MANUFACTURING RISK INDEX

2019

TALENT, TECHNOLOGY, THREATS:
IDENTIFYING OPPORTUNITIES
WHILE MITIGATING CHALLENGES

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CUSHMAN & WAKEFIELD

INTRODUCTION

Global manufacturing has entered a new era, marked by the growing influence of technology and innovation on production processes and logistics.

FORMERLY **LOW COST LOCATIONS** SUCH AS **CHINA** AND **INDIA**, ARE **MOVING UP THE VALUE PRODUCTION CHAIN** THROUGH COUNTRY-SPONSORED SUPPORT OF TECHNOLOGICAL ADOPTION

DESPITE HIGHER COSTS RELATIVE TO ASIA, GROWING CONCERN FOR **IP PROTECTION** COMBINED WITH **SKILLED LABOUR AVAILABILITY** IS KEEPING **NORTH AMERICA** AT THE **TOP OF THE RANKINGS**

TECHNOLOGICAL ADOPTION HERE-TO-STAY

In order to speed up technological adoption in manufacturing, a number of countries have already adopted 2025 or 2030 initiatives aimed at advancing Industry 4.0 innovations such as Big Data, the Internet of Things and 3D Printing. However, the full integration of cost and production efficiencies will take time, due to the investment required in existing plants, equipment and the training of skilled labour.

Paving the way, acquisitions and partnerships with high-tech companies and technical schools is intensifying, an approach that promises to boost the ongoing shift from labour-intensive to automated production. The increasing cost of labour in traditional industrial locations, coupled with labour shortages, are also driving change. Certain kinds of manufacturing, such as apparel, still rely heavily on labour and will therefore continue to exploit lower cost locations. However, such a strategy could be compromised, as some low cost locations may also have labour pools that lack appropriate skills.

NATIONALISM/PROTECTIONISM: THREAT TO GLOBALISATION

Recent geopolitical events suggest that rising protectionism and nationalism may be jeopardising global and regional production lines and supply chains. In Europe, as the UK extends the Brexit deadline further to October 31st, European manufacturers continue to try to formulate contingency plans for what could be a "no deal" Brexit from the EU. A number of manufacturers with pan-European production lines have already signalled that they may close their UK plants in the months leading up to the UK's departure from the EU, in order to avoid costly delays at the border.

A frictionless border is also critical to maintain food supplies, especially perishable foods, imported from the EU. Given that half of the UK's food is imported and roughly 40% of these imports come from EU negotiated trade agreements, a 'no deal' Brexit could result in an average tariff of 22% on food imports, if WTO terms are applied. Despite Brexit extensions, the discussion continues around how to handle perishable foods imported from the EU and whether or not these need to forego safety inspections to avoid delays. What is clear is that such a decision runs the risk of EU countries rejecting UK food exports, considering that this food does not meet EU safety standards.

INTRODUCTION

CHINA'S TRADE PRACTICES UNDER THE GUN

On another front, troubled trade relations between China and the US are having a global impact, albeit less so for the US. The latter's highly diversified economy and sizeable consumer market provide strong leverage at the negotiating table with China. Nevertheless, these current trade disagreements are being exacerbated by a growing desire among manufacturers and governments to protect innovation IPs in production relationships with China.

Through its foreign direct investment and acquisitions, China has successfully accessed IPs to the point that, the German, French and Italian governments have blocked attempted acquisitions by the Chinese. At the same time, European governments have been pushing for a tighter screening regime on investments emanating from outside the EU and last year the European Commission put forward a proposal to give the EU the right to supervise investments in sectors where it subsidises technology.

Moreover, IP concerns could negatively impact on foreign direct investment in Chinese manufacturing, something the Chinese are already addressing through incentives and more flexible trade agreements. With foreign manufacturers increasingly turning to lower cost Asian countries, the rate of growth in China's economy is forecast to gradually slow – with expected GDP growth of 6.8% in 2018 edging down to 6.1% for this year and 5.8% in 2020. For the time being, China remains the world's manufacturing power house but, as location priorities and concerns change, other countries (in Asia) and regions (the Americas) are becoming strong challengers.

