

## Servicification Trends in ASEAN:

Regional Comparison and Policy Insights

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# Contents

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- |                                    |  |
|------------------------------------|--|
| 1 Session Introduction & Review    | 9 Industrial Structure Patterns                |
| 2 ASEAN Manufacturing Overview     | 10 Drivers of Servicification                  |
| 3 Measuring Servicification        | 11 Drivers of Servicification: Country Cases   |
| 4 ASEAN Servicification Indicators | 12 ASEAN Servicification Benchmarking (Part 1) |
| 5 Three-Tier Country Analysis      | 13 ASEAN Servicification Benchmarking (Part 2) |
| 6 Tier 1: Advanced Servicification | 14 Policy Recommendations by Tier              |
| 7 Tier 2: Emerging Servicification | 15 Summary & Key Takeaways                     |
| 8 Tier 3: Early Stage Countries    | 16 References                                  |

This comprehensive session builds on previous discussions of servicification concepts to provide a data-driven comparison across all 10 ASEAN member countries, highlighting patterns, benchmarks, and tailored policy recommendations.

# Session Context: Building on Previous Sessions

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## 1 Introduction to Productivity in Manufacturing

Foundational productivity concepts, measurement frameworks, and manufacturing sector challenges

## 3 Strategic Framework for Servicification

Core competency extension, value chain positioning, business models for service integration

## 2 Understanding Servicification

Key concepts, 3-part framework (inputs, outputs, employment), global trends in service integration

## 4 Mechanisms of Servicification in GVCs

Task-based mechanisms, value addition patterns, service-sector linkages in global value chains

### Gap This Session Addresses

- Limited cross-country comparative data on servicification implementation across ASEAN
- Need for empirical benchmarking of manufacturing servicification by country and sector
- Gap in actionable policy insights tailored to different development levels

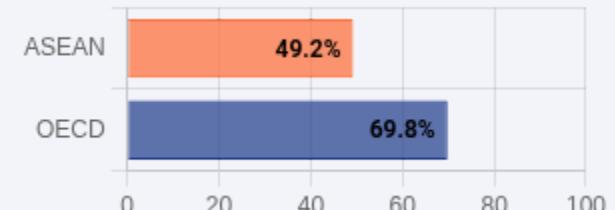
# ASEAN Manufacturing Landscape: Structural Overview

## Manufacturing Output Growth



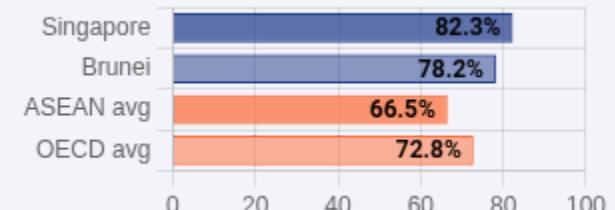
## ASEAN vs. Global Average (2023)

### Services in GDP (%)



ASEAN: 49.2% | OECD average: 69.8%

### Services Employment (%)



Singapore: 82.3% | Brunei: 78.2% | ASEAN avg: 66.5% | OECD avg: 72.8%

ASEAN manufacturing plays an important role in global supply chains, with strong growth projections.

# Servicification Measurement Framework

## Service Input

Services embedded in manufacturing production processes

- R&D and design
- Logistics and supply chain
- IT support and digital services
- Professional services (legal, accounting)

**Key indicator:** Service input share of total inputs

## Service Output

Services bundled with or complementary to manufactured products

- After-sales support
- Maintenance contracts
- Training and consulting
- Product-as-a-service models

**Key indicator:** Service revenue as % of total revenue

## Service Employment

Shift toward service activities within manufacturing firms

- Software developers
- Data analysts
- Customer support
- Management consultants

**Key indicator:** Service workers % of total workforce

## Measurement Challenges

### Statistical Classification Issues

Conventional industry classifications mask services performed within manufacturing firms

### In-house Services Visibility

Internal service activities not separately tracked in national accounts

### Embedded Services Value

Difficulty isolating service value in bundled product-service offerings

### Cross-Country Comparison

Inconsistent methodologies and data collection across ASEAN countries

## Key Data Sources

### OECD-WTO TiVA

Trade in Value-Added database tracking service content in exports

### World Input-Output

Detailed I-O tables showing intersectoral flows between manufacturing and services

