

## How might Changes in Global Industrial Policies affect Singapore’s Economy?

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### Executive Summary

Global industrial policy<sup>1</sup> has reemerged amid greater geopolitical disintegration. As national security and economics converge, states intervene in strategically-important industries to insure against external threats. Industrial policies include export-oriented industrialisation<sup>2</sup>, import substitution industrialisation<sup>3</sup>, technology-focused industrial policies<sup>4</sup>, and green industrial policies<sup>5</sup>, and include demand<sup>6</sup>- and supply-side<sup>7</sup> policies.

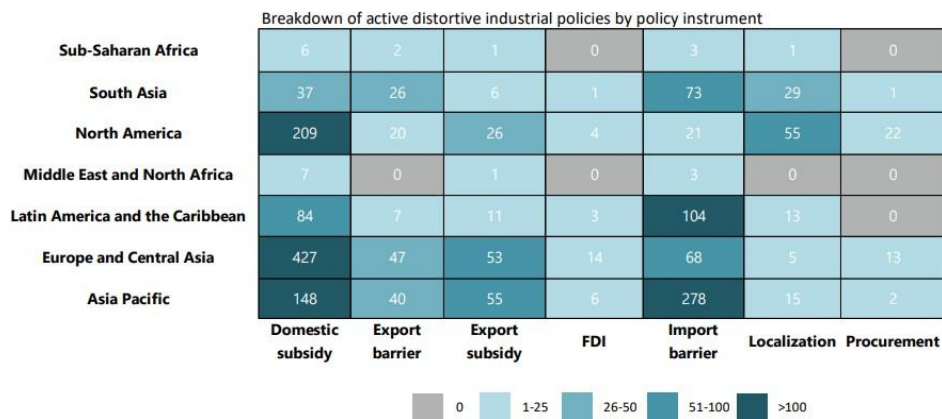


Figure 1: Table detailing the number of new industrial policies by region and policy instrument.

Source: International Monetary Fund (IMF) (2024).

<p><b>Export barriers</b></p> <ol style="list-style-type: none"> <li>1. Export ban</li> <li>2. Export licensing requirement</li> <li>3. Export quota</li> <li>4. Export tariff quota</li> <li>5. Export tax</li> <li>6. Local supply requirement for exports</li> <li>7. Export-related non-tariff measure, nes<sup>18</sup></li> </ol>	<p><b>Import barriers</b></p> <ol style="list-style-type: none"> <li>1. Anti-dumping</li> <li>2. Anti-subsidy</li> <li>3. Import ban</li> <li>4. Import licensing requirement</li> <li>5. Import monitoring</li> <li>6. Import quota</li> <li>7. Import tariff</li> <li>8. Import tariff quota</li> <li>9. Internal taxation of imports</li> <li>10. Import-related non-tariff measure, nes</li> </ol>
<p><b>Domestic subsidies</b></p> <ol style="list-style-type: none"> <li>1. Capital injection and equity stakes (including bailouts)</li> <li>2. Financial grant</li> <li>3. In-kind grant</li> <li>4. Tax or social insurance relief</li> <li>5. Production subsidy</li> <li>6. Interest payment subsidy</li> <li>7. Loan guarantee</li> <li>8. Import incentive</li> <li>9. Price stabilization</li> <li>10. State loan</li> <li>11. State aid, nes</li> <li>12. State aid, unspecified</li> </ol>	<p><b>Export incentives</b></p> <ol style="list-style-type: none"> <li>1. Trade finance</li> <li>2. Export subsidy</li> <li>3. Tax-based export incentive</li> <li>4. Financial assistance in foreign market</li> <li>5. Other export incentive</li> </ol>
<p><b>Foreign Direct Investment measures</b></p> <ol style="list-style-type: none"> <li>1. FDI: Entry and ownership rule</li> <li>2. FDI: Financial incentive</li> <li>3. FDI: Treatment and operations, nes</li> </ol>	<p><b>Public procurement measures</b></p> <ol style="list-style-type: none"> <li>1. Public procurement access</li> <li>2. Public procurement, nes</li> </ol>
<p><b>Localization content measures</b></p> <ol style="list-style-type: none"> <li>1. Local content incentive</li> <li>2. Local content requirement</li> <li>3. Local operations incentive</li> <li>4. Local operations requirement</li> <li>5. Local value added incentive</li> <li>6. Public procurement localization</li> <li>7. Localization, nes</li> </ol>	<p><b>Others</b></p> <ol style="list-style-type: none"> <li>1. Anti-circumvention</li> <li>2. Control on personal transactions</li> <li>3. Controls on commercial transactions and investment instruments</li> <li>4. Controls on credit operations</li> <li>5. Foreign customer limit</li> <li>6. Intellectual property protection</li> <li>7. Labor market access</li> <li>8. Post-migration treatment</li> <li>9. Repatriation &amp; surrender requirements</li> <li>10. Special safeguard</li> <li>11. Trade payment measure</li> <li>12. Instrument unclear</li> </ol>

Figure 2: Taxonomy of industrial policy instruments. Source: IMF (2024).

In a post-globalization world, Singapore must anticipate and insulate itself against external threats, remain a hub for commerce, investment, and innovation, and entrench itself in global and regional value chains (GVCs and RVCs).

**Section 1** outlines economic disruptions Singapore will face.

Increasing barriers-to-trade will disrupt Singapore's cyclical and trade-dependent economy and create GVC disruptions that stoke material shortages and inflationary pressures. Meanwhile, protectionism throttles the international flow of capital, labour, and entrepreneurs, shackling Singapore's ability to retain and attract foreign factors of production.

**Section 2** outlines policy responses to cushion Singapore's economy from exogenous disruptions, and areas-of-improvement and growth opportunities to manage.

To strengthen its economic resilience, Singapore can diversify its economic drivers. Specifically, green finance and regional business intermediation are promising and future-proof opportunities that Singapore can monetise. Green finance encompasses environmental, social, and governance<sup>8</sup> (ESG) investment funds, green bonds, and carbon credits, while regional business settlement involves supporting RVCs within Southeast Asia (SEA) and providing SEA businesses with administrative services. These complement Singapore's existing expertise in finance, logistics, and administration.

Singapore should also utilise trade agreements and strategic investments with overseas partners to secure its supply of resources and weather GVC disruptions.

To retain and attract foreign direct investment (FDI), Singapore can bolster tax- and non-tax business incentives.

Finally, Singapore must address structural factors that undermine its economic development and global

competitiveness: labour productivity issues, the underperformance of local enterprise, and weak innovative capacity<sup>9</sup>.

Overall, Singapore must establish economic resiliency to absorb volatility and leverage new opportunities to adapt and remain relevant.

Section 1: **Key Threats to Singapore’s Economy**

1.1 : Global Trade Fragmentation and Supply Chain Reconfiguration

Singapore is among the most trade-dependent economies<sup>10</sup> due to its hubstatus<sup>11</sup> and export dependence<sup>12</sup>, exposing Singapore to trade disruptions.

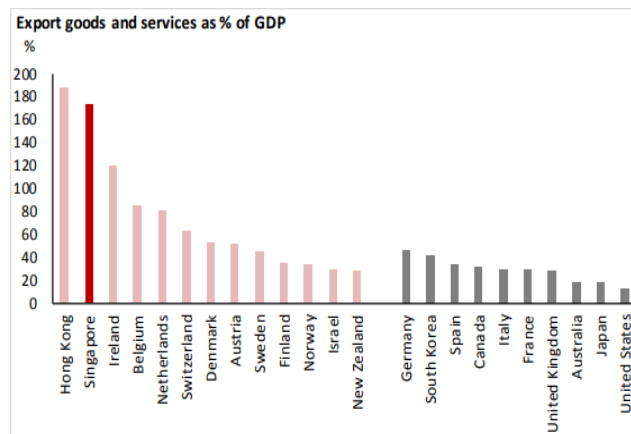


Figure 3: Export goods and services as a % of Gross Domestic Product (GDP). Source: World Bank.

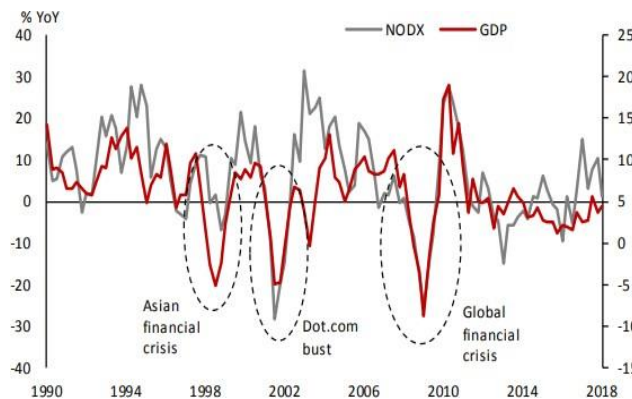


Figure 4: Singapore’s GDP and Non-Oil Domestic Exports (NODX). Source: Singapore Department of Statistics.

Geopolitical concerns prompt trade protectionism as countries ‘reshore<sup>13</sup>’ and ‘friendshore<sup>14</sup>’, unwinding GVCs and disrupting trade flows. This undermines Singapore’s economic growth, particularly in trade-dependent sectors<sup>15</sup>.

Additionally, as a resource-scarce and import-dependent economy, GVC disturbances like supply-side disruptions impact Singapore disproportionately<sup>16</sup> and stoke domestic inflation<sup>17</sup>.

