



The Great Supply Chain Migration – Breaking Down the Cost of Doing Business in Asia

An analysis into location selection for manufacturing

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About TMX

TMX is Asia-Pacific's leading business transformation consultancy. While others plan for the future, we invent it – creating the digital and supply chain solutions of tomorrow to make you go further, faster.

We take the time to understand your business then help you implement cutting edge solutions that revolutionise how you work, transforming the journey from source to end customer. Our specialist team brings deep industry experience to optimise the entire value chain, from top-of-the-funnel demand generation right through to final fulfilment. Powered by our integrated property, project and program management services, we implement practical and efficient solutions that deliver tangible improvement.

Whether you need a seamless end-to-end solution or expert advice about one step in the process, TMX future-proofs your business to succeed in a fast changing world.

This report is authored by **TMX's Megan Benger, Director – Supply Chain** and **Rebecca An, Supply Chain consultant**, based in Vietnam.



Megan Benger
Director – Supply Chain, TMX

Megan is a supply chain specialist with over 20 years of industry experience. She has successfully designed and implemented supply chain solutions for many leading organisations in Australia and Asia. She has led teams responsible for all aspects of distribution centres and transport solution design.

Megan joined TMX after a long history working for major third-party logistics providers. For the last 10 years, she has lived and worked in 5 cities across Asia. Her focus has been on developing solution design capability in these emerging markets.



Rebecca An
Supply Chain Consultant, TMX

Rebecca recently joined TMX as supply chain consultant. Before TMX, Rebecca worked in a number of consultancy companies, providing market intelligence to help her clients with their strategies of market entrance and market expansion in Asian countries. Rebecca's strength is her sharp analytical mind and thorough research methodology.



Foreword

2021 has been an interesting year to say the least, with unusual shifts in the global business landscape.

Globally, countries are beginning to emerge from lockdowns and the life-changing aftermath of the COVID-19 pandemic. At the same time, the pandemic has shone the spotlight on the world's climate crisis and the growing importance of sustainability for businesses and individuals alike.

Topping off these demanding developments, global supply chains are going through a crunch. Against a backdrop of rising reliance on global supply chains, delays are compounded by the impact of bottlenecks at shipping ports, and reduced manpower amid increasing consumer demands – as attested to by the new Singles Day 2021 sales record set by Alibaba and JD at US\$139 billion.

In the face of the many challenges that 2021 have brought, we are also starting to see opportunities emerge. Even before recent events, businesses have commenced efforts to expand their supply chains in a bid to reduce complete reliance on China as a manufacturing base. Expedited by both the pandemic as well as sluggish progress in trade tensions between China and the United States, business leaders have further increased their focus on mitigating risks. Consequently, many are turning to a China Plus One strategy to diversify manufacturing locations or looking to expand operations into new markets in Asia.

However, deciding where to establish a manufacturing outpost in Asia is a challenging and complex process. In our consulting work, the clients we speak to are aware of the potential locations for consideration. The challenge lies in quantifying and qualifying the pros and cons a location offers over another.

Undoubtedly, each market offers different advantages, but also brings distinct challenges and limitations. Without a presence in these markets, vast amounts of online information – sometimes conflicting – may not be enough to make informed decisions around expansion and diversification.

Drawing on our experience in the region, we have produced this analysis to provide a comparative view of the costs and conditions for doing business in various countries across Asia. Through in-depth quantitative research and our unique perspective as Asia-Pacific's leading business transformation consultancy, we seek to provide acute insights.

We hope that the report will be useful for companies in its location considerations as we work together to invent the future.

Introduction

Asia represents about 60% of the world population with over 4.5 billion people, offering an immense opportunity to tap on for labour resources and market size. However, Asia is a highly diverse region with each country at a different stage of economic development, bringing its own set of advantages and limitations.

For companies trying to answer the question of where to base manufacturing sites, this analysis provides an overview of the key criteria to consider and a relative ranking of the potential locations.

This report looks at nine countries in Asia, namely Cambodia, India, Indonesia, Malaysia, Myanmar, The Philippines, Singapore, Thailand, and Vietnam. TMX conducted a comparative analysis of the nine countries using a variety of cost and condition indicators. The study considers the following cost components:



Labour



Lease



Logistics



Utilities



Telecommunications

Using data compiled on each factor directly or through a proxy to calculate the costs, evaluation was then carried out using a standardised operational scenario summarised below.

