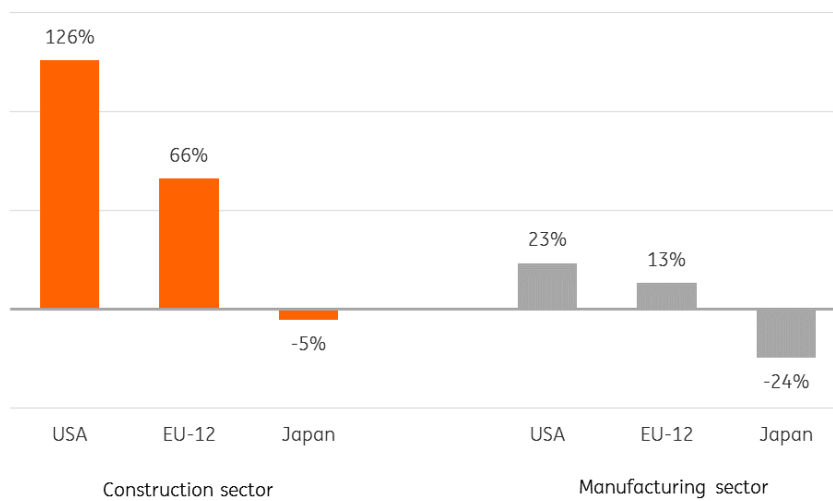
\*\*Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal & Spain

### Slower growth in labour productivity in construction sector

In recent years, labour productivity in the construction sector has grown much more slowly compared to the manufacturing sector in the US, Japan and the 12 most important countries in the European Union (the EU12). Growth in the EU12 has been just 3% since 2000, while the region's manufacturing labour productivity increased by 51% over the same period. The trend in Japan has been very similar. In the US, labour productivity in the construction sector actually decreased by almost a quarter while the country's manufacturing sector became much more efficient (with a 67% improvement).

## Big price increases in construction

Changes in output prices, 2018 compared to 2000



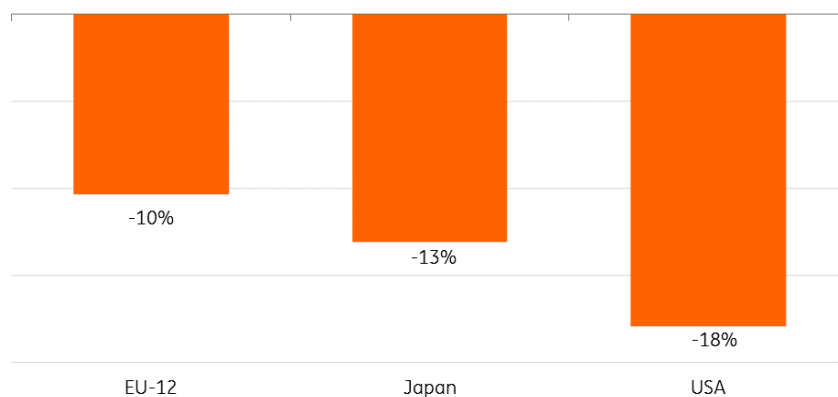
Source: Oxford Economics and Eurostat, processed by the ING Economics Department

### Big price increases in construction sector

The slow rate of productivity growth in the construction sector has given rise to significant increases in prices. For example, prices in the US construction sector have increased by 126% since 2000. In the EU12, prices in the construction sector have risen by 66%. In manufacturing, prices in both the EU12 and the US increased much less steeply, by 23% and 13%, respectively. In Japan, prices in the construction sector actually decreased, but prices in manufacturing dropped even more sharply. The slow growth in labour productivity means that increases in costs related to wages and materials cannot be sufficiently covered by simply improving efficiency. Consequently, construction firms need to increase the prices they charge to clients. In manufacturing, on the other hand, significant increases in productivity often allow companies to keep prices down. In the electronics sector, for example, products are becoming cheaper, or better quality products are being made available at the same price.

