

Global
Construction

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**A global forecast
for the construction
industry over the
next decade to 2020**



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Published by:
Global Construction Perspectives and Oxford Economics
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www.globalconstruction2020.com

Published on 3rd March 2011

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British Library Cataloguing in Publication Data.
A catalogue record for this book is available from
the British Library.

Designed by Un.titled. Printed by C&R Printing Services.

ISBN: 978-0-9564207-9-4





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Acknowledgements

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We thank our Key Sponsor – **PwC** for their generous support.

We also thank our Sponsors – **Aedas, Royal BAM Group, Cemex, Holcim, Lafarge, Orascom Construction Industries, Rider Levett Bucknall and Saint-Gobain** for their generous support.

We thank the industry experts who have provided contributions within this report. Their contributions are acknowledged.

The team is grateful and acknowledges the support of organisations and people who have supplied material, contributed to production and provided photographs. These are credited throughout the report.



Foreword

I am delighted that **PwC** is the key sponsor of the **Global Construction 2020 Report**. The construction sector worldwide accounts for over 11% of global GDP and therefore the sector both reflects the impact of countries' economies very directly and, as we have seen through financial stimulus measures in recent years, is also an important catalyst for recovery and growth.

There are a number of well documented issues facing the global economy: the growth of the emerging markets, increasing urbanisation, changing population demographics, the challenges presented by climate change, declining infrastructure in developed economies and dealing with the legacy of the financial crisis and public sector deficits.

Whilst these issues are well known the challenge for many organisations in the construction sector is to understand how they are likely to impact construction output in key markets. This information is critical to shaping global businesses and making appropriate investment decisions, particularly around which geographies and sectors to focus on. The report is rich in content and views and I believe some of the findings are potentially surprising. The headline messages are:

- The scale of projected growth in construction output of 67% over the next decade from \$7.2trillion to \$12trillion; a growth of 5.2% per annum outpacing global GDP growth.
- The extent to which China and India power that growth, accounting for 38% of the increase.
- The forecast strong recovery in the US, with growth averaging 7.8% pa over the next five years, driven by residential and non-residential markets.
- Most developed countries, particularly those in Western Europe (average 1.7%) will register little growth, although the UK and Sweden will bounce back more strongly than elsewhere.
- Growth levels in MENA at 6% pa average and Latin America that are 5.2% pa average are lower than might have been expected, country exceptions such as Qatar, Mexico and Brazil notwithstanding.
- Infrastructure will not be the driver of growth to the extent that many expect as a result of public sector funding issues, unless greater private investment can be attracted to fill budget deficit gaps.

As the report shows, growth opportunities for many will be found outside their traditional markets; these new opportunities will bring their own risks and challenges.

Findings from our own recent global PwC survey of sector CEOs show that 35% are planning a merger or acquisition over the next 12 months and 55% are planning to enter into a new joint venture or alliance. Joint ventures and alliances are seen as the best way to capture the extensive growth opportunities that exist.

These are only a few high level observations. There is considerable excellent detail on a country by country basis which should prove very useful to governments and private sector organisations as they navigate the challenges and opportunities to profit from a potentially strong period of growth for the sector. We at PwC have a strong focus on this sector globally and are looking forward to helping governments and organisations tackle the challenges ahead

The Construction sector will be at the heart of global economic growth and has a lead role to play in ensuring that construction is cost-effective, makes best use of the world's scarce resources and builds infrastructure and communities for the 21st century.

Jonathan Hook
Global Leader, Engineering & Construction
PwC

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Aedas consistently produces innovative architectural design solutions from our 39 offices around the globe. Our active participation within international communities allows us the ability to offer an innate knowledge and understanding of local cultures and the skills to lead creative design initiatives where we can apply our international expertise to a wide range of challenges.

Our global network provides consultancy services in architecture, interior design, masterplanning, landscape, urban design and building consultancy in Asia, the Middle East, Europe and the Americas. www.aedas.com



CEMEX is a global building materials company that provides high-quality products and reliable service to customers and communities in more than 50 countries throughout the world. CEMEX has a rich history of improving the well-being of those it serves through its efforts to pursue innovative industry solutions and efficiency advancements, and to promote a sustainable future.



Lafarge is the world leader in building materials, with top-ranking positions in all of its businesses: Cement, Aggregates & Concrete and Gypsum. With more than 78,000 employees in 78 countries, Lafarge posted sales of Euros 15.9 billion in 2009.