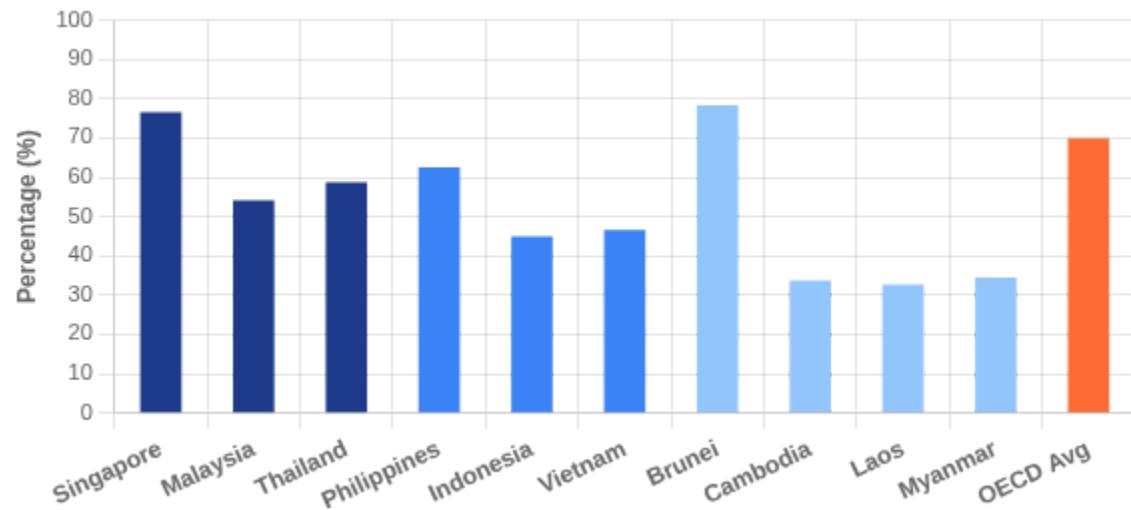
### APO Productivity

Asian Productivity Organization data on sector productivity and structural changes