Cost Components				
Labour	Lease	Logistics	Utilities	Telecommunications
Assumption				
207 headcount	20,000 m2 warehouse rental size	14 40ft shipping containers to major markets: <ul style="list-style-type: none"> • USA (Los Angeles) • Europe (Rotterdam) • China (Shanghai) • Japan • United Arab Emirates • Australia • New Zealand 	Electricity consumption: 400,000 kWh per month Water usage: 1000 m3 per month	Land lines, cell phone & internet

Beyond the direct costs involved, it is essential to also consider qualitative factors in the strategic decision-making process. This is particularly crucial given the diverse culture and differing circumstances of each country. Therefore, this report also investigates the competitiveness of each country based on the following:

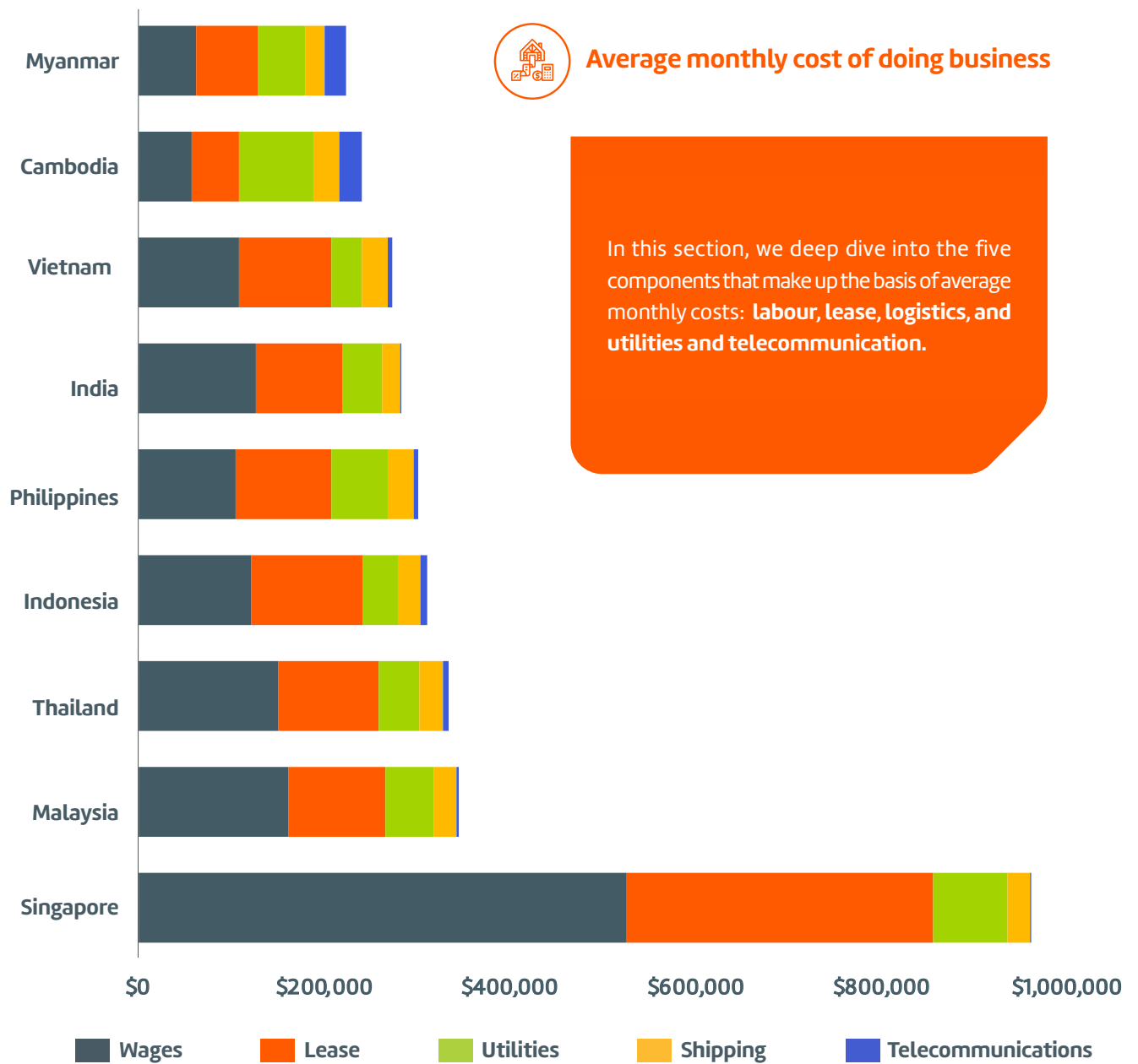
- **Business environment**
- **Availability of labour and talent quality**
- **Logistics performance**
- **Readiness for manufacturing digitalisation**

Overall, this report is designed to serve as a guide to understanding the key drivers of differences across markets in Asia and the cost vs condition balance in each country.