	New Normal GDP	Income Changes from Baseline (\$ billion)			% Changes from Baseline		
		Reshoring	Near-shoring	Friend-shoring	Reshoring	Near-shoring	Friend-shoring
New Zealand	280	0	-7	-1	-0.1	-2.5	-0.5
Philippines	731	-7	-31	-2	-1.0	-4.3	-0.3
Singapore	518	-20	-43	-14	-3.9	-8.3	-2.7
Republic of Korea	2,127	-27	-66	-46	-1.3	-3.1	-2.2
Thailand	742	-13	-60	-11	-1.7	-8.1	-1.5
Taipei, China	717	-13	-17	-3	-1.8	-2.4	-0.5
Viet Nam	459	-25	-44	-12	-5.4	-9.7	-2.6
ASEAN nes	215	-3	-11	-2	-1.3	-5.2	-1.0
Asia nes	1,487	-5	-40	-9	-0.3	-2.7	-0.6
<b>Other Regions</b>	<b>40,166</b>	<b>-320</b>	<b>-311</b>	<b>-103</b>	<b>-0.8</b>	<b>-0.8</b>	<b>-0.3</b>
Africa nes	3,541	-33	-127	-32	-0.9	-3.6	-0.9
Europe nes	21,999	-61	10	10	-0.3	0.0	0.0
United Kingdom	3,962	-61	11	13	-1.5	0.3	0.3
Middle East, North Africa	7,432	-84	-46	-54	-1.1	-0.6	-0.7
Russian Federation	1,987	-51	-13	-24	-2.6	-3.1	-1.2
Rest of World	1,246	-30	-86	-16	-2.4	-6.9	-1.3
<b>World</b>	<b>126,252</b>	<b>-1,089</b>	<b>-1,548</b>	<b>-793</b>	<b>-0.9</b>	<b>-1.2</b>	<b>-0.6</b>

Figure 5: Simulation of the impact of 3 scenarios of industrial policy (reshoring, nearshoring, friendshoring) on Singapore’s GDP compared to other countries (in billions). Singapore is more impacted (as a % of GDP) by geopolitical disturbances than the average country. Source: Asian Development Bank.

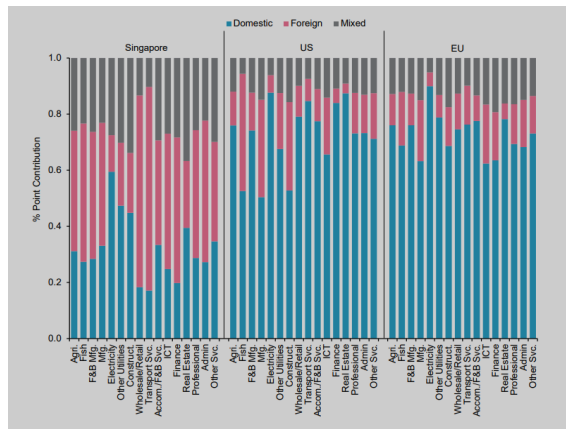


Figure 6: % Decomposition of energy inflation into domestic, foreign and mixed transmission channels. Singapore’s domestic energy inflation is disproportionately exposed to non-domestic (foreign and mixed) factors versus peers (US and the EU). Source: MAS.

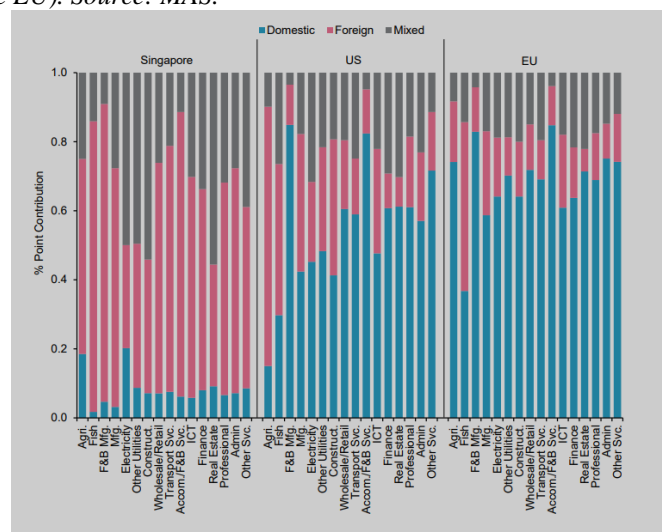


Figure 7: % Decomposition of agricultural inflation into domestic, foreign and mixed transmission channels.

*Singapore's domestic agricultural inflation is disproportionately exposed to non-domestic (foreign and mixed) factors versus peers (US and the EU). Source: MAS.*

## 1.2 : Outflow of Foreign Factors

Singapore's economy is dominated by foreign factors of production<sup>18</sup>—indigenous value-added<sup>19</sup> relative to GDP is at secular lows<sup>20</sup>.

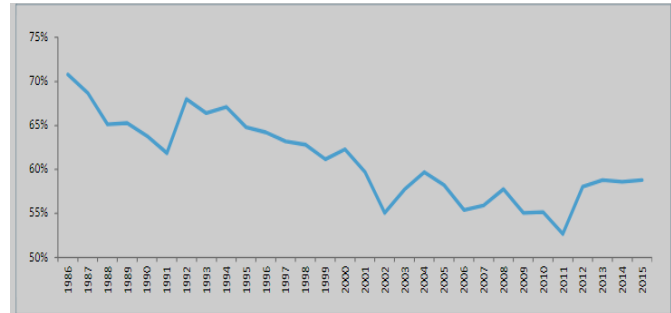


Figure 8: Singapore's share of indigenous GDP to total GDP. Source: Centennial Asia Advisors and Singstat, Singapore Department of Statistics.

Singapore depends on multinational corporations (MNCs) for capital investments, innovative technologies, imported labour, and tax income. As industrial policies stiffen international competition for FDI<sup>21</sup> and reduce the mobility and availability of foreign factors, Singapore must maintain competitive incentive frameworks to retain and attract capital. Nevertheless, Singapore cannot compete on monetary incentives<sup>22</sup>. Plus, industrial policy<sup>23</sup> and efforts<sup>24</sup> to combat base erosion and profit shifting (BEPS) by MNCs reduces Singapore's leeway to attract MNCs using tax incentives.

Singapore's competition intensifies as industrial policy stimulates spending on infrastructure, transport, and other sectors<sup>25</sup>. To retain Singapore's hubstatus, investment projects, and job opportunities<sup>26</sup>, continual investments are critical. Should Singapore become less competitive, businesses will relocate—69% of European companies<sup>27</sup> are considering leaving Singapore amid rising operating costs. Singapore International Chamber of Commerce expresses “no room for complacency” as MNCs face rising business and living costs<sup>28</sup>. Similarly, DPM Lawrence Wong shares from consultation sessions that MNCs are “mobile” and “have options” for future investments<sup>29</sup>.

## 2. Policies to Bolster Singapore's Economic Resiliency & invest ability

### 2.1 : Diversifying Singapore's Economic Drivers

To remain relevant and attractive to a wider range of activities and investments, diversified investments and capability building in new growth areas is necessary, particularly high-growth, high-value, and knowledge-based industries where Singapore has an edge<sup>30</sup>.

#### 2.1.1 : Sustainable Finance<sup>31</sup> and Carbon Services

Singapore can leverage its robust legislative framework and finance hubstatus to become an ESG hub<sup>32</sup>. Economic opportunities<sup>33</sup> are immense—UBS estimates US\$140-trillion in climate investments. Singapore can issue sustainability-linked securities like green bonds<sup>34</sup> and establish impact investing funds.

Moreover, as sustainability becomes top-of-mind amidst green industrial policies<sup>35</sup>, Singapore can monetise carbon credits trading<sup>36</sup>, offsetting<sup>37</sup>, and accounting<sup>38</sup> services.

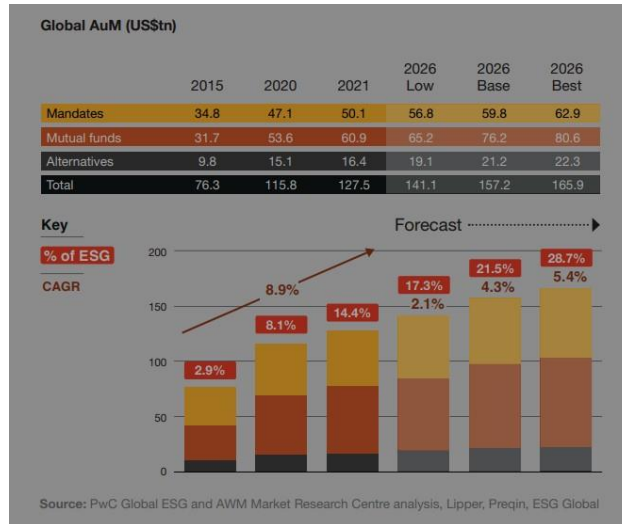


Figure 9: The potential size of the green finance market by assets under management. Source: PwC Global ESG and AWM Market Research Centre.

Green finance can revitalise Singapore’s lacklustre financial market<sup>39</sup> and attract fresh capital<sup>40 41</sup>.