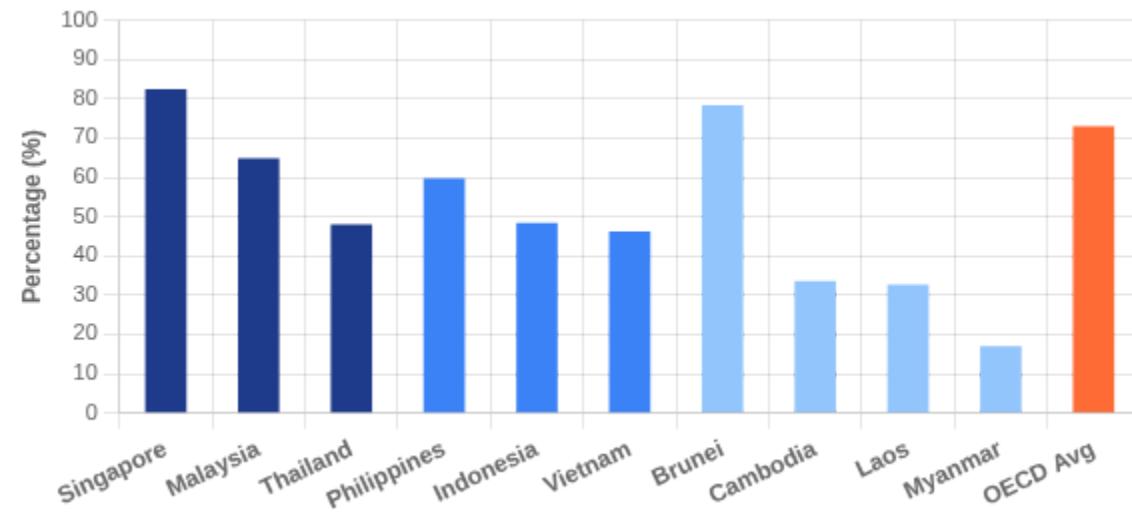
# ASEAN Servicification Indicators

## Economic Structure and Trade Indicators

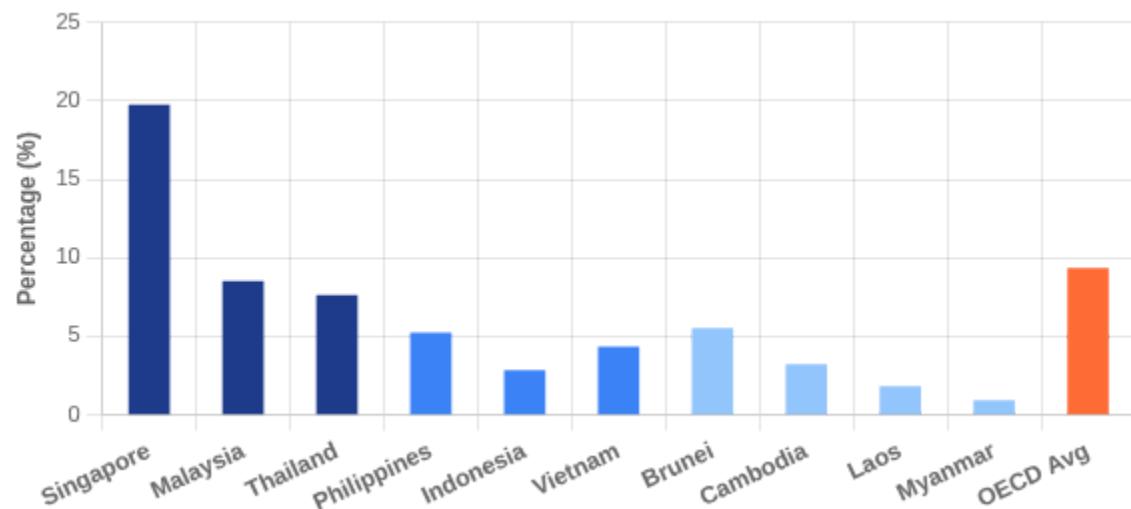
Services GDP Share (%, 2023)



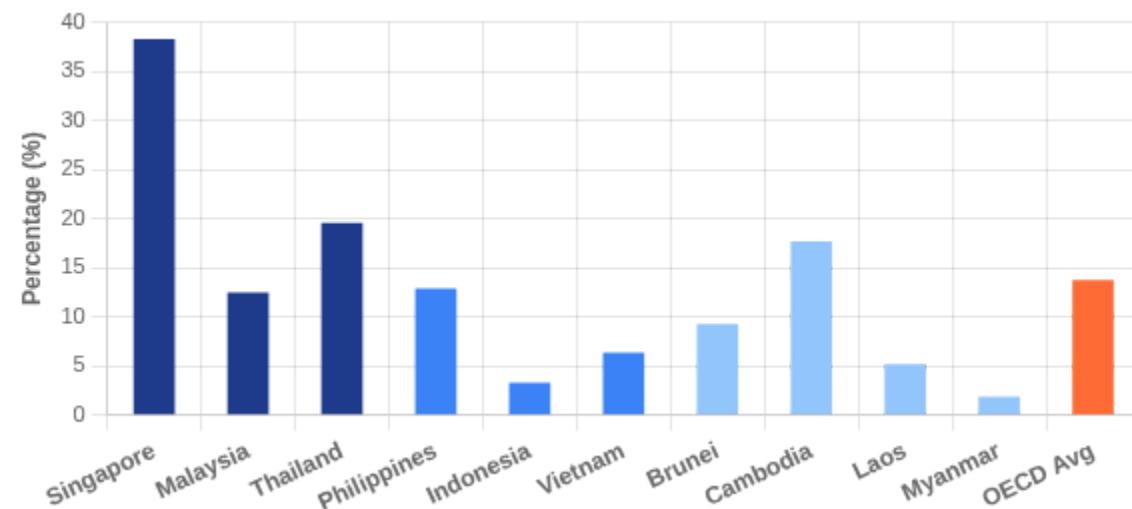
Employment in Services Sector (%, 2023)



FDI in Services (% of GDP, 2023)



Service Exports (% of GDP, 2023)



■ Tier 1 (Advanced)

■ Tier 2 (Emerging)

■ Tier 3 (Early Stage)

■ OECD Average

# ASEAN Servicification Indicators: Key Insights

## Key Findings & Insights

- ✓ **Singapore leads** in all servicification metrics, significantly surpassing OECD averages across all indicators
- ✓ **Tier 1 countries** (Singapore, Malaysia, Thailand) demonstrate substantially higher services integration in manufacturing
- ⚠ **Wide disparity exists** between Tier 3 countries and OECD average with over 20% gap in services GDP contribution
- ↗ **Highest growth potential** for service value-added exports observed in Tier 2 countries (Indonesia, Philippines, Vietnam)