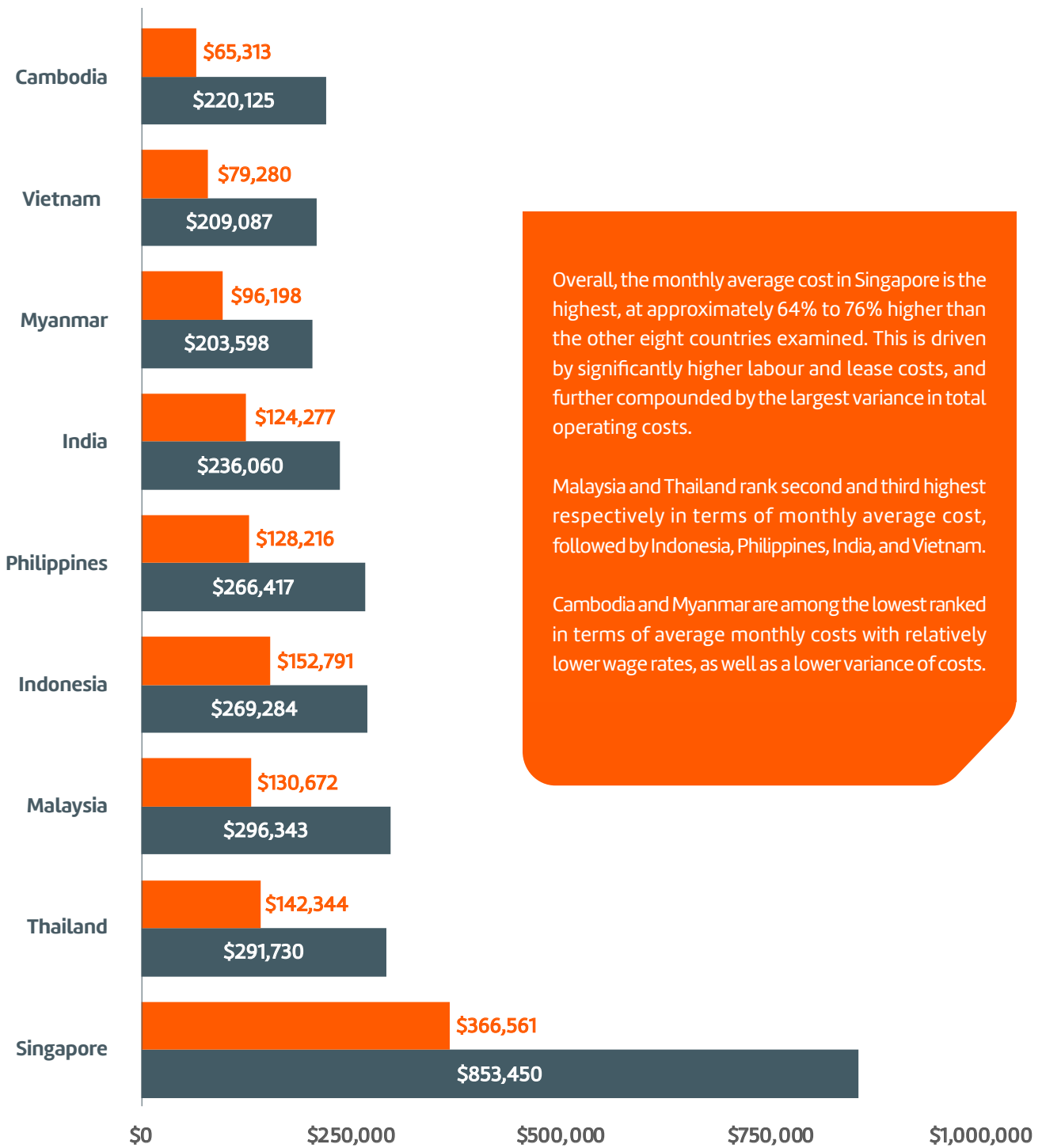
Operating costs

Overview





Total operating costs minimum and maximum in US \$/month



Overall, the monthly average cost in Singapore is the highest, at approximately 64% to 76% higher than the other eight countries examined. This is driven by significantly higher labour and lease costs, and further compounded by the largest variance in total operating costs.

Malaysia and Thailand rank second and third highest respectively in terms of monthly average cost, followed by Indonesia, Philippines, India, and Vietnam.

Cambodia and Myanmar are among the lowest ranked in terms of average monthly costs with relatively lower wage rates, as well as a lower variance of costs.