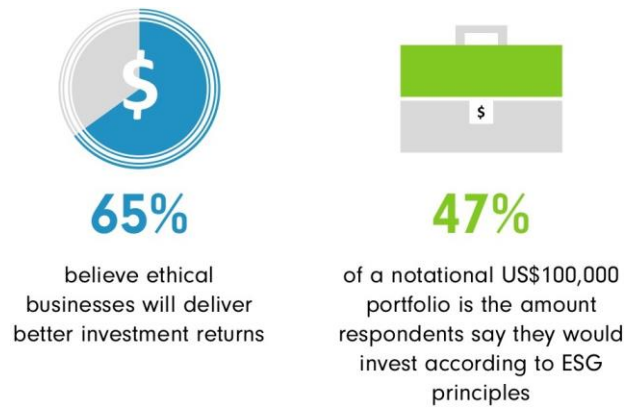


Figure 10: Majority of investors believe sustainable investments can deliver superior returns.

Source: Vontobel Asset Management.

Additionally, Singapore’s businesses support Singapore’s green hub ambitions<sup>42</sup>.

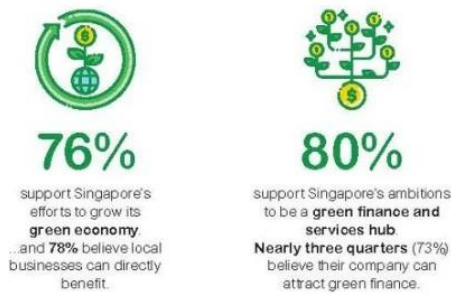


Figure 11: A survey of 500 business and sustainability leaders revealed strong support for Singapore’s green transition plans. Source: Schneider Electric.

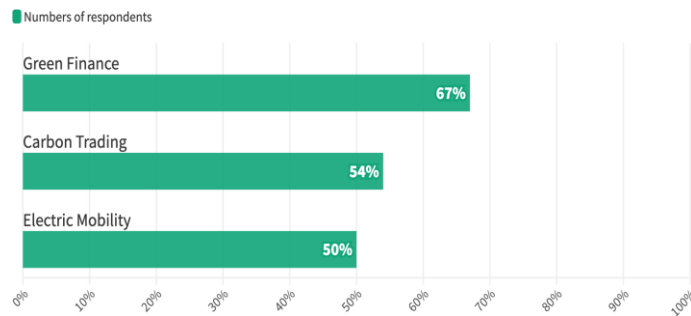


Figure 12: Survey responses of 150 industry leaders indicate that Singapore could become a regional hub for green finance (67%), carbon trading (54%) and electric mobility (50%). 92% agreed that Singapore can become a leader in sustainable finance. Source: Sustainable Energy Association of Singapore.

Furthermore, Singapore has unique advantages, including sound regulations, deep capital markets, low-cost incorporation services, geographic connectivity to lucrative markets<sup>43</sup>, and early progress in green bond issuance.

### Capacity-Building in Green Finance

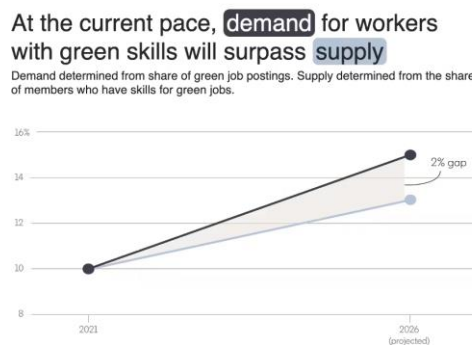
#### Bolstering Talent Development Pipelines to Fill Skill Gaps

Singapore can establish training programmes with interdisciplinary study across sustainable finance, climate science, and environmental policy, ensuring workers possess financial, environmental, and socio-political acumen.

*“Interdisciplinary research and teaching is uniquely suited to the study of sustainability. Not limited by fields, departments or majors, our students can create concentrations that explore green issues from every angle, and our faculty bring an impressive breadth of knowledge from various fields.”*

Figure 13: Extract from an interview with Professor Victoria Rosner of the New York University Gallatin School of Individualised Study, renowned among liberal arts colleges for allowing students to design their own interdisciplinary degrees. Source: The Straits Times (2023).

Figure 14: Projected gap between the demand and supply for workers in the green economy.



Source: LinkedIn’s Global Green Skills Report.

#### Promoting Inter-stakeholder Collaboration to Support Green Finance



Figure 15: Roles different stakeholders can play in promoting the green finance sector. Source: The United Nations Global Compact (2004).

Research centres can promote research into sustainable investment strategies, green financial products, impact assessment methodologies etc., helping Singapore become an ESG leader and innovator.

Singapore can organise innovation sandboxes to testbed innovative ideas and partner with industry organisations to offer mentorship, resources, and networking opportunities,expediting ESG-related innovations.

Aligning Regulations and Policies and Supporting ESG Investments

Singapore-based ESG investors cited inconsistent and changing ESG standards as challenges<sup>44</sup>. Singapore can engage industry stakeholders, NGOs, and international oversight committees<sup>45</sup> to standardise ESG scoring frameworks and set precise policies surrounding ESG credentials and greenwashing, establishing investor confidence and simplifying the due diligence process.

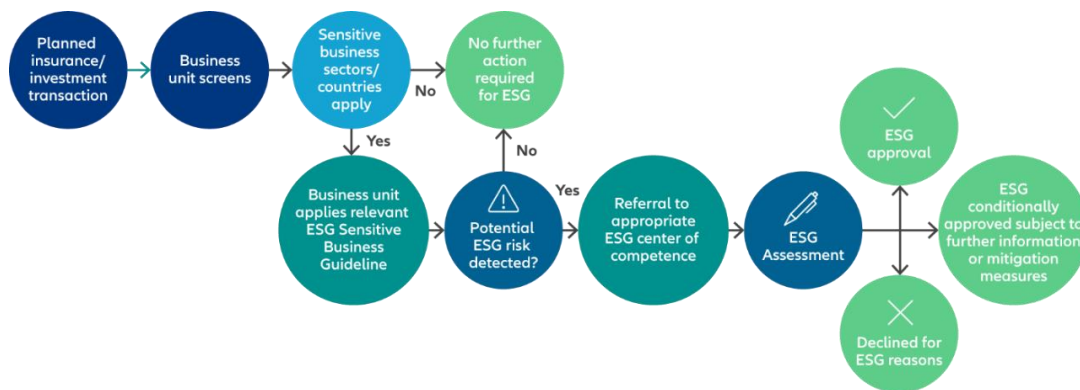


Figure 16: A flowchart that outlines a possible ESG referral process Singapore’s regulators can adopt to support the underwriting and screening of ESG investments. Source: Allianz Sustainability Integration Framework.

Singapore can also establish a sustainability centre to create communication channels between ESG stakeholders and policymakers regarding policies, regulations, and green finance developmental frameworks<sup>46</sup>, publicise training resources to support talent development programmes, provide resources for research and market studies to expand the range of ESG products and services and better cater to investors and businesses, and facilitate collaboration with other countries.



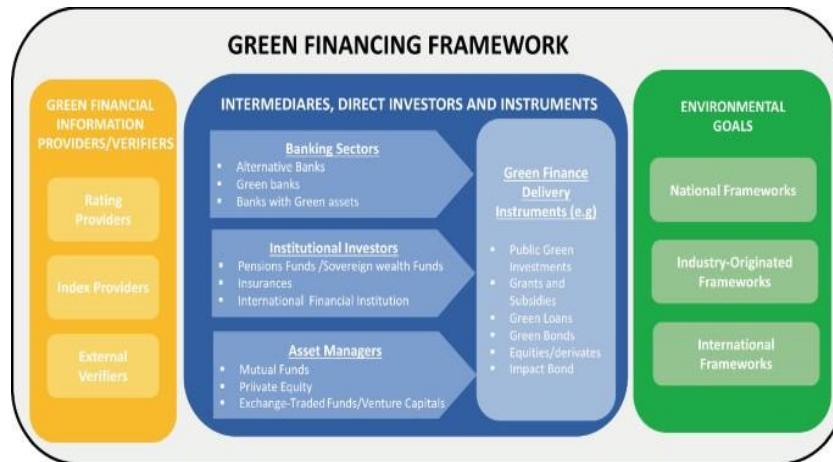


Figure 17: A developmental framework for the green finance sector. Source: Green Investing: Changing Paradigms and Future Directions, pp 55-83.

Finally, ESG investing creates reporting and compliance costs and necessitates workforce reskilling and upskilling. This increases costs for investors by over 10%<sup>47</sup>, hurting investors without sufficient scale and resources to absorb additional costs. Support—via grants, subsidised training programmes, and compliance frameworks—is warranted.

2.1.2 : Supporting Regional Business Intermediation and Connectivity Initiatives in SEA

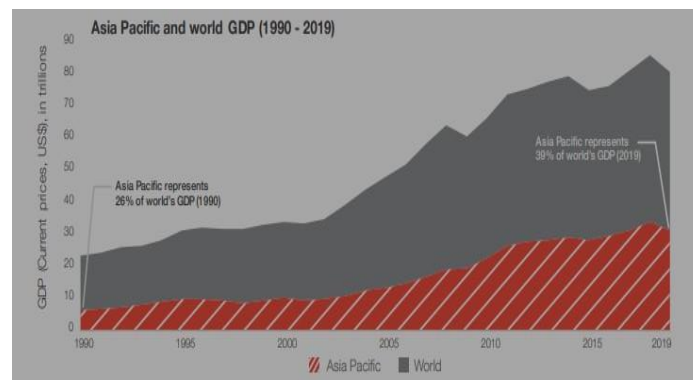


Figure 18: Asia Pacific GDP as a percentage of global GDP. Asia Pacific's GDP growth rates are outpacing the rest of the world. Source: United Nations, International Monetary Fund.



Figure 19: The business opportunities in Southeast Asia have increased tremendously.