INFRASTRUCTURE INVESTMENT STILL KEY FOR MANUFACTURERS

Navigating the world's growing number of trade barriers and conflict regions requires even greater sophistication in supply chains and infrastructure. Countries which invest in platforms that facilitate the flow of goods in to and out of production lines will remain high up in our Manufacturing Risk Index. China's seamless supply chain connections have resulted from substantial investment in infrastructure and multi-modal transport, including the New Silk Road rail and maritime projects, in addition to incentives. These factors have been key to the country achieving the top positions in all three of our MRI scenarios and have largely off-set growing concerns about IP protection.

LABOUR AVAILABILITY AS IMPORTANT AS COST

Despite higher labour costs, the US ranks at the top of both our baseline and risk sensitive scenarios, alongside China. Key factors include its investment in infrastructure, the availability of skilled labour, state-level incentives and investment in innovation and technology supported by specialised technical education.

PROTECTIONISM AND **NATIONALISM** ARE PUTTING GLOBAL AND REGIONAL SUPPLY CHAINS AT RISK

BREXIT IS A **THREAT TO EUROPEAN PRODUCTION LINES** AND THE **FREE FLOW OF GOODS** IN AND OUT OF THE UK

LOW COST LOCATIONS IN **SOUTH EAST ASIA** ARE STILL **ATTRACTIVE FOR LABOUR INTENSIVE MANUFACTURING**

BASELINE

BASELINE | COST | RISK

DESCRIPTION AND WEIGHTINGS

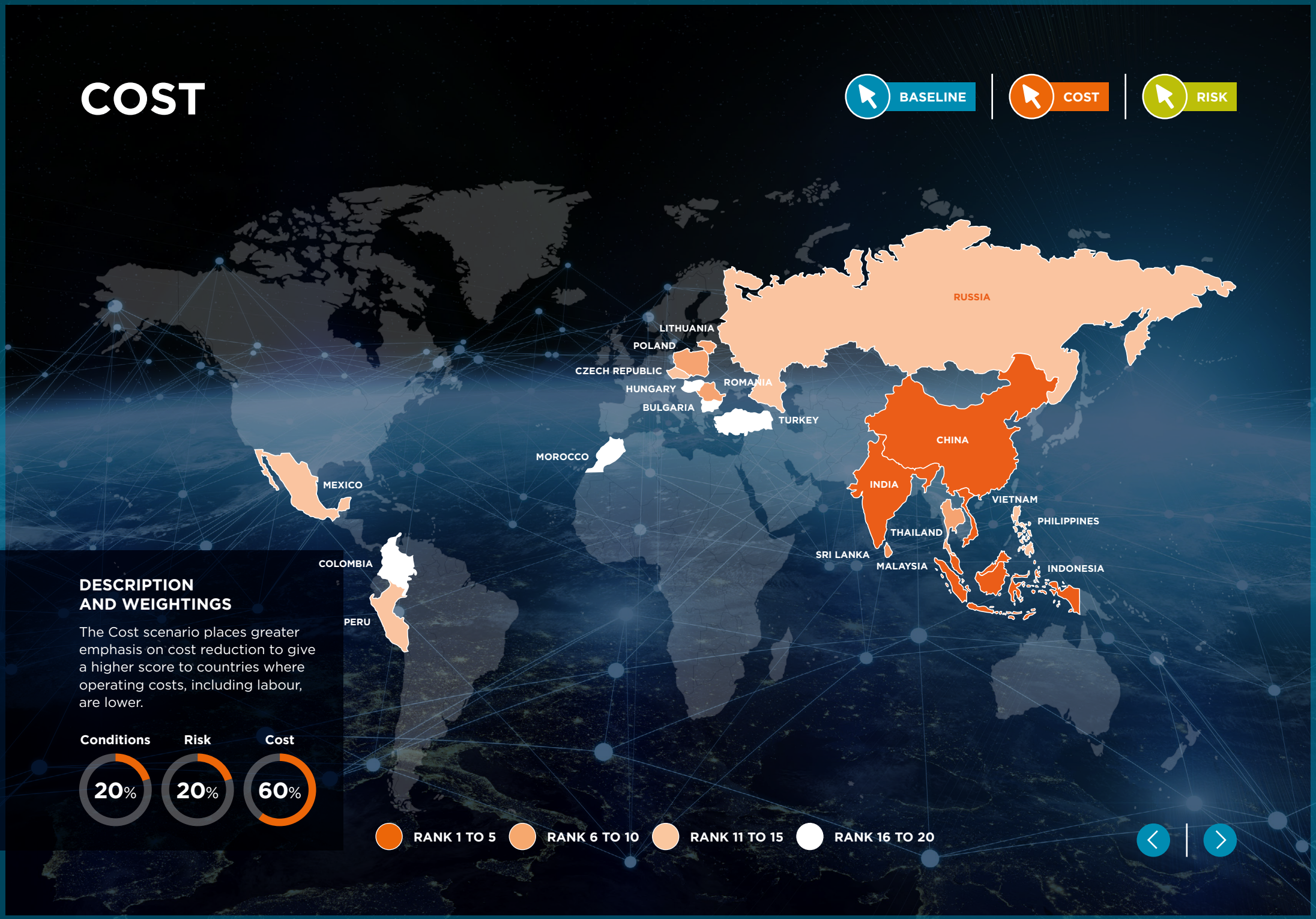
The Baseline scenario gives equal importance to a country's operating conditions and cost competitiveness.