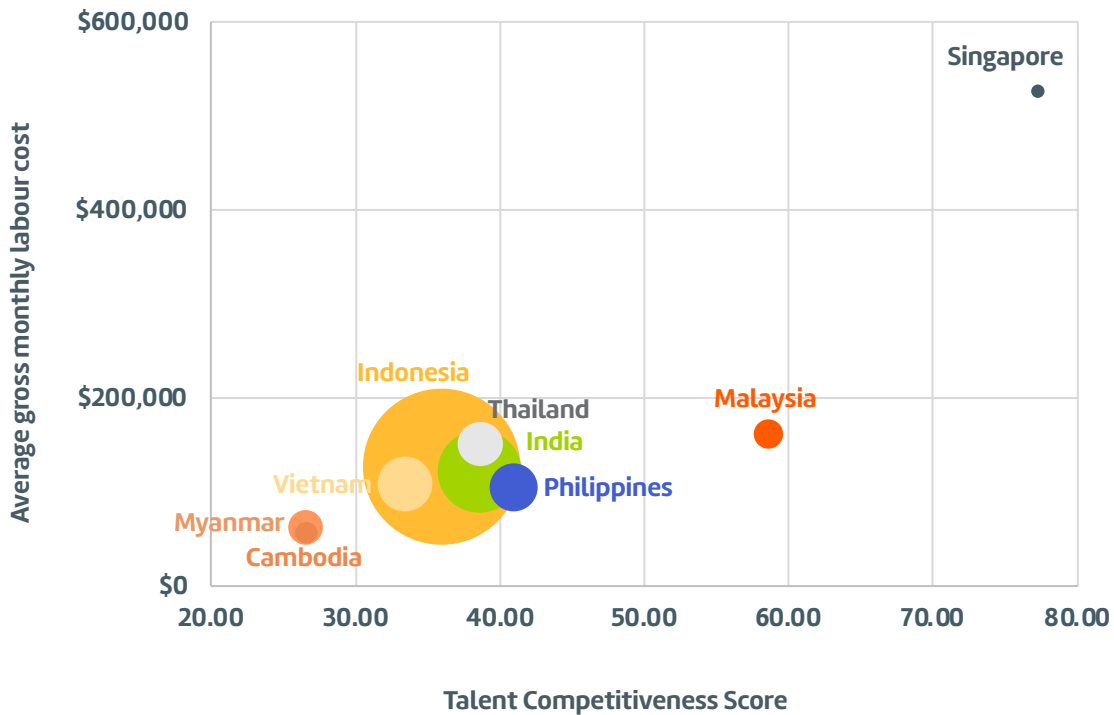


Labour

Of the nine countries examined, labour is the major component of total costs, except in Myanmar. Aside from the cost, the size of the labour force and talent competitiveness were also evaluated.



Labour assessment



Key:

Size of bubble represents relative size of labour force

Talent competitiveness score measures talent competitiveness and size of labour force.

Singapore has by far the highest labour cost – over double the next ranking country, Malaysia. However, Singapore also outperforms the other eight countries in terms of talent competitiveness. In fact, it ranked third globally in the latest Global Talent Competitiveness Ranking with a score of 77.3.

Malaysia ranks second in terms of cost, as well as talent competitiveness with a score of 58.6. The nation has shown great improvement in talent competitiveness due to its constant efforts in developing digital and tech talent, as well as upskilling the nation’s next-generation workforce.

Thailand, the Philippines, Indonesia, India, and Vietnam offer a sizable and relatively affordable pool of labour. These countries often offer abundant employment opportunities but fewer highly skilled talent in many sectors with talent competitiveness scores ranging between 40.9 and 33.4.

Cambodia and Myanmar have the lowest cost of labour, though they stand relatively low in talent competitiveness. A large percentage of the labour force remains low-skilled, which may be more suited for basic assembly lines.