Singapore seeks to be an ideal hub from which businesses and investors can access the region and its growing market. Source: EDB.

SEA<sup>48</sup> is benefitting<sup>49</sup> from ‘reshoring’ by developed economies<sup>50</sup>.

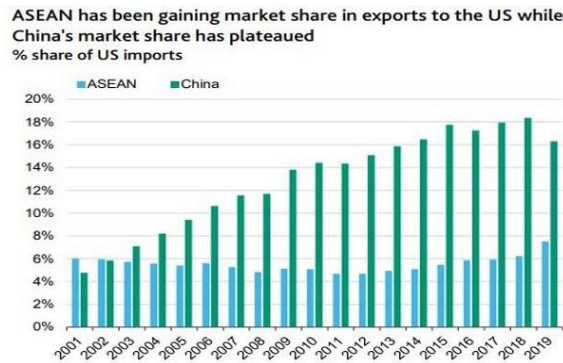


Figure 20: The market share of ASEAN economies and China in the export market to the US. Source: TradeMap, Moody's Investors Service.

Singapore can act as regional business coordinator<sup>51</sup>, given its geographic location<sup>52</sup>, functional sophistication in administration, technology, and logistics<sup>53</sup>, and international reputation as a reliable partner<sup>54</sup>. SEA's growth should uplift Singapore's economy<sup>55</sup>.

### How Singapore can Complement and Capitalise on SEA's Economic Growth<sup>56</sup>

**SEA of Opportunities: Riding the waves of success from Singapore**

With Southeast Asia (SEA) poised to experience tremendous growth in the next decade, find out how Singapore can be your gateway to these opportunities.

**Ride on SEA's US\$1T GMV digital economy with Singapore's world-class infrastructure and diverse talent pool**  
SEA is transforming into a region that is increasingly middle-first. Singapore's strong tech talent pool, strong and ecosystem of innovation centres and access to funding allow businesses to seize the immense growth opportunities.

**Singapore's US\$1B R&D investment**  
The Research, Innovation & Enterprise Fund will continue to drive digital economy initiatives.

**Navigate SEA's growing middle class with Singapore's leading consumer insights and capabilities**  
Middle-class households will grow by 5% annually through to 2025. Singapore is the preferred consumer insights hub for businesses to consolidate their regional operations and speak to the Southeast Asian consumer.

**SEA's GDP to reach US\$2.1T by 2027**  
Increasing purchasing power will drive greater demand in sectors from food to healthcare.

**Enter SEA in the age of industry 4.0 with Singapore's strategic alliances and partnerships**  
As SEA emerges as a reliable and cost-competitive manufacturing location, Singapore's extensive network of bilateral and multilateral partnerships enable businesses to build a more flexible and resilient supply chain in the region.

**Access an extensive network of deep economic linkages**  
Including the world's largest trade pact (Regional Comprehensive Economic Partnership) and Free Trade Agreements with over 60 partners.

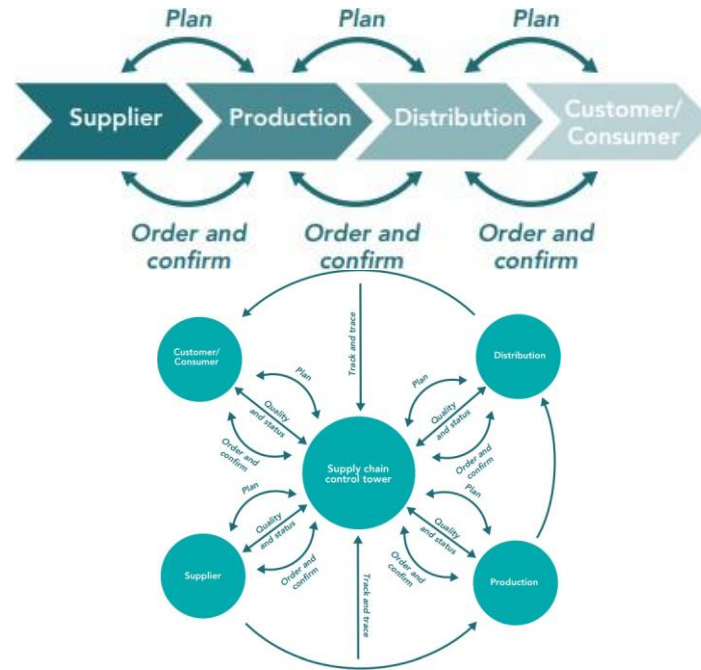
**Tap SEA's demand for infrastructure solutions with Singapore's excellent connectivity to the region**  
SEA countries are increasing infrastructure expenditure and developing new urban centres. Businesses can leverage Singapore's global logistic network to access these opportunities quickly and effectively.

**The logistic hub in SEA**  
Singapore is ranked first in the region for 10 years in a row.

Download 'SEA of Opportunities: Understanding Southeast Asia' to learn more.

Figure 21: How Singapore can become a launchpad for businesses in SEA. Source: Economic Development Board Singapore.

Supporting the Transformation of RVCs in SEA and Supply Chain 4.0 Initiatives<sup>57 58</sup>



Figures 22, 23: A traditional supply chain model (top) versus an integrated supply chain ecosystem (bottom). Source: PWC.

Singapore can monetise its expertise in Industry 4.0 technologies<sup>59</sup> by addressing gaps<sup>60</sup> and optimising cost-efficiencies<sup>61</sup> and information flows<sup>62</sup> in RVCs<sup>63</sup>. According to Temasek, Singapore possesses advanced logistics infrastructure and expertise and already invests in technological adoption in supply chain sectors, with the Singapore government introducing various initiatives focused on innovation and digitalisation in the logistics sector to enhance productivity<sup>64</sup>.

<sup>59</sup> Outlined in Figure 24.

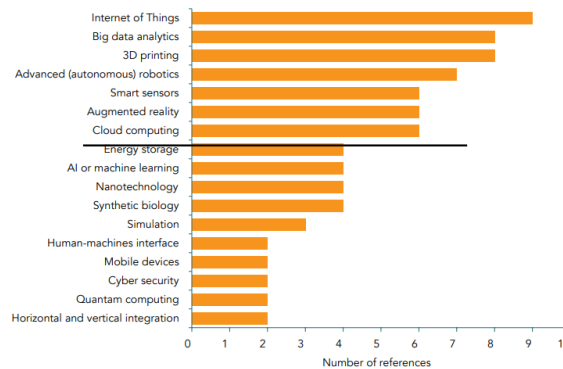


Figure 24: Industry 4.0 technologies, ranked by number of references in recent studies. Source: Hallward-Driemeier and Nayyar (2017).

Furthermore, there are increasing premiums on stable business jurisdictions amid geopolitical uncertainties<sup>65</sup>, making Singapore uniquely-positioned to become a key RVC node and participate in SEA’s growth.



Figure 25: How manufacturers surveyed will respond to rising geopolitical uncertainty to remain successful.

This creates employment in trade-related sectors<sup>66</sup>, particularly benefitting Singapore’s trade-dependent economy<sup>67</sup>.

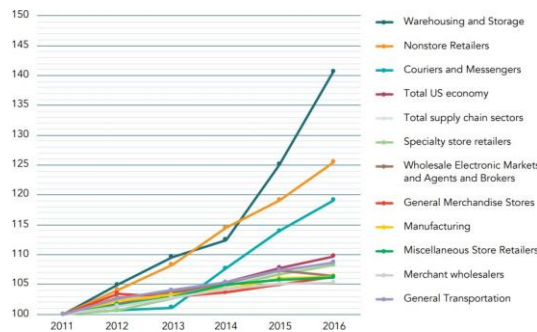


Figure 26: Index of US Employment growth in supply chain sectors and the overall economy from 2011-2016, following the adoption and diffusion of Supply Chain 4.0 processes (2011 is assigned a base value of 100). Source: World Trade Organisation.

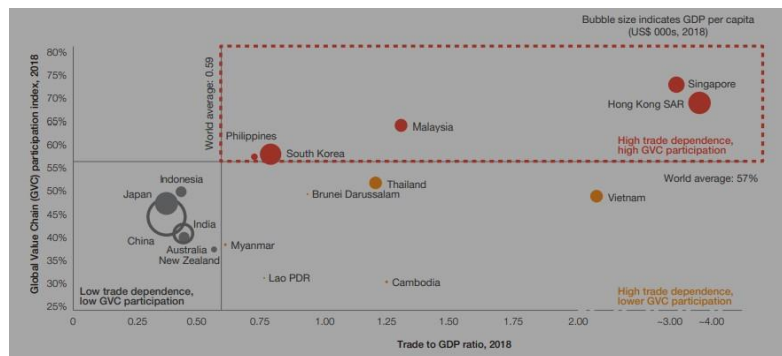


Figure 27: Trade dependence and participation in global supply chains across key Asia Pacific markets. Source: ITC Trade Map.

**Trade facilitation<sup>68</sup> and economic partnerships in SEA**

Closing intra-regional gaps in trade across SEA<sup>69</sup> lowers export-import transaction costs and stimulates trade flows.

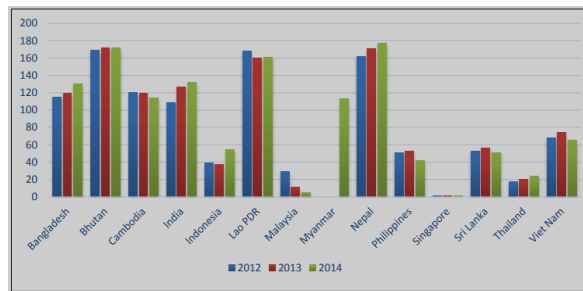


Figure 28: World Bank Doing Business: “Trading Across Borders” Rankings from 2012-2014. The benchmark aggregates many factors, including ease of starting a business, obtaining permits, registering property, getting credit, protecting investors, paying taxes, enforcing contracts, and resolving insolvency. Drastic differences in the trade facilitation environments between more and less advanced SEA countries hampers regional economic integration.