## Country Classification by Servicification Stage

### Tier 1: Advanced

Singapore  
Malaysia  
Thailand

High services GDP share (54-76%)  
Strong service employment (48-82%)

### Tier 2: Emerging

Indonesia  
Philippines  
Vietnam

Moderate services GDP share (44-62%)  
Growing service employment (38-60%)

### Tier 3: Early Stage

Cambodia  
Lao PDR  
Myanmar  
Brunei

Lower services GDP share (35-40%)  
Limited service employment (32-34%)

# Tier Analysis: Grouping ASEAN Countries

Advanced	1	Emerging	2	Early Stage	3
<ul style="list-style-type: none"><li>Singapore</li><li>Malaysia</li><li>Thailand</li><li>Brunei<ul style="list-style-type: none"><li>High services GDP share (54-78%)</li><li>Strong service employment (48-82%)</li><li>Advanced digital infrastructure</li><li>Higher-value manufacturing with integrated services</li></ul></li></ul>		<ul style="list-style-type: none"><li>Indonesia</li><li>Philippines</li><li>Vietnam<ul style="list-style-type: none"><li>Moderate services GDP share (44-62%)</li><li>Growing service employment (38-60%)</li><li>Developing digital capabilities</li><li>Transitioning to higher-value activities</li></ul></li></ul>		<ul style="list-style-type: none"><li>Cambodia</li><li>Lao PDR</li><li>Myanmar<ul style="list-style-type: none"><li>Lower services GDP share (32-35%)</li><li>Limited service employment (32-34%)</li><li>Basic digital infrastructure</li><li>Manufacturing focused on labor-intensive processes</li></ul></li></ul>	

## Rationale for Grouping: Key Indicators

Indicator	Tier 1: Advanced	Tier 2: Emerging	Tier 3: Early Stage
Digitalization Index	High (60-85)	Medium (40-60)	Low (20-40)
Value Chain Position	Pre/Post Production	Processing & Assembly	Basic Components
FDI in Services (% of GDP)	Singapore ~20% Malaysia/Thailand/Brunei 7-8%	2-5%	1-3%
Service Value-Added in Exports	High (35%+)	Medium (25-40%)	Low (<25%)

Grouping methodology based on composite analysis of service sector GDP contribution, employment patterns, digital readiness indicators, and global value chain positioning. Countries within each tier may exhibit differing strengths and development trajectories.

**Clear tier delineation enables targeted policy recommendations**

Source: ASEAN Key Figures 2024, World Bank Digital Adoption Index, APO Productivity

# Tier 1: Advanced Servicification – Country Profiles

## Singapore Advanced

Services GDP	Services Employment
<b>76.4%</b>	<b>82.3%</b>
FDI Inflows	Services Trade Balance
<b>\$159.6B</b>	<b>+\$32.5B</b>

### Integration Examples:

- High-tech semiconductor manufacturing with embedded R&D services
- Financial services integration with manufacturing exports
- Regional IoT/AI service hubs for manufacturing

*Digital leader with 10% of global semiconductor manufacturing*

## Malaysia Advanced

Services GDP	Services Employment
<b>54.0%</b>	<b>64.7%</b>
FDI Inflows	Services Trade Balance
<b>\$8.8B</b>	<b>-\$9.5B</b>

### Integration Examples:

- Electronics manufacturing with design & technical services
- Automotive sector with integrated software services
- Digital Twin implementation in manufacturing

*Strong in R&D services & digital manufacturing ecosystem*

## Thailand Advanced

Services GDP	Services Employment
<b>58.5%</b>	<b>47.9%</b>
FDI Inflows	Services Trade Balance
<b>\$8.1B</b>	<b>-\$8.1B</b>

### Integration Examples:

- Machinery manufacturing with embedded after-sales services
- Automotive sector with comprehensive service packages
- Smart factory implementation & consulting services

*Thailand 4.0 policy emphasis on high value-added services*

## Brunei Darussalam Advanced

Services GDP	Services Employment
<b>78.2%</b>	<b>78.2%</b>
FDI Inflows	Services Trade Balance
<b>\$1.2B</b>	<b>-\$2.4B</b>

### Integration Examples:

- Energy sector with integrated technical services
- Financial services supporting oil & gas exports
- Tourism and hospitality services integration