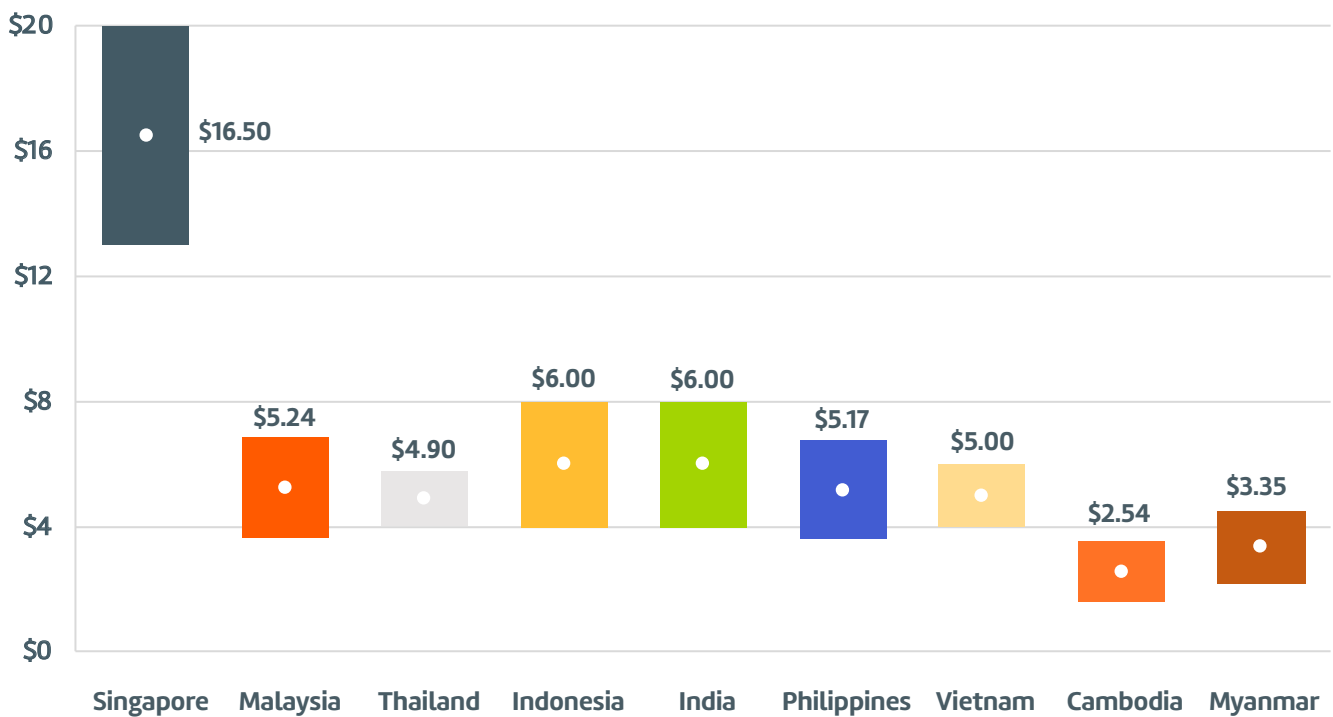
Lease

Leasing costs make up the second largest component of total costs. This factor is greatly determined by the amount of land space available in the country and the corresponding demand levels.

Despite the pandemic's impact on supply and demand for real estate across Asia, rental rates for prime warehouses across the nine countries remained flat. This attests to the relative resilience of the sector, which is driven by the wave of investors shifting from China to Southeast Asian countries and the growth of the ecommerce sector.



Warehouse rental rate (US\$/sqm/mo)



Expectedly, Singapore has the highest leasing cost among the nine countries. The average warehouse rental rate is approximately US\$16.5 per square metre per month.

This is followed by India and Indonesia, which costs around US\$6 per square metre per month, and Malaysia, Philippines, Vietnam, and Thailand, which range about US\$5 per square metre per month.

Myanmar and Cambodia offer the most affordable warehouse rental rates at US\$3.4 and US\$2.5 per square metre per month respectively.

Logistics

Given the complexity in measuring logistics costs, the analysis focused on the cost of international shipping from each country to main export markets across the globe. These are:

- **United State of America (Los Angeles)**
- **Europe (Rotterdam)**
- **China (Shanghai)**
- **Japan**
- **United Arab Emirates**
- **Australia; and**
- **New Zealand**

Countries were then evaluated using two factors, logistics cost per month of international shipping and its logistics performance score. The logistics performance score is computed using:

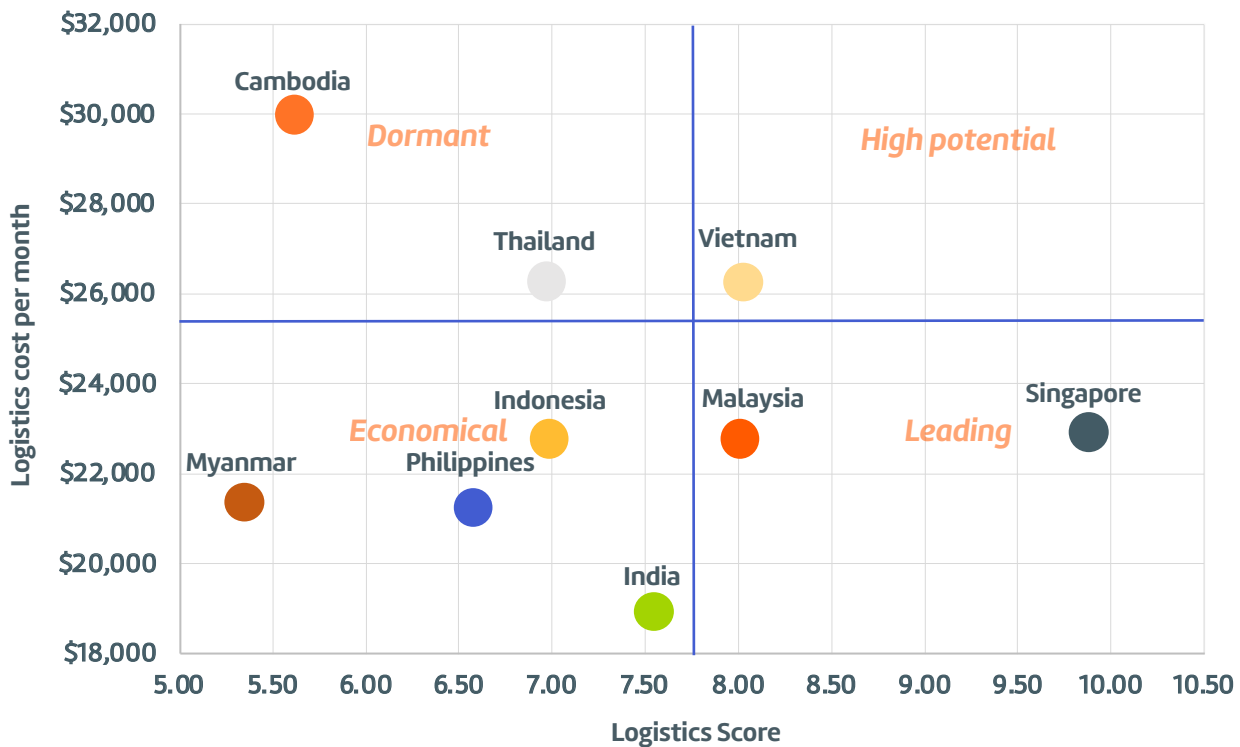
- **Logistics quality and competence**
- **Efficiency in customs clearance**
- **Time efficiency for international shipment from each country to the main export markets in the world;**
- **Shipping connectivity and routing efficiency**