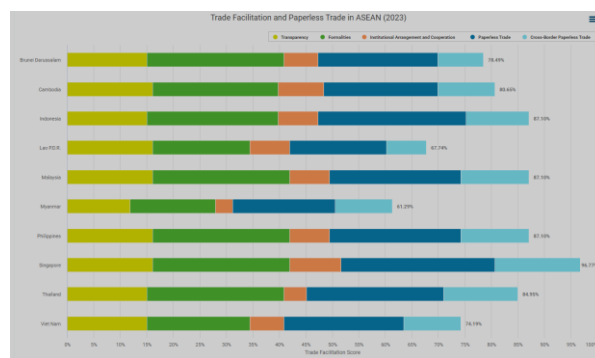


Figure 29: The trade facilitation scores of ASEAN economies. Source: United Nations.

For a well-integrated trading network, Singapore must collaborate with SEA partners and address barriers-to-trade, including burdensome documentation, non-uniform administrative processes<sup>70</sup>, inefficient customs procedures<sup>71</sup>, unequal technological adoption<sup>72</sup>, and non-tariff barriers-to-trade<sup>73</sup>.

Economy	Documents for export (no.)	Time to export (days)	Documents for import (no.)	Time to import (days)
Singapore	4	5	4	4
Malaysia	5	11	6	8
Thailand	5	14	5	13
Indonesia	4	17	7	23
Sri Lanka	6	20	6	19
Viet Nam	6	21	8	21
Bangladesh	6	25	8	34
Philippines	7	15	8	14
India	9	16	11	20
Cambodia	9	22	10	26
Myanmar	9	25	9	27
Bhutan	9	38	12	38
Lao PDR	10	26	10	26
Nepal	11	41	11	38

Figure 30: Differences across SEA in the number of documents required for export and time taken to process export and import transactions. A positive correlation between the number of export documents required and time taken for transactions is observed, indicating the need to reduce paperwork. Source: Asian Development Bank.

Inefficient customs procedures increase costs by 2-24% of the value of traded goods. Reducing barriers-to-trade could boost SEA’s GDP by 9.3% and exports by 12.1%<sup>74</sup>. This in turn advantages Singapore as a maritime trade and business administrator and keeps Singapore attractive to investors and firms seeking exposure to SEA’s markets.

Additionally, Singapore can use regional digital economy agreements<sup>75</sup> to establish interoperable digital trade systems<sup>76</sup>, promote e-invoicing<sup>77</sup>, eliminate data localisation requirements that restrict data flows<sup>78</sup> and raise compliance costs, and foster economic cooperatives in growth areas like fintech<sup>79</sup>, artificial intelligence<sup>80</sup>, and

data<sup>81</sup>.

2.2 : Improving Supply Chain Resilience Through Multilateral Economic Cooperation and Engagement  
 As Singapore imports natural resources, it must hedge unexpected disruptions<sup>82</sup>, including shortages, price spikes, protectionism<sup>83</sup>, war, and climate change, ensuring security of supply.

**Global uncertainties and examples of their impact on supply chains**



Figure 31: Example of unexpected disruptions and their impact on Singapore. Source: Singapore Ministry of Finance.

**Policy Tools to Ensure Singapore’s Access to Critical Resources**

Maintaining an Open-to-Trade Stance<sup>84</sup> and a Reputation as a Reliable Trading Partner

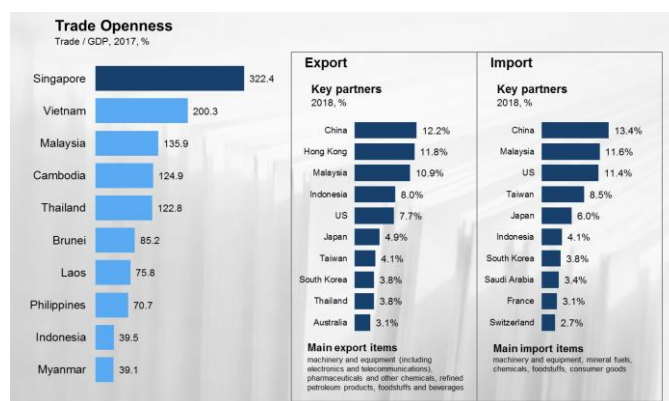


Figure 32: Singapore ranks first in Trade Openness in SEA. Source: World Bank, ITC, and ADB.

Singapore avoid imposing barriers-to-trade<sup>85 86</sup> and collaborate with partners to sustain trade flows.

Singapore can participate in multilateral trade agreements and diversify its trading network, especially within SEA<sup>87</sup>, ensuring stable cross-border flows and logistics networks.

Strategic Investments to Expand Trade Connections and Reduce the Risk of Disruption

Singapore must invest in connectivity infrastructure to remain a logistics and tradinghub.

Additionally, Singapore should invest in resource projects, especially within countries with rich resource reserves, to secure commodity supply<sup>88 89</sup>.

2.3 : Rejigging Singapore’s Business Incentive Framework to Maintain an Attractive Business and Investment Climate

2.3.1 : Tax Incentives

As tax competition narrows in a post-BEPS environment, Singapore must approach tax reform strategically and

self-differentiate in other ways.

Singapore should consider tax incentives protected under BEPS 2.0<sup>90</sup> including Qualified Refundable Tax Credits to retain tax-competitiveness, and ease tax treatment of equity-based compensation to keep pace with other jurisdictions<sup>91 92</sup>, demonstrating Singapore’s commitment to remain tax-competitive to MNCs while aligning with international standards.

Singapore can also simplify tax rules<sup>93</sup> and introduce regulations with clear implementation timelines and tax implications, reducing businesses’ compliance burden amid new, complex, and ever-changing regulations, strengthening Singapore’s reputation as a business-friendly jurisdiction.

2.3.2 : Non-tax Incentives

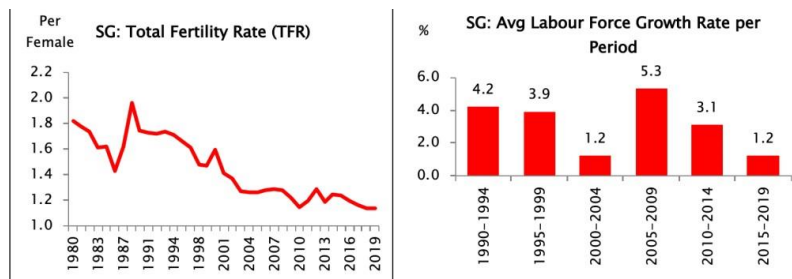
Additional tax revenues can fund non-tax schemes, including talent facilitation programmes to fill skill-gaps and subsidies for rent and fixed assets to mitigate rising business costs, demonstrating Singapore’s support for MNCs.

2.4 : Addressing Structural Issues within Singapore’s Economy

Singapore must overcome structural challenges—including falling labour and total factor productivity<sup>94</sup>, the underperformance of local enterprises, and weak innovative capacity—and become a high-productivity and innovation-based economy. This helps Singapore remain economically-resilient, self-sufficient, competitive, and attractive to investors and businesses, as the mobility and availability of foreign labour, capital, firms, and technology wane.

2.4.1 : Low and Stalling Labour Productivity

Singapore confronts slowing labour force growth<sup>95</sup> amid historically-low fertility rates (1.05) and decelerating immigration rates<sup>96</sup>. Singapore’s labour force participation is high, leaving limited scope for increases<sup>97</sup>. As Singapore’s workforce stagnates, labour productivity must rise to maintain Singapore’s productive capacity and offset demographics-related economic impacts.



Figures 33 & 34: Singapore has experienced low fertility rates and weak domestic labour force growth. Source: Academia SG.

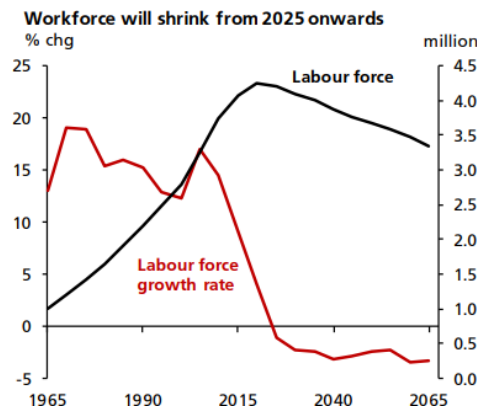


Figure 35: Singapore’s domestic workforce is set to shrink from 2025. Source: United Nations.

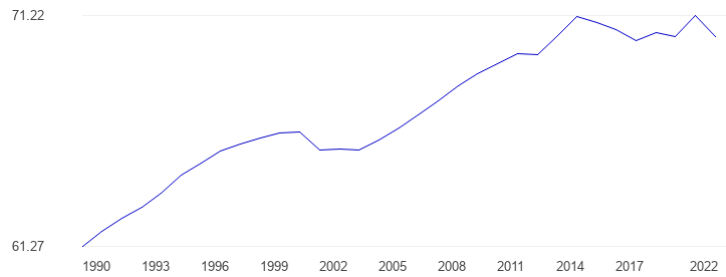


Figure 36: Singapore’s labour force participation rates have increased from 61.27% in 1990 to a maximum of 71.22% in 2021 and 70.28% in 2022. Singapore’s participation rates have likely peaked, having stagnated over the past decade, leaving limited room for further increases by encouraging more individuals to join the workforce.