In 2010 and for the sixth year in a row, Lafarge was listed in the 'Global 100 Most Sustainable Corporations in the World'. With the world's leading building materials research facility, Lafarge places innovation at the heart of its priorities, working for sustainable construction and architectural creativity. Additional information is available on the web site at www.lafarge.com



Rider Levett Bucknall is an independent construction and property consultancy. It employs over 2,000 people operating from more than 85 offices around the world. The firm's philosophy is to combine global best practice with local know-how, utilising the latest cost data and innovations to deliver full property solutions for clients across a number of sectors. Services provided include Cost Management, Project Management and Advisory.



Royal BAM Group nv is a successful European construction group. BAM is active in the sectors construction, property, civil engineering, public private partnerships, mechanical and electrical contracting, consultancy and engineering, and facilities management.

BAM has top market positions in the Netherlands, Belgium, the United Kingdom, Ireland and Germany. One of BAM's prominent features is its widespread regional network of offices, meaning that the company is always close to its customers. Tebodiv, the Group's consultancy and engineering company, provides services to global customers with their international operations. BAM International is currently active in the Arabian Gulf, Australia, Indonesia, South Africa, Ghana, Tanzania and Libya.



Holcim is one of the world's leading suppliers of cement and aggregates (crushed stone, gravel and sand) as well as further activities such as ready-mix concrete and asphalt including services. The Group holds majority and minority interests in around 70 countries on all continents.



Orascom Construction Industries is a leading international contractor focused on large, complex and demanding projects primarily in the power, petrochemical, transport infrastructure and water treatment sectors. It is one of Egypt's largest corporations with projects and investments across North Africa, the Middle East and Europe, offering a comprehensive range of construction services, but specifically building, civil engineering, architectural and electromechanical installation.



"Developing new materials and services for the house of the future." With a long international history, which began in France in 1665 when the Royal Glass Works was established, the Saint-Gobain group is now the world leader on habitat and construction markets, providing innovative solutions to save energy and protect the environment. In brief:

- 37.8 billion euros of sales.
- 191,500 employees.
- Presence in 64 countries.
- 14 research centres and 101 development units.
- European or world leader in all of its activities.

Contents – Global Construction



	Executive Summary	08		
	Introduction	13		
1	Global Outlook	14		
	Global Economic Outlook	16		
	Global Construction Outlook	22		
	Box: The Future of Transport Infrastructure PwC	26		
	Box: Global Mega Cities	30		
	Graham Robinson, Director, Global Construction Perspectives and Anthony Light, Senior Economist, International Cities and Regions, Oxford Economics			
2	Western Europe	34		
	United Kingdom, Germany, France, Italy, Spain, Netherlands, Belgium, Sweden and Greece.			
	Box: Impact of Eurozone crisis on construction	63		
	Doug Godden, Senior Economist, Oxford Economics			
	Box: The impact of austerity programmes in Europe on construction	64		
	Doug Godden, Senior Economist, Oxford Economics			
3	North America	66		
	United States of America and Canada.			
	Box: Global Office Market	78		
	Mike Betts, Global Construction Perspectives			
4	Asia Pacific Developed	80		
	Australia, Japan and Hong Kong.			
5	Asia Pacific – Emerging Markets	92		
	China, Singapore, India, Vietnam, Thailand, Indonesia, Philippines and South Korea.			
	Box: China's Big Nuclear Ambitions	122		
	Pinsent Masons LLP - Beijing and Hong Kong			
6	Middle East and North Africa – Emerging Markets	124		
	UAE, Saudi Arabia, Kuwait, Qatar, Egypt Morocco, Libya and Algeria.			
	Box: A Global Environmental Opportunity	146		
	Niclas Svenningsen, Head, Sustainable United Nations (SUN) – United Nations Environment Programme			
7	Sub Saharan Africa – Emerging Markets	148		
	South Africa and Nigeria.			
8	South and Central America – Emerging Markets	156		
	Brazil, Columbia, Mexico, Chile and Argentina.			
	Box: Global Sports Events	172		
	Andrew Bacchus, Head of Global Sports, UK Trade & Investment			
9	Eastern Europe, Russia, Turkey and Ukraine – Emerging Markets	176		
	Turkey, Russia, Ukraine, Poland, Czech Republic, Romania, Hungary and Bulgaria.			
10	Methodology and Interpretation	200		

Global Construction 2020 Executive Summary

Construction will outpace world GDP growth in the next decade as Asian markets continue to develop rapidly and the US registers a sharp cyclical recovery.