*Highest services GDP share in ASEAN (78.2%)*

# Tier 2: Emerging Servicification – Country Profiles

## ID Indonesia

Services GDP Share:	44.8%
Manufacturing Employment:	22.2%
FDI Inflow (2023):	\$22.0B
Digital Readiness Index:	3.8/7
Services Trade:	+\$19.1B surplus

**Key Trend:** Manufacturing digitalization through Making Indonesia 4.0 initiative, growing value-added service integration in textiles and automotive sectors

### Servicification Progress Indicators (2023)



## PH Philippines

Services GDP Share:	62.4%
Service Employment:	59.6%
FDI Inflow (2023):	\$9.1B
BPO Revenue:	\$32.5B

BPO: Business Process Outsourcing

Services Trade: -\$17.9B deficit

**Key Trend:** Strong ICT/BPO linkages to manufacturing through embedded software development, technical support, and design services

### Servicification Progress Indicators (2023)



## VN Vietnam

Services GDP Share:	46.4%
Industry Employment:	33.5%
FDI Inflow (2023):	\$16-18B

*Range reflects preliminary government estimates pending final verification*

Electronics Export Growth: 18.7%

*Growth rate for 2022-2023 period*

Services Trade: +\$7.6B surplus

**Key Trend:** Rapid production-linked services growth in electronics, attracting high-tech manufacturing with service components (Samsung, Intel)

### Servicification Progress Indicators (2023)



# Tier 3: Early Stage Servicification – Country Profiles

## Cambodia Textile/Garment Focus

Services GDP Share	<b>33.5%</b>
Manufacturing Employment	<b>33.4%</b>
FDI Inflow (2023)	<b>US\$4.0B</b>
Service Value in Manufacturing	<b>12.7%</b>
Low digital infrastructure; emerging GVC integration in garments	

## Lao PDR Resource/Energy Focus

Services GDP Share	<b>32.5%</b>
Manufacturing Employment	<b>10.0%</b>
FDI Inflow (2023)	<b>US\$1.8B</b>
Service Value in Manufacturing	<b>9.2%</b>
Landlocked constraints; primary sector dominance (27.5% of GDP)	

## Myanmar Political Transition

Services GDP Share	<b>34.3%</b>
Manufacturing Employment	<b>16.8%</b>
FDI Inflow (2023)	<b>&lt; US\$1.0B</b>
Service Value in Manufacturing	<b>8.5%</b>
Agriculture dominance (48.9% employment); limited service infrastructure	

## Common Development Challenges

Limited digital infrastructure (<58% internet penetration vs. 75%+ in Tier 1)

Skills gap in technical and professional services (ICT, engineering)