Based on the evaluation, four different groups were identified.





Benchmark logistics (international trade only)



Market-leading:

These countries offered low logistics cost per month and great logistics performance. Naturally, Singapore, which is recognised as Asia's top logistics hub, falls in this category, as does Malaysia.

High potential:

Countries in this category have a relatively higher logistics cost but are able to extend good logistics performance – equal to that of countries categorised as leading. Vietnam falls in this category.

Economical:

Countries categorised as “economical” are able to provide low logistics costs. However, such countries also require logistics improvement as they fare relatively poorly on logistics performance. India, Indonesia, the Philippines, and Myanmar are considered economical, with India being the most cost-efficient of the four.

Dormant:

Dormant countries are deemed relatively costly and less skilful in terms of logistics performance. Cambodia and Thailand fall under this category and have potential to improve in terms of cost and performance.

Utilities and Telecommunications

Utilities and telecommunication costs contributes approximately 16 per cent of the total cost in most countries. This consists of electricity consumption, water usage, land lines, cell phone and internet costs.

Overall, electricity forms the largest proportion of costs among these components. Cambodia has the most expensive electricity rates while Vietnam's electricity rates are the most affordable.

As for telecommunication costs, the more developed the countries are, the lower the telecommunication costs. As a result, Myanmar and Cambodia have the highest internet costs while Singapore and India provide the most affordable rates.

Beyond costs – Qualitative assessment

Aside from the direct operating costs, it is essential to look at qualitative factors for a complete perspective on the optimal country of choice. As such, the countries are also assessed based on a competitiveness score that is computed from four key metrics:

1. Business environment

Measures ease of doing business and average levels of economic growth

2. Talent performance

Size of labour force and competitiveness of labour

3. Logistics performance

Measure logistics competence, customs efficiency, timeliness, and shipping connectivity

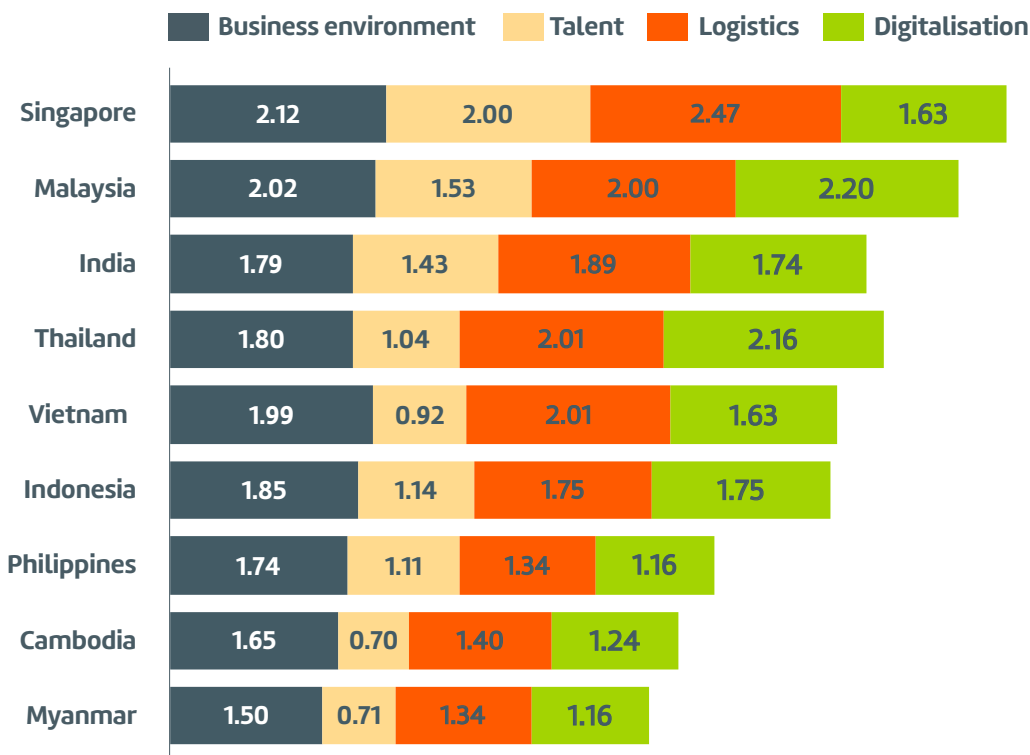
4. Readiness for digitalisation

Evaluates manufacturing capacity and readiness for digital transformation

The overall country competitiveness score represents the weighted average of each scores from the four metrics outlined above.