## Sharp drop in construction production in the US in particular

Volume changes in construction production (Added value, 2018 compared to 2000)



Source: Oxford Economics, processed by the ING Economics Department

## Overcapacity and reduction in investment

There has been a great decline in construction activity in many regions in the first two decades of the 21st century, and this has had a hugely negative impact on labour productivity growth in the sector. Construction activity in the EU12 in 2018 was 10% below the levels in 2000. The decline was even greater in the US, at 18%. The shrinking market has led to overcapacity in construction firms, which in turn prevents them from deploying their employees efficiently. In addition, this overcapacity and the shrinking turnover has led to the postponement or even cancellation of investments in new and more efficient production processes such as [digitisation and industrialisation](#). This is reflected in the relatively small-scale use of [robots in the construction sector](#). In European manufacturing, there are currently 160 robots in operation for every 10,000 employees compared to 1.2 robots per 10,000 employees in the European construction sector. The number of robots in use in the American and Japanese construction sectors is also relatively small.

## Need for flexibility makes innovation difficult

The shrinking construction volume is one issue hindering efficiency in the construction sector, but it is by no means the only factor. Construction personnel the world over have to work in accordance with specific building processes and the demands that these bring. Flexibility is often a requirement, and machines generally don't offer enough of that. This results in a structural slowdown in productivity growth. The following aspects are important factors in this:

- Production is tied to specific location: Every construction project is different, and the construction firms have to move all their expensive machinery to new locations for each project, requiring challenging and time-consuming transportation.
- Specifications and drawings: The design of the building is generally taken care of by architects and structural engineers rather than by the construction firms. Construction firms are therefore constructing different objects in different ways in every new project. It is almost impossible for them to standardise their working methods.
- Volatile market: Construction firms operate within a volatile market, with periods of peak activity alternating with periods of inactivity. Such conditions demand rapid scaling up and

down. This is not conducive to making big investments in efficiency-enhancing means of production.

## Author

### Maurice van Sante

Senior Economist Construction & Team Lead Sectors

[maurice.van.sante@ing.com](mailto:maurice.van.sante@ing.com)

## Disclaimer

This publication has been prepared by the Economic and Financial Analysis Division of ING Bank N.V. (“ING”) solely for information purposes without regard to any particular user's investment objectives, financial situation, or means. *ING forms part of ING Group (being for this purpose ING Group N.V. and its subsidiary and affiliated companies)*. The information in the publication is not an investment recommendation and it is not investment, legal or tax advice or an offer or solicitation to purchase or sell any financial instrument. Reasonable care has been taken to ensure that this publication is not untrue or misleading when published, but ING does not represent that it is accurate or complete. ING does not accept any liability for any direct, indirect or consequential loss arising from any use of this publication. Unless otherwise stated, any views, forecasts, or estimates are solely those of the author(s), as of the date of the publication and are subject to change without notice.

The distribution of this publication may be restricted by law or regulation in different jurisdictions and persons into whose possession this publication comes should inform themselves about, and observe, such restrictions.

Copyright and database rights protection exists in this report and it may not be reproduced, distributed or published by any person for any purpose without the prior express consent of ING. All rights are reserved. ING Bank N.V. is authorised by the Dutch Central Bank and supervised by the European Central Bank (ECB), the Dutch Central Bank (DNB) and the Dutch Authority for the Financial Markets (AFM). ING Bank N.V. is incorporated in the Netherlands (Trade Register no. 33031431 Amsterdam). In the United Kingdom this information is approved and/or communicated by ING Bank N.V., London Branch. ING Bank N.V., London Branch is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. ING Bank N.V., London branch is registered in England (Registration number BR000341) at 8-10 Moorgate, London EC2 6DA. For US Investors: Any person wishing to discuss this report or effect transactions in any security discussed herein should contact ING Financial Markets LLC, which is a member of the NYSE, FINRA and SIPC and part of ING, and which has accepted responsibility for the distribution of this report in the United States under applicable requirements.

Additional information is available on request. For more information about ING Group, please visit <http://www.ing.com>.