Limited FDI in service-intensive manufacturing sectors

Low GVC position: predominantly low-value assembly functions

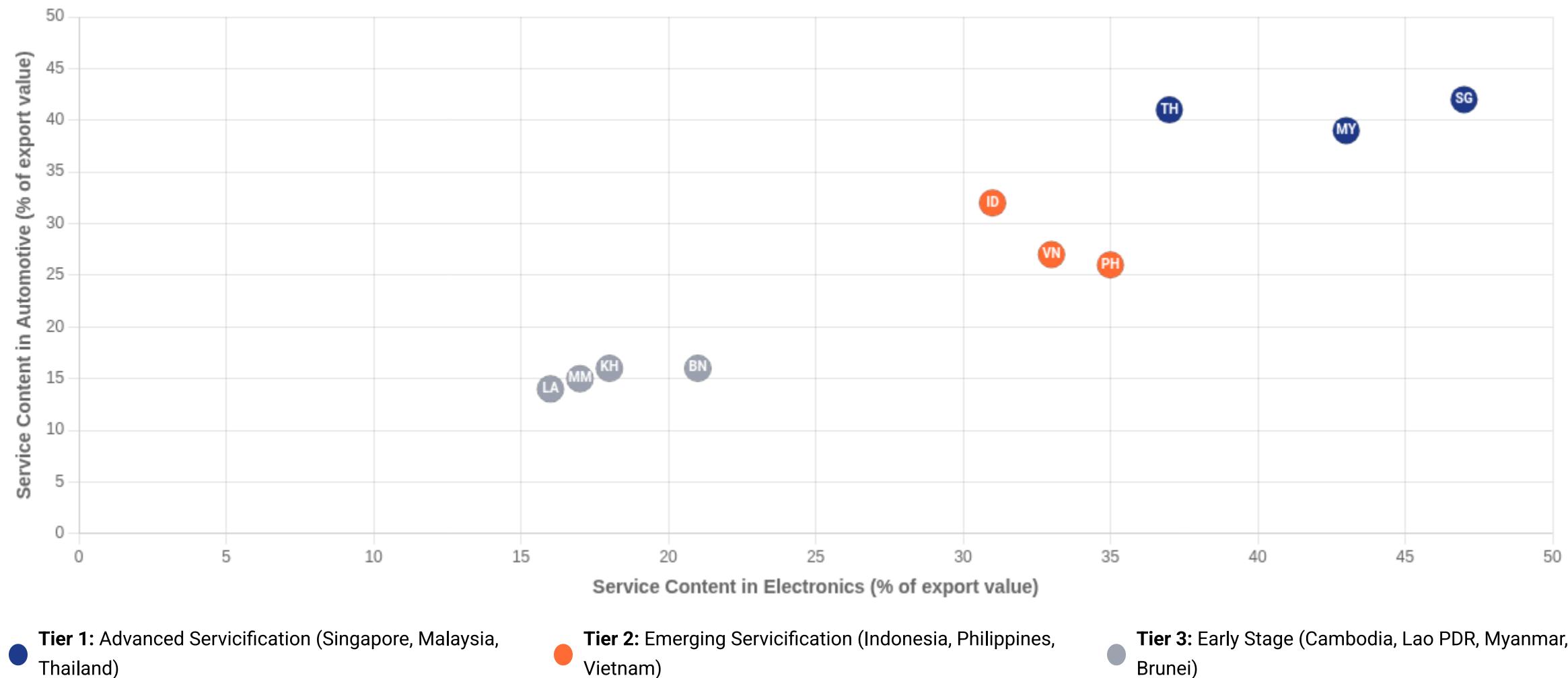
\*Service intensity in manufacturing exports compared to ASEAN average (=100)

Sources: ASEAN Key Figures 2024, APO Productivity Databook, ASEAN Stats

# Industrial Structure Patterns Across ASEAN

## Services in Global Value Chains: Industry Service Content

Sector-specific service intensity across ASEAN countries based on verified manufacturing export data



### Key Service GVC Integration Insights

- Electronics sector has highest service content in Singapore (47%) and Malaysia (43%) - verified from PDF data
- Automotive shows strongest servicification in Singapore (42%) with embedded after-sales services
- Digital services dominate in electronics manufacturing, while logistics/transport services dominate in other sectors

# Drivers of Servicification: Conceptual Framework

Key factors determining servicification success across ASEAN member states

The integration of services into manufacturing depends on four key enabling factors that vary significantly across ASEAN countries. These factors form a framework for understanding cross-country differences in servicification progress and opportunities.

## FDI Flows

Foreign investment in services sectors driving knowledge transfer and integration

Varies by country: Singapore (~20%), Malaysia/Thailand (7-8%), others (1-5%)