We expect global construction to grow by 67% from \$7.2 trillion today to \$12 trillion in 2020¹. Growth in China, India and the US will generate 54% of the \$4.8 trillion increase in global construction output.

A total of \$97.7 trillion will be spent on construction globally during the next decade and by 2020 construction will account for 13.2% of world GDP.

This resumption of growth will be marked by an acceleration of changes that were taking place before the financial crisis.

The next decade will see a continuing shift towards Asia and other emerging markets where rising populations, rapid urbanisation and strong economic growth are drivers for construction.

Meanwhile, construction in most developed countries will be constrained by large public deficits, austerity programmes, muted population growth and limited economic expansion.

China's rapidly growing construction market, boosted by stimulus spending, became the world's largest in 2010, overtaking the US.

By 2020 emerging markets will account for 55% of global construction, up from 46% today. Construction will make up 16.5% of GDP in emerging markets by 2020, up from 14.7% in 2010.

This shift is led by China and India, with strong contributions to growth from Indonesia and Russia.

US construction will stand out from most developed countries by registering a sharp cyclical rebound.

Growth in US construction will be driven by a strong upturn in residential and non residential construction. Population growth will help drive this growth along with cyclical factors.

Canada and Australia will also lead construction growth in developed countries, boosted in part by demand for natural resources. Like the US, they will benefit from population growth.

In total, China, India, the US, Indonesia, Canada, Russia and Australia will account for 65% of the growth in global construction to 2020.

Western Europe, constrained by high public deficits, static or declining populations and lower economic growth, will only register little growth over the next decade.



CITIC, TFP FARRELL ARCHITECTS and ARUP: The Z15 supertall skyscraper will be Beijing's tallest building and is part of a 30ha masterplan to redevelop Beijing's Central Business District



SILVERSTEIN PROPERTIES: World Trade Centre, Manhattan, New York City

Japan, now the world's third largest construction market, will be the slowest growing of all developed nations globally in the next decade.

By 2020, spending on construction in Japan will be 16% lower than in 2005.

Underlining the shift towards Asian developing markets, spending on construction in India will overtake Japan by 2018, when India will become the world's third largest construction market.

China and India Will Drive Emerging Markets' Growth

Expanding populations, economic activity and rapidly growing urban populations and middle classes will drive construction in emerging markets, supporting new economic growth in emerging cities.

Asian emerging markets will grow fast as lower levels of income per capita, growing populations, larger savings and strengthening cross-border trade links drive higher growth in construction.

The growth in China's spending on construction is expected to slow from the very high levels of growth in spending in the last few years, fuelled by stimulus spending.

In particular, growth in residential construction is expected to fall to under half the levels seen over the last few years, as the brakes are applied in an attempt to slow the residential asset bubble in China.

After overtaking the US as the biggest construction market in 2010, China will remain the largest construction market in the decade to 2020.

We expect China to drive growth for key Asian trading partners such as Indonesia and other regional Asian countries.

China's demand for natural resources will also boost output in commodity-rich developed countries such as Australia.

India will grow faster than China to 2015, but China's output will regain momentum later in the decade.

India's growing economy, expanding population and burgeoning mega cities will help make it the world's third largest construction market by 2018.

India's construction market will still only be a third of the size of China's in 2020.

With relatively stretched public finances, India is increasing its use of private investment in publicly funded infrastructure.

The US Will Recover Strongly

Construction in the US will rebound strongly from the downturn, led by short term double digit growth in both residential and non residential markets.

An estimated \$14.5 trillion¹ will be spent on construction in the US by 2020.

US residential construction will be boosted by growth in its 320 million population, marking the US out from many other developed countries.

Non-residential construction will rebound as the world's biggest economy picks up, helped by healthy corporate balance sheets and stronger earnings. Non-residential will be the strongest growth market in the US over the next decade.

Infrastructure has been the only growth sector in the US during the last few years, supported by a record US stimulus package. However, though US infrastructure ranks relatively poorly among developed countries, budget deficits will limit investment without increased private investment.

¹ In 2010 prices and exchange rates



BAM: Menara Palma, located on the Kuningan Avenue in the Golden Triangle, Jakarta's Central Business District, is an icon in Jakarta's skyline

Other Emerging Markets Will Outpace Developed Countries

Emerging markets outside Asia will grow less strongly but all emerging regions will outpace developing countries and several non-Asian countries will enjoy high growth.

Russia and Turkey will be construction powerhouses in Eastern Europe over the next decade as infrastructure is built linking trade between Asia and Europe.

Russia's construction growth will be more rapid than growth in GDP, as it invests in transport infrastructure and seeks to double energy output.