Country competitiveness scorecard





Singapore earned the highest scores, ahead of second-ranked Malaysia in most aspects.

They were followed by India, Thailand, Vietnam, and Indonesia. With an insignificant difference in scores, these four countries are on relatively equal footing, each with its own advantages and disadvantages.

Thailand scored high in digitalisation and business environment as it is driven by good fundamentals in production scale and ease of doing business. On the other hand, India obtained a higher score in talent on account of its large base of higher skilled work force, owing to its efforts in developing its role as a talent hub.

Driven by positive economic growth, Vietnam has a better score in business environment. However, with a lower talent score, it indicates challenges for companies looking to find ready talent. Such businesses may consider investment in training and development.

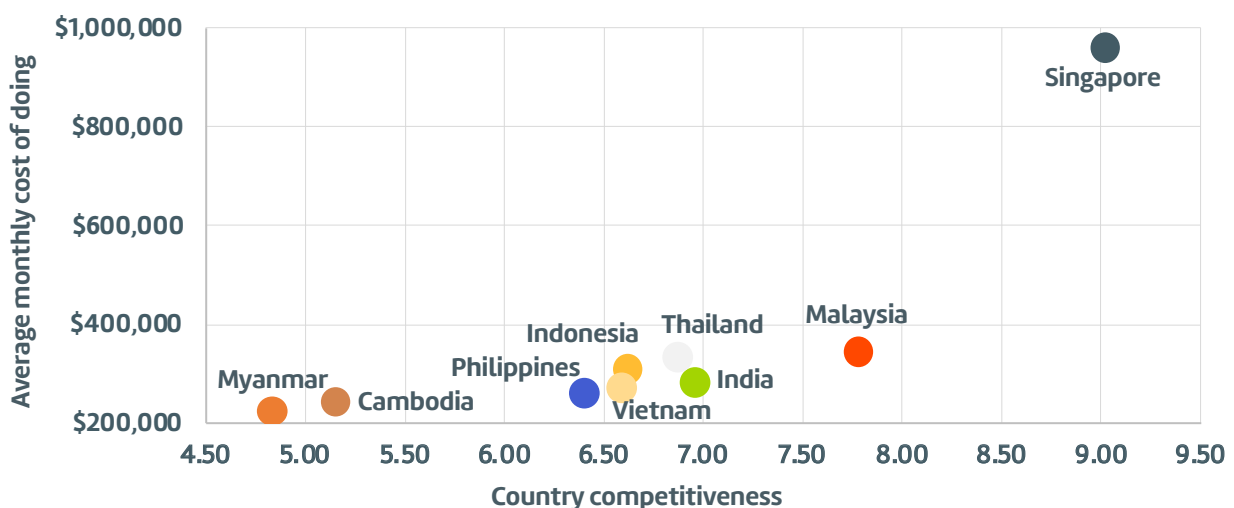
Indonesia is in a relatively better position to prepare for manufacturing digitalization. The growth of technology firms in Indonesia in recent years has put them ahead of countries like Vietnam in terms of readiness to adopt higher levels of digitalisation.

Lastly, Cambodia and Myanmar are lagging their peers in the region. The risk level in Myanmar has increased significantly since the beginning of 2021. Political instability has resulted in violence and the economy has stalled because of the ongoing situation. Limited physical infrastructure and the military regime's suspensions of internet and other telecommunications services have hindered commercial activities and business operations.

The prolonged fight against COVID-19 has inflicted a hefty economic toll on Myanmar. Lockdown measures, travel restrictions, bureaucratic impediments and political insecurity have all resulted in rising food prices, job losses, currency depreciation and businesses leaving Myanmar. It may take some time for Myanmar's economy to recover with COVID-19 cases still on the rise.

Considerations

Manufacturing value chain



Overall, considering both the average costs of doing business and the country competitiveness scores, we see that Singapore is undoubtedly the most expensive, but also the most competitive manufacturing location among the nine countries. This is driven by the highest score in ease of doing business, availability of skilled talent, efficient logistics systems, and its role as an early adopter of manufacturing digitalisation. On the other hand, Cambodia and Myanmar are at the bottom of the value chain.

So, what does this mean for businesses?

Firstly, Singapore is an obvious choice for companies with higher-value-added manufacturing with very complex processes and automation requirements.