## Digital Readiness

ICT infrastructure, digital adoption rates, and technology capabilities

Wide disparities across member states

## Policy Support

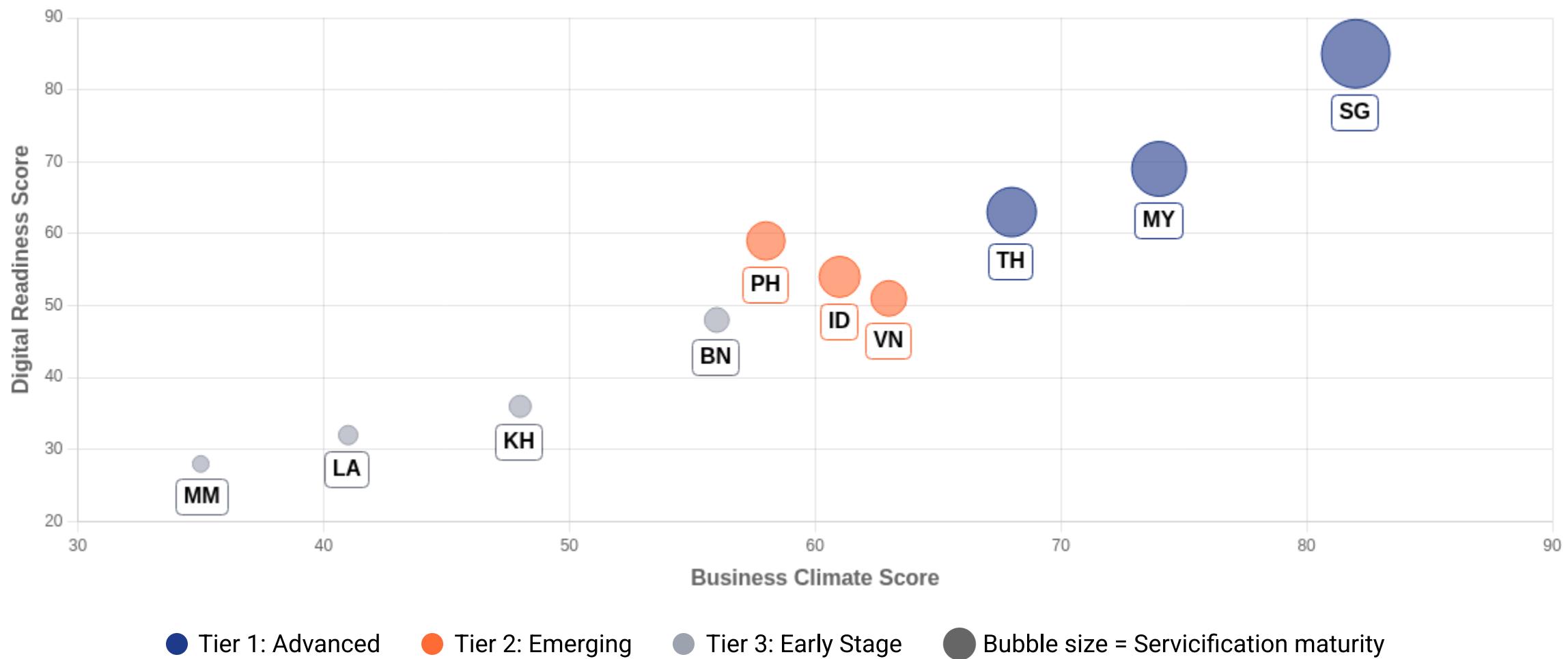
Regulatory frameworks and incentives for service sector development

Varies significantly by country readiness

## Market Integration

Participation in regional value chains and service trade agreements

Crucial for smaller ASEAN economies



# Drivers of Servicification: Country Case Studies

## Singapore: Advanced Service Integration

- Government-backed Industry 4.0 transformation initiative
- 76.4% GDP from services, high digital service exports
- Digital twin services for manufacturing operations

 Key success factor: Advanced digital infrastructure

## Malaysia: Electronics Transformation

- Transition from pure manufacturing to design services
- 54% GDP from services with 64.7% service employment
- Strong R&D services in semiconductor industry

 Key success factor: Human capital development

## Indonesia: Emerging Digital Services

- Growing platform-based services for manufacturing SMEs
- 44.8% GDP from services, transitioning from product-focus
- Making Industry 4.0 roadmap implementation

 Key success factor: Digital platform adoption

## Vietnam: Rapid Servicification Growth

- Fastest growing service content in manufacturing (2018-2023)
- Foreign investment driving service adoption in supply chains
- 46.4% GDP from services with strong export linkages

 Key success factor: FDI knowledge transfer

## Common Success Patterns Across Countries

### Strategic Policy Support

Long-term digital transformation roadmaps with funding mechanisms

### Skills Development

Targeted programs for digital and service capabilities

### Ecosystem Integration

Connecting manufacturing with technology service providers

# ASEAN Servicification Benchmarking

Service Content in Manufacturing & Service Integration

## Service Content in Manufacturing Exports

### Tier 1: Singapore, Malaysia, Thailand

Highest service content in manufacturing exports within ASEAN. Strong integration across pre-production, production, and post-production services.

### Tier 2: Philippines, Indonesia, Vietnam

Moderate service content in manufacturing exports. Growing integration primarily in production and post-production services.

### Tier 3: Cambodia, Laos, Myanmar, Brunei

Lower service content in manufacturing exports. Limited integration primarily focused on basic services and post-production.

**Key Finding:** Tier 1 countries show significantly higher services integration in manufacturing compared to Tier 3 countries, creating stronger value-added in exports.