However, labour productivity growth remains sluggish<sup>98</sup> and lags economic growth<sup>99</sup>.

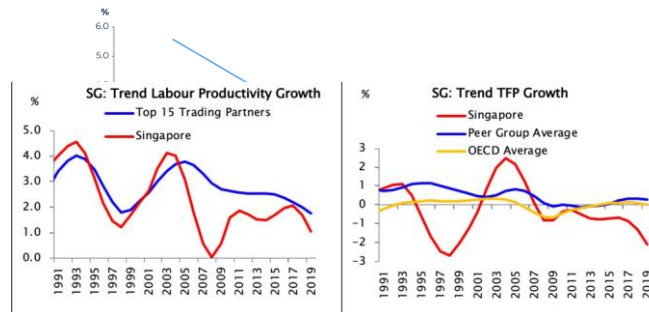


Figure 37: Singapore’s labour productivity growth has been falling from 1984-2016. Source: Centennial Asia Advisors.

Figures 38 & 39: Singapore’s labour and total factor productivity has lagged its peer group, especially in the past decade. Source: Singapore Department of Statistics, Academia SG.

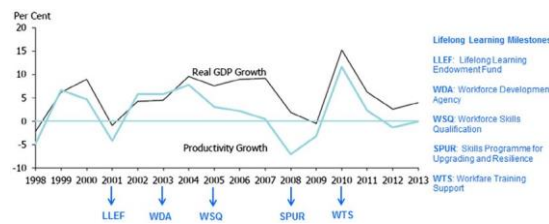


Figure 40: Singapore’s real GDP and productivity growth rates from 1998-2013. Source: Millie Lee & Paul Morris (2016): Lifelong learning, income inequality and social mobility in Singapore, International Journal of Lifelong Education.

Singapore must raise productivity to better utilise labour inputs (which curbs manpower constraints), lower production costs (which increases firms’ global competitiveness and profitability), and improve returns-on-investment<sup>100</sup> (which boosts business and investor confidence and drives capital formation, job creation, and long-term economic growth).



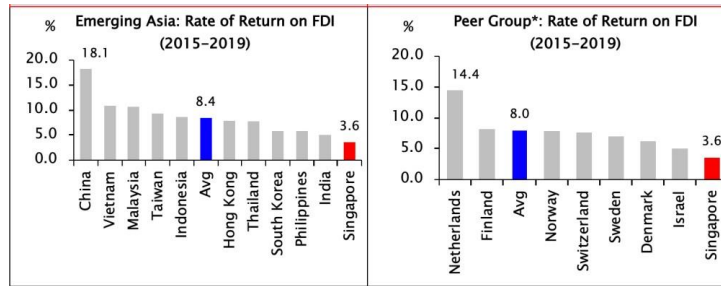


Figure 41: Rate-of-return on FDI for Singapore, Emerging Asia, and Singapore's Peer Group, from 2015-2019. Calculated using annual FDI income divided by inward FDI stock. Source: UNCTAD, IMF Balance of Payments Database, Academia SG.

### Policy Responses to Raise Labour Productivity

#### Better Incentives for Upskilling and Reskilling

Manager Nur Ellisa shared<sup>101</sup> businesses' lack of recognition for upskilling<sup>102</sup>, impacting workers' willingness to upskill<sup>103</sup>.

Companies must offer pathways for salary increments and career progression to promote workforce mobility, reward upskilling, and motivate workers to increase productivity.

Policymakers can use awareness campaigns to educate employers about upskilling's benefits, standardise frameworks for businesses to recognise upskilling when evaluating employees, offer incentives to businesses that hire and support workers who upskill, and gather feedback from workers and businesses to make upskilling certifications more relevant.

#### Balanced Foreign Labour Policy

Applying the theory of induced innovation<sup>104</sup>, tightening foreign labour policy restricts readily-available low-cost labour and curtails firms from expanding output by increasing labour inputs<sup>105</sup>, prompting firms to seek alternative profitability-enhancing strategies including investments in productivity-enhancing technology, automation, and upskilling<sup>106</sup>. Government subsidies are necessary to offset implementation costs.

Nevertheless, Singapore should only target sectors with greatest potential for productivity gains, as foreign workers complement Singapore's workforce by addressing skill-gaps and labour shortages and should not be repudiated.

Additionally, Singapore should welcome highly-skilled and productive foreign workers. Singapore can adopt skill-based immigration criteria that assess applicants' qualifications, experience, and skill-sets.

#### 2.4.2 : Structural Underperformance of Domestic SMEs

Domestic corporations struggle to deliver operational efficiency<sup>107</sup>, hurting their productivity, profitability, and international competitiveness.

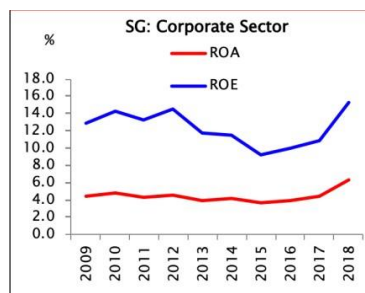
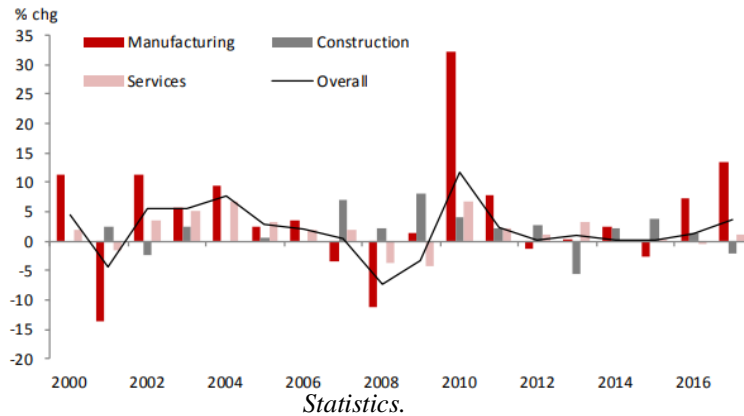


Figure 42: Singapore's corporate sector performance and profitability measured by ROA and ROE. Returns remain sub-par. Source: Singapore Department of Statistics, Academia SG.

Figure 43: Singapore's productivity growth across sectors from 2000-2017. Source: Singapore Department of



Per MAS, only 16% of domestic SMEs are financially-resilient and either productive or innovative<sup>108</sup>.

Contributing factors include: SMEs' competitive disadvantages<sup>109</sup> versus MNCs<sup>110</sup> and government-linked companies<sup>111</sup>, insufficient awareness of productivity- and innovation-enhancing schemes<sup>112</sup>, and high business costs<sup>113</sup>.

Uplifting domestic SMEs can yield large productivity gains.

**Policy Measures to Help SMEs Become More Productive and Competitive**

Subsidising Innovative, Productivity-Enhancing Workplace Technologies

Singapore can subsidise productivity-enhancing technologies, helping SMEs streamline workflows, automate processes, and reduce labour costs, optimising SMEs' productivity and operational efficiency<sup>114</sup>.

Lowering Business Costs for SMEs

Singapore must address rising rents through subsidies or policy changes. Notably, a policy shift by JTC<sup>115</sup> to divest industrial land to private developers and investors<sup>116</sup> caused uncontrolled rent increases for SMEs, impacting their profitability and international cost-competitiveness<sup>117</sup>.

Singapore must ensure low-cost credit access, especially for SMEs who lack business history and struggle to secure financing, and establish equity crowdfunding platforms for early-stage investors<sup>118</sup> to provide patient growth capital.

Differentiated Government Support for SMEs

Singapore should offer differentiated support based on a 4-tiered SME classification system to optimise capital-efficiency and resource utilisation<sup>119</sup>.

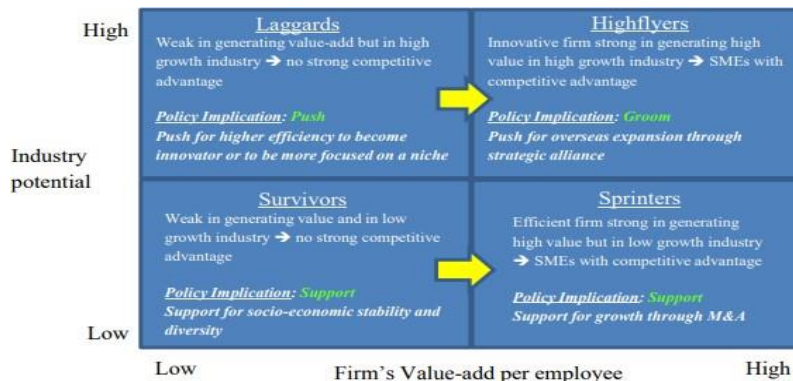


Figure 44: Classification of SMEs using an industry potential vs productivity (value-add) matrix.

*A differentiated policy framework offers more comprehensive support for different types of SMEs. Source: Faizal et al. (2016).*

*Highflyers* are innovative, highly-competitive SMEs in high value-add industries. Support for internationalization is recommended.

*Sprinters* are efficient SMEs in low value-add industries. Merger and acquisition support is recommended to absorb smaller, less-efficient firms to increase capital-efficiency.