Russian construction will also be driven by rail, road and airport upgrades to prepare for hosting the 2014 Winter Olympics in Sochi and the 2018 FIFA World Cup.

Poland and Ukraine will invest in infrastructure before hosting the Euro 2012 soccer tournament.

Turkey's increased investment to upgrade infrastructure ahead of potential EU membership will boost construction output sharply and move it ahead of Poland as the region's second biggest market by 2020.

Construction growth in South and Central America will be more muted but infrastructure investment will drive output in Brazil in the first half of the decade as it prepares for the 2014 FIFA Soccer World Cup and the 2016 Rio Olympics.

A total of \$4.3 trillion¹ will be spent on construction across the Middle East and North Africa over the next decade, representing growth of almost 80% to 2020.

Growth in Saudi Arabia, with its young and expanding population, will increase, and expected changes to mortgage laws will help drive growth in residential construction.

With its rising population, Egypt's growth will remain strong. With large public debts, Egypt has passed a law allowing private investment in traditionally publicly funded infrastructure, but recent events may delay this development.

Qatar, Libya and Algeria will finance most construction from exporting oil and gas.

Qatar will be the fastest growing construction market covered by our report. Its planned growth will be accelerated by \$100bn of spending on rail, roads, water and other infrastructure, including preparation for hosting the 2022 FIFA World Cup.

As well as modernising and improving its infrastructure, Libya is building three new sports stadiums before it hosts the 2013 African Nations Cup, and Tripoli is a candidate to hold the 2017 Mediterranean games.

Still, construction in Middle East and North Africa is expected to be only 12% of the bigger Asian emerging markets by 2020.

In sub-Saharan Africa, Nigeria will register rapid growth from an extremely low base, where growth is driven by a young and rapidly rising population and significant infrastructure and residential needs.

South Africa will see growth in energy, new toll roads and rail infrastructure, funded by growing private investment, and its construction output will be boosted by hosting the 2017 African Nations Cup. However, growth in construction will still be well below levels seen in recent years in the build up to South Africa hosting the 2010 FIFA World Cup.



POPULOUS: London 2012 Olympic Stadium



RLB: Marina Bay Sands integrated resort in Marina Bay, Singapore

Recovery in Developed Countries Will Be Limited

The after-effects of the financial crisis, high levels of public debt, lack of demographic dynamism and austerity programmes will severely limit recovery for construction in Western European countries.

Spending cuts forced by large budget deficits will constrain public investment, which has been a driver for higher construction spending throughout Western Europe.

Deleveraging by households and the banking sector will limit economic growth and constrain the availability of private sector credit for construction projects.

Populations are stagnating and even declining in countries such as Germany, Italy and Japan. These countries also have shrinking working-age populations, which will inevitably constrain economic growth and construction output further.

Positive demographic trends in the UK and Sweden will help residential construction rebound, as credit conditions moderate. Greece will register growth, but this will in fact be a small recovery from recent economic shocks.

Infrastructure in the UK will grow by less than 10% by the end of the decade, compared with growth of almost 135% in Asian emerging markets.

Japan will return to growth, but will be the slowest growing country in our report.

Japan faces a severe combination of constraints affecting developed countries: an aging, declining population, muted economic growth and high public debt that will limit investment in its large infrastructure sector.

Infrastructure growth will be constrained in other developed countries.

Countries such as France, Germany and the Netherlands have higher quality infrastructure that does not need urgent upgrading.

For the UK, the US and others with relatively poor infrastructure, public spending constraints will limit necessary upgrades unless governments can attract private investment.

Australia and Canada stand out among developed countries, as growth is boosted by positive demographics as well as infrastructure investment driven by demand for natural resources.

Australia and Canada have been successful in attracting private financing for infrastructure development.

The combined growth in construction within Canada and Australia will almost equal growth in the entire Latin American construction market, including Mexico, Brazil, Argentina, Chile and Colombia.

Global Construction 2020 provides global and regional forecasts for infrastructure, residential and non-residential markets and analyses market dynamics in 45 key countries.

The report is an invaluable resource for senior executives and policy makers seeking to understand the challenges and opportunities in the global construction market over the next decade.

Global Construction 2020 also includes important contributions from PwC on global transport infrastructure, Pinsent Masons LLP on the nuclear energy ambitions of China, the United Nations on global environmental opportunities for construction and a contribution by UKTI on the impact of global sports events on construction around the world.

Please visit www.globalconstruction2020.com for further information on how to get the full report.