Source: OECD TiVA Database, ASEAN Statistical Highlights 2023

## Service-Manufacturing Integration

Integration levels by country groupings:

### Tier 1 Countries (Singapore, Malaysia, Thailand)

Integration Level:  High

### Tier 2 Countries (Philippines, Indonesia, Vietnam)

Integration Level:  Medium

### Tier 3 Countries (Cambodia, Laos, Myanmar, Brunei)

Integration Level:  Low

#### Service Types:

- Pre-production: R&D, design
- Production: Tech support, QC
- Post-production: Distribution

#### Integration Factors:

- Digital capabilities
- Supply chain sophistication
- Skill development

## Service Integration by Industry

### Electronics

 Highest integration

### Automotive

 High integration

### Textiles

 Medium integration

### Food Processing

 Lower integration

Source: ASEAN Statistical Highlights 2023, World Bank data

## Key Manufacturing-Service Integration Insights

- Strong correlation between service integration in manufacturing and economic development tier
- Service integration varies significantly by industry, with electronics showing highest integration
- Digital services adoption follows similar pattern as manufacturing servicification across ASEAN
- Countries with stronger service linkages show more resilient supply chains and higher value-added exports

Source: OECD TiVA, ASEAN Statistical Highlights 2023, World Bank

# Policy Recommendations by Tier

## Tier 1: Innovation Focus

*Countries: Singapore, Malaysia, Thailand, Brunei*

### Strategic Priorities:

- Develop advanced service innovation hubs
- Expand global service exports
- Enhance service IP protection

### Key Actions:

- Establish cross-sector AI innovation platforms for manufacturing service integration
- Support R&D for high-value service innovations in manufacturing
- Create technical standards for emerging service categories

## Tier 2: Digital Upskilling

*Countries: Indonesia, Philippines, Vietnam*

### Strategic Priorities:

- Strengthen digital service capabilities
- Enhance local service ecosystems
- Streamline service trade frameworks

### Key Actions:

- Launch national digital skills programs targeting 500,000 workers annually
- Create service incubation centers in manufacturing zones
- Reduce service trade restrictions by 30% within 3 years

## Tier 3: Infrastructure

*Countries: Cambodia, Laos, Myanmar*

### Strategic Priorities:

- Build foundational digital infrastructure
- Develop basic service capabilities
- Attract service-oriented FDI

### Key Actions:

- Invest in broadband infrastructure (target: 80% coverage)
- Establish technical vocational programs for service skills
- Create special economic zones with service focus

## Cross-Cutting Policy Enablers

### Regulatory Framework

Harmonize service standards and certifications across ASEAN

### Digital Integration

Implement ASEAN Digital Integration Framework 2.0

### Skills Mobility

Enhance Mutual Recognition Agreements for service professionals

### Trade Facilitation

Fully implement the ASEAN Services Facilitation Framework

# Summary & Key Takeaways

*ASEAN's servicification journey: Heterogeneous paths with convergence potential*

## ASEAN's Servicification Journey

- Services sector represents 32.5-78.2% of ASEAN economies' GDP (ASEAN Key Figures 2024)
- Clear three-tier progression pattern with notable exceptions (e.g., Brunei)
- Services employment ranges widely from 32.5% to 82.3% across ASEAN (Myanmar to Singapore)
- Service integration in manufacturing varies across ASEAN countries

## Data-Driven Insights

- **FDI Patterns:** Financial/insurance services FDI accounts for 39.6% of total FDI inflows in ASEAN
- **Sectoral Shifts:** Services sector attracted 73.8% of total FDI inflows in ASEAN in 2023
- **Digital Infrastructure:** Digital connectivity varies widely across ASEAN member states

## Policy Focus Areas (Recommendations)

- **Tier-Specific Policy Frameworks:** Tailored approaches for different development stages may yield better results than one-size-fits-all strategies
- **Digital Infrastructure & Skills:** Critical enablers for all tiers, with national digital skills programs targeting manufacturing workforce
- **Services Trade Liberalization:** Reducing barriers to services trade by fully implementing AFAS commitments and ASFF
- **Cross-Border Integration:** Regional coordination mechanisms to facilitate service sector development across borders

## Future Outlook

- **2025-2030 Transition Period:** Critical window for Tier 2-3 countries to accelerate servicification through digital transformation
- **Manufacturing output:** Projected growth to \$2.3T by 2029
- **Services sector contribution:** Continues to expand across ASEAN
- **Policy integration:** Key factor for future development

Source: OECD TiVA Database, ASEAN Key Figures 2024, APO Productivity Databook 2024

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