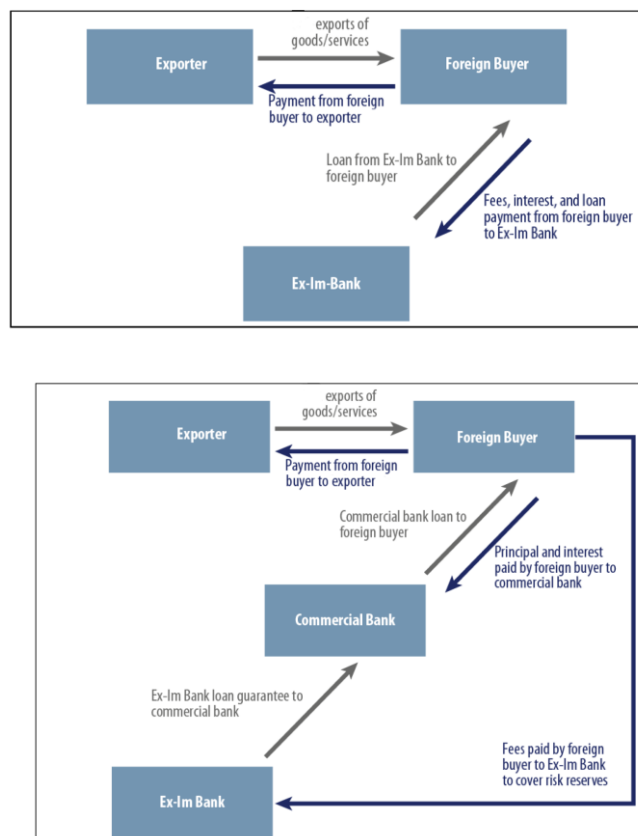
*Laggards* are inefficient, uncompetitive SMEs in high-growth sectors. They should be pushed to increase efficiency or shut down.

*Survivors* are inefficient SMEs in low-growth sectors. Support should be limited to allow economic restructuring.

Supporting the Scaling and Internationalisation of SMEs

Singapore can connect internationalising SMEs to overseas partners for market entry support—including business matching services to establish overseas partnerships—to mitigate uncertainties.

Singapore could establish an Export-Import bank<sup>120 121</sup> which utilises its low cost-of-capital to fund foreign purchases of SMEs’ exports<sup>122</sup>, helping SMEs access untapped markets<sup>123</sup> and scale-up<sup>124</sup>, and achieve economies-of-scale which enhances productivity and profitability<sup>125</sup>.



*Figure 45: The structure of export finance and the role of EXIM banks in promoting trade and investments. Source: Nanyang Technological University.*

2.4.3 : Poor Innovative Capacity

Innovation can increase Singapore’s productive capacity, FDI inflows, high-value jobcreation, and global competitiveness.

While Singapore’s public R&D spend has risen from 2.5% of GDP (1991) to 4.5% (2016), Singapore's

innovation efficiency<sup>126</sup> remains anaemic<sup>127 128</sup>. Contributing factors include Singaporeans' risk-aversion<sup>129</sup> and lack of creativity<sup>130</sup> and limited domestic end-markets for innovations.

	2016-17	2017-18
Capacity for innovation	20	20
Quality of scientific research institutions	10	12
Company spending on R&D	15	17
University-industry collaboration in R&D	7	8
Government procurement of advanced technology products	4	5
Availability of scientists and engineers	9	9
Patents, applications/million population	13	12

Figure 46: Singapore's ranking (out of 24 countries) in different metrics related to innovation. Singapore did not rank well in areas such as innovation capacity, quality of scientific research institutions, company spending on R&D, and patents. Source: World Economic Forum Global Competitiveness Report, 2017-2018.

### Responses to Promote and Increase the Success of Domestic Innovations<sup>131</sup>



Figure 47: Participants in an innovation ecosystem and their roles. A successful innovation ecosystem involves businesses (to develop talent, conduct R&D, and commercialise innovations), academia (to support talent development and R&D), government (for funding and establishing priority-areas), and financial institutions (for funding and scaling innovations).

Source: PWC.

#### Increased Funding to Support Innovation Activities

Singapore can establish first-loss funds wherein the government underwrites some initial losses to promote R&D.

To scale-up and commercialise innovations, Singapore can connect innovators to research institutes, industry players, and investors through startup support ecosystems to provide research expertise and facilities, talent pools, industry networks, mentorship, and funding. Singapore can also subsidise domestic innovations to improve demand conditions and growth potential of innovations.

#### Strengthening Cross-Stakeholder Partnerships for a Successful Innovation Ecosystem

Singapore can develop innovation clusters with startups, research institutes, shared research labs and test-bedding facilities, and firms to reap agglomeration economies<sup>132</sup> via knowledge exchange<sup>133</sup>, cost-efficiencies from shared resources and reduced duplication of efforts, and industry collaborations to translate research into commercial applications aligned with industry needs, accelerating the adoption of innovative products.

To strengthen talent pipelines<sup>134</sup>, Singapore can sponsor STEM-related scholarships and work with universities and businesses to establish talent development programmes with multidisciplinary training in entrepreneurship

and design thinking.

#### Creating a risk-seeking and innovation-friendly culture

Firms can appoint innovative<sup>135</sup> leaders who encourage risk-taking, give employees freedom to explore innovative ideas, and reward successful innovation<sup>136</sup>.

To support firms, Singapore<sup>137</sup> can create guidelines to evaluate employee performance in innovation-based aspects and specifications regarding additional compensation.

Singapore<sup>138</sup> can promote innovation sandboxes for firms to test ideas in a controlled, low-stakes environment<sup>139</sup>, helping firms test and iterate new ideas and scale successful innovations with confidence.

These create an appetite for experimentation, organisational change, creativity and calculated risk-taking, accelerating the development of innovative ideas.

### 3. Conclusion

Through judicious adjustments to diversify, hedge risks, and capture opportunities, Singapore can weather global industrial policies and remain resilient and dynamic.

### 4. Bibliography

1. Evenett, S., Jakubik, A., Martín, F., & Ruta, M. (2024, January 4). *The return of industrial policy in data*. IMF. <https://www.imf.org/en/Publications/WP/Issues/2023/12/23/The-Return-of-Industrial-Policy-in-Data-542828>
2. Faizal, Y. B., Chang, Z. Y., Ng, Y. H., & Tan, M. W. (2016, January). Supporting a dynamic SME sector: Challenges faced by SMEs in Singapore. Academia.edu. [https://www.academia.edu/24066217/Supporting\\_a\\_Dynamic\\_SME\\_Sector\\_Challenges\\_Faced\\_by\\_SMEs\\_in\\_Singapore](https://www.academia.edu/24066217/Supporting_a_Dynamic_SME_Sector_Challenges_Faced_by_SMEs_in_Singapore).
3. UN. (2023). UN Global Survey on Digital and Sustainable Trade Facilitation. <https://www.untsurvey.org/group?id=ASEAN>.
4. European Union - ASEAN Business Council. (2017). Facilitation in ASEAN: Modernising customs procedures and helping MSMEs. <https://www.eu-asean.eu/wp-content/uploads/2022/02/Facilitation-in-ASEAN-Modernising-Customs-Procedures-and-Helping-MSMEs-2017.pdf>.
5. SG101. Asean Economic Community: Forging Closer Ties. SG101. (n.d.). <https://www.sg101.gov.sg/economy/digging-deeper-case-studies/asean/>
6. The Business Times. (2023, March 29). Malaysia and Singapore – A corridor key to ASEAN’s growing prosperity. The Business Times. <https://www.businesstimes.com.sg/international/global/malaysia-and-singapore-corridor-key-aseans-growing-prosperity>.
7. World Bank Group. (2022, June) Deepening linkages between South and Southeast Asia. <https://documents1.worldbank.org/curated/en/099935106222222459/pdf/P16286504042220c808ee006e72f2cac441.pdf>
8. PwC. (2022). *Asset and Wealth Management Revolution 2022*. PwC. <https://www.pwc.com/gx/en/industries/financial-services/asset-management/publications/asset-and-wealth-management-revolution-2022.html>
9. PwC. (2023, March). *Singapore as a Sustainable Asset Management Hub*. PwC. <https://www.pwc.com/sg/en/publications/assets/page/singapore-as-a-sustainable-asset-management-hub.pdf>.
11. Bayley, A. A. (2014). Policies to Enhance Trade Facilitation in South Asia and Southeast Asia. <https://www.adb.org/sites/default/files/publication/156344/adbi-wp489.pdf>
12. Davie, S. (2023, February 27). *Interdisciplinary education key to developing Green Economy Skills*. The Straits Times. <https://www.straitstimes.com/singapore/interdisciplinary-education-key-to-developing-green-economy-skills>
13. LinkedIn. (2022). LinkedIn’s Global Green Skills Report. <https://linkedin.github.io/global-green-report-2022/>.
14. Goh, S. (2023, March 24). More training support for companies to Plug Singapore’s Green Skills Gap. Eco-Business. <https://www.eco-business.com/news/more-training-support-for-companies-to-plug-singapore-green-skills-gap/>
15. Ministry of Finance, Singapore. (2022, December) Strengthening our supply chain resilience. Ministry of Finance, Singapore. <https://www.mof.gov.sg/singapore-public-sector-outcomes-review/citizens/our->