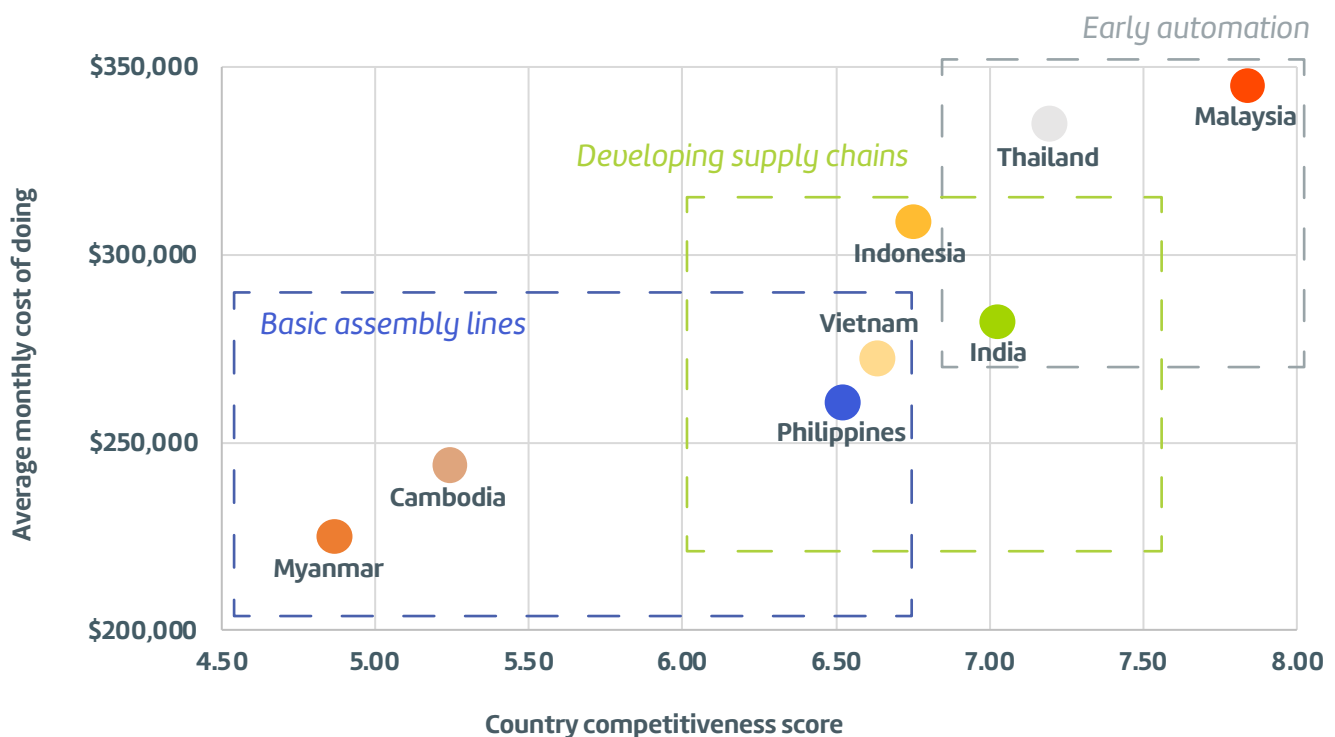
Next, based on the findings of the remaining eight countries, TMX identified the relationship between cost and competitiveness to develop a proxy that can be used to verify the stage of their respective manufacturing value chains.

The proxy of the value chain intends to reflect the manufacturing complexity of each country since each country is at a different stage of the value chain. One country can fall into one or two stages in the value chain.

The three stages are:

1. **Basic assembly lines**
2. **Developing supply chains**
3. **Early automation**

Manufacturing value chain



Cambodia and Myanmar are categorised under the “basic assembly lines” stage and would be suitable for manufacturing operations in sectors such as textile and garments, footwear, and resource-based processing. Though less competitive, these two countries also offer the lowest costs.

Philippines, Indonesia, and Vietnam are counted to be in both the “basic assembly line” and “developing supply chains” stages. Beyond basic assembly lines, these countries can serve the somewhat more complex supply chains of the automotive, auto parts, and electronics sectors. Hence, they offer a good match for manufacturing companies that do not require extensive manufacturing sophistication or highly skilled labour, with room for future development.

Lastly, Thailand, Malaysia and India are at the stage of “early automation”. These countries are already investing more in smart manufacturing and innovation, accelerating the integration of new technology. These countries would be a good pick for businesses that are on the same trajectory.

For businesses trying to decide where in Asia to base manufacturing sites, the critical next step would be to first evaluate the business needs and objectives to best ascertain the optimal choice. Understanding these will be key in helping businesses navigate the disparities in costs and conditions of the different countries in Asia, and making a decision that will benefit the business.

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Get in touch with TMX's experts in Asia today to discuss how to make the most of these distinct, booming markets.

For more information, contact us.

enquiries@tmx.global

+65 3159 4104