Conditions	Risk	Cost
40%	20%	40%

RANK 1 TO 5 | RANK 6 TO 10 | RANK 11 TO 15 | RANK 16 TO 20

COST

BASELINE | COST | RISK



DESCRIPTION AND WEIGHTINGS

The Cost scenario places greater emphasis on cost reduction to give a higher score to countries where operating costs, including labour, are lower.

Conditions	Risk	Cost
20%	20%	60%

RANK 1 TO 5 | RANK 6 TO 10 | RANK 11 TO 15 | RANK 16 TO 20

RISK

BASELINE | COST | RISK

DESCRIPTION AND WEIGHTINGS

Taking into account rising geo-political risk, our Risk scenario favours countries presenting lower levels of economic and political risk.

Conditions	Risk	Cost
20%	60%	20%

RANK 1 TO 5 | RANK 6 TO 10 | RANK 11 TO 15 | RANK 16 TO 20

MRI METHODOLOGY

The Manufacturing Risk Index (MRI) assesses the most suitable locations for global manufacturing among 48 countries in EMEA, the Americas and Asia-Pacific. Each country is scored against 20 tier-2/3 variables that make up the tier-1 variables (conditions, cost and risk), whose weightings vary in the three scenarios presented in this report. The data underpinning the MRI comes from a variety of reliable sources, including the World Bank, UNCTAD and Oxford Economics. A list of the tier-2 variables is available opposite.

The broad nature of the manufacturing sector means that the importance of these key parameters will inevitably vary on an individual basis. The results contained within our ranking do not provide a definitive answer for all manufacturing companies on where their facilities should be located. They are instead intended to act as a guide as to how locations can be ranked using a given set of parameters and weightings.

CONDITIONS

TALENT/LABOUR FORCE

LOGISTICS/ACCESS TO MARKETS

BUSINESS ENVIRONMENT

SUSTAINABILITY/CORPORATE RESPONSIBILITY

RISKS

NATURAL DISASTER RISK

ECONOMIC RISK

CORPORATE RISK

ENERGY RISK

COSTS

MANUFACTURING LABOUR COSTS PER HOUR

ELECTRICITY FOR INDUSTRIAL/ HEAVY USE (PRICE PER HOUR)

CONSTRUCTION BUILDING COSTS

REGISTERING PROPERTY COST (% OF INCOME PER CAPITA)

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