- shared-future-and-place-in-the-world/strengthening-our-supply-chain-resilience
16. Asian Development Bank. (2023, March). ASEAN global value chains: Resilience and sustainability.
  17. <https://www.adb.org/sites/default/files/publication/871976/asean-global-value-chains-resilience-sustainability.pdf>
  18. PwC.(2020,November).AsiaPacific'stime<https://www.pwc.com/gx/en/asia-pacific/asia-pacifics-time-nov2020.pdf>.
  19. APEC. (2022, January). A decade of Supply Chain Initiatives: Opportunities and challenges in post-covid-19 recovery. APEC. <https://www.apec.org/publications/2022/01/a-decade-of-supply-chain-initiatives-opportunities-and-challenges-in-post-covid-19-recovery> World Economic Forum. (2022). A global rewiring: Global value chains in 2022. WorldEconomic Forum.
  20. [https://www3.weforum.org/docs/WEF\\_A\\_Global\\_Rewiring\\_Global\\_Value\\_Chains\\_2022.pdf](https://www3.weforum.org/docs/WEF_A_Global_Rewiring_Global_Value_Chains_2022.pdf)
  21. Tan, A. (2024, January 18). South-East Asia Weathers IPO drought, SGX potential intact amid subdued performance: Deloitte. The Straits Times. <https://www.straitstimes.com/business/asean-weather-ipo-drought-sgx-potential-intact-amid-subdued-performance-deloitte>
  22. Sim, K. H. (2020, September 9). How are labour productivity statistics measured – and what can companies and individuals do to improve it. Dollars and Sense. <https://dollarsandsense.sg/how-are-labour-productivity-statistics-measured/>
  23. Ministry of Trade and Industry, Singapore. (n.d.). *Digital Economy Agreements*. Ministry of Trade and Industry, Singapore.<https://www.mti.gov.sg/Trade/Digital-Economy-Agreements>
  24. South China Morning Post. (2022, April). Singapore: The gateway to Southeast Asia. South China Morning Post. <https://www.scmp.com/presented/business/topics/china-conference-southeast-asia/article/3173241/singapore-gateway>
  25. Auyong, H. (2016, March). Singapore's labour productivity challenge. Institute of Policy Studies. <https://ipscommons.sg/singapores-labour-productivity-challenge/>
  26. Reccessary. (2023, October). Singapore: A strong green finance leader in Southeast Asia for net-zero measures. Reccessary. <https://www.reccessary.com/en/news/sg-announcement/singapore-strong-green-finance-leading-southeast-asia-net-zero-measures>
  27. -leading-southeast-asia-net-zero-measures
  28. Civil Service College Singapore. (2011, June). That elixir called productivity: Ten implications for Singapore. Civil Service College Singapore.
  29. <https://knowledge.csc.gov.sg/ethos-issue-09/that-elixir-called-productivity-ten-implications-for-singapore/>
  30. The Business Times. (2023, March). Innovation and productivity are imperative for Singapore amid rising costs. The Business Times. <https://www.businesstimes.com.sg/singapore/innovation-and-productivity-are-imperative-singapore-amid-rising-costs>
  31. -singapore-amid-rising-costs
  32. The Business Times. (2023, April). Singapore firms must transform productivity amid economic uncertainty: SNEF. The Business Times. <https://www.businesstimes.com.sg/singapore/singapore-firms-must-transform-productivity-amid-economic-uncertainty-snef>
  33. Singapore Business Review. (n.d.). Chart of the day: Why Singapore's productivity drive is failing. Singapore Business Review. <https://sbr.com.sg/economy/news/chart-day-why-singapores-productivity-drive-failing>
  34. Allianz. (2023, June 21). *Allianz Sustainability Integration Framework*. Allianz. [https://www.allianz.com/content/dam/onemarketing/azcom/Allianz\\_com/sustainability/documents/Allianz\\_ESG\\_Integration\\_Framework.pdf](https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/sustainability/documents/Allianz_ESG_Integration_Framework.pdf)
  35. Auyong, H. (2014). Productivity challenges in Singapore (Part 2). Lee Kuan Yew School of Public Policy, National University of Singapore.
  36. [https://lkyspp.nus.edu.sg/docs/default-source/case-studies/productivity-challenges-in-singapore-part-2.pdf?sfvrsn=26ca960b\\_2](https://lkyspp.nus.edu.sg/docs/default-source/case-studies/productivity-challenges-in-singapore-part-2.pdf?sfvrsn=26ca960b_2).
  37. Singapore Business Federation. (2024, January). KPMG and SBF Budget 2024. Singapore Business Federation.<https://www.sbf.org.sg/newsroom/media/press-releases/detail/kpmg-and-sbf-budget-2024>
  38. Tang, S. K. (n.d.). In Focus: “No Room for Complacency” as fight for global investments heats up. What can Singapore do? CNA. <https://www.channelnewsasia.com/business/focus-singapore-competition-global-investments-us-china-3376206>
  39. MAS. (2022, October). Effects of higher global input costs on prices in Singapore. [https://www.mas.gov.sg/-/media/mas/epg/mr/2022/oct/mroct22\\_sf\\_a.pdf](https://www.mas.gov.sg/-/media/mas/epg/mr/2022/oct/mroct22_sf_a.pdf)
  40. Academia SG. (2020, December 23). Singapore’s poor productivity performance.AcademiaSG.
  41. <https://www.academia.sg/academic-views/singapores-poor-productivity-performance/>.
  42. National Climate Change Secretariat. (n.d.). Carbon services and trading. National ClimateChange

- Secretariat.<https://www.nccs.gov.sg/singapores-climate-action/carbon-services-and-trading/>
43. Singapore Business Review. (n.d.). Why Singapore needs to reinvest more in SMEs. Singapore Business Review.<https://sbr.com.sg/markets-investing/commentary/why-singapore-needs-re-invest-more-in-smes>
  44. The Business Times. (2022, October). Two-thirds of local firms financially resilient, but not productive or innovative. The Business Times. <https://www.businesstimes.com.sg/singapore/economy-policy/two-thirds-local-firms-financially-resilient-not-productive-or-innovative>
  45. Institute of Policy Studies. (2015, August). Helping Singapore's SMEs to make their mark on the global stage. Institute of Policy Studies. <https://ipscommons.sg/helping-singapores-smes-to-make-their-mark-on-the-global-stage/>
  46. Nikkei Asia. (2015, January). Singapore bourse to launch equity crowdfunding platform. Nikkei Asia.
  47. <https://asia.nikkei.com/Business/Finance/Singapore-bourse-to-launch-equity-crowdfunding-platform>  
United Nations. (2004). *Who Cares Wins*. United Nations. [https://www.unepfi.org/fileadmin/events/2004/stocks/who\\_cares\\_wins\\_global\\_compact\\_2004.pdf](https://www.unepfi.org/fileadmin/events/2004/stocks/who_cares_wins_global_compact_2004.pdf)
  48. Channel News Asia. (2023, May). Singapore cannot afford to be outbid by 'big boys' to attract investments: Lawrence Wong. Channel News Asia. <https://www.channelnewsasia.com/singapore/singapore-cannot-afford-outbid-big-boys-attract-investments-may-day-rally-lawrence-wong-3456271>
  49. Nikkei Asia. (2017, February). Singapore group pilot's agglomeration to aid SME growth. Nikkei Asia. <https://asia.nikkei.com/NAR/Articles/Singapore-group-pilot-agglomeration-to-aid-SME-growth>
  50. Ministry of Foreign Affairs Singapore. (2023, February). Transcript of press conference by Minister for Communications and Information, Mr S Iswaran, and Senior Minister of State for Communications and Information and Health, Dr Janil Puthucherry, on the Committee of Supply 2023. Ministry of Foreign Affairs Singapore. <https://www.mfa.gov.sg/Newsroom/Press-Statements-Transcripts-and-Photos/2023/02/Min-COS-2023>
  51. Orbitax. (2023, October). Singapore's Response to New Corporate Income Tax Measures. Orbitax.
  52. <https://orbitax.com/news/archive.php/Singapores-Response-to-New-Co-53821>
  53. Millie Lee & Paul Morris (2016): Lifelong learning, income inequality and social mobility in Singapore. International Journal of Lifelong Education. <http://dx.doi.org/10.1080/02601370.2016.1165747>
  54. KPMG. (2024, January). Strategic moves towards future growth and competitiveness. KPMG.
  55. <https://kpmg.com/sg/en/home/media/press-contributions/2024/01/strategic-moves-towards-future-growth-and-competitiveness.html>
  56. Grant Thornton. (2022, January). Singapore's potential response to GloBE rules. Grant Thornton.
  57. <https://www.grantthornton.sg/insights/Singapores-potential-response-to-GloBE-rules/>
  58. Nanyang Technological University Centre for Advanced Studies. (2022, June). The role of EXIM Bank in promoting trade and investments in Africa. Nanyang Technological University.
  59. <https://www.ntu.edu.sg/cas/news-events/news/details/the-role-of-exim-bank-in-promoting-trade-and-investments-in-africa>
  60. The Business Times. (2021, May). Singapore must adapt, adjust tax policies to fit new tax world. The Business Times. <https://www.businesstimes.com.sg/opinion-features/columns/singapore-must-adapt-adjust-tax-policies-fit-new-tax-world>
  61. Yasar, Y., & Sarada, A. (2023, November 7). How can compensation models support innovation and creativity in your organisation? How Compensation Models Boost Innovation and Creativity. LinkedIn. <https://www.linkedin.com/advice/3/how-can-compensation-models-support-innovation-growth>
  62. Zaraba, M. K. (2023, October 26). Regulatory sandboxes: Fostering Innovation. Infomineo.
  63. <https://infomineo.com/technology-telecommunication/regulatory-sandboxes-fostering-innovation/>