

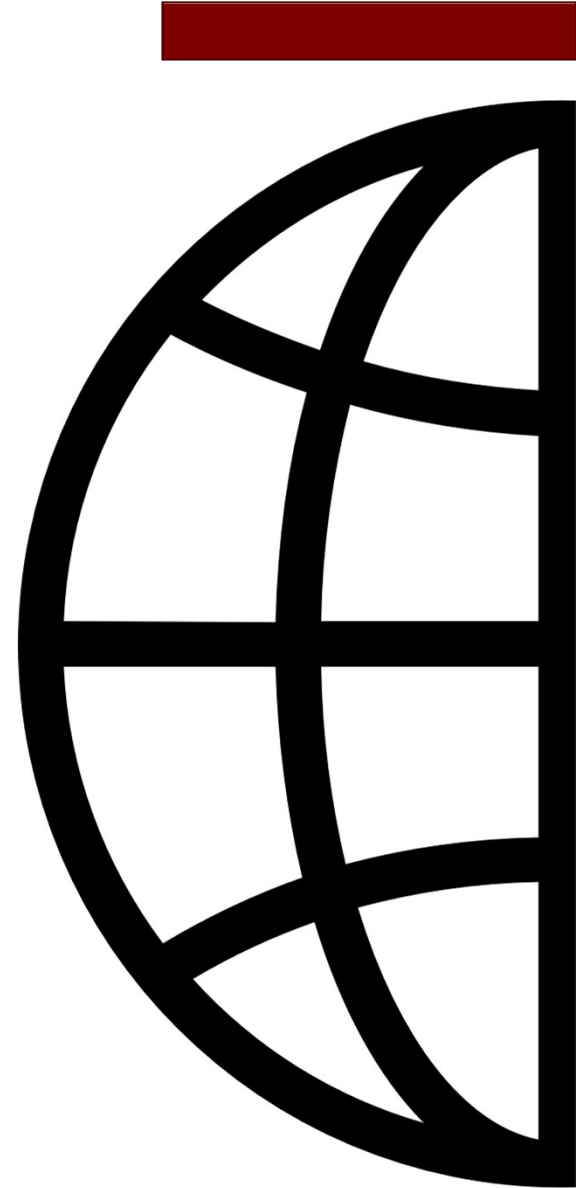


Global Tissue Industry

Stanley Okoro

Group Managing Director

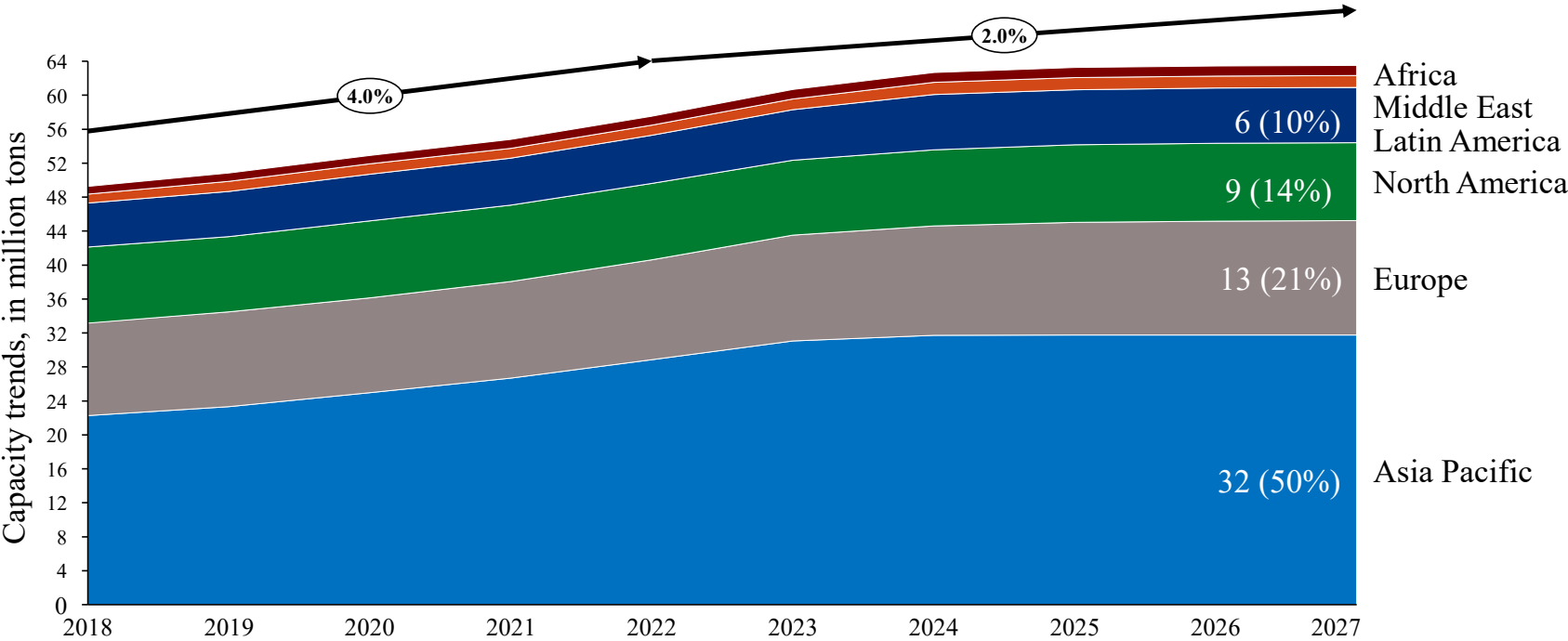
24 October 2023 | VPPA Conference, Ho Chi Minh City



Discussion

- Global Tissue Market Analysis
- Asia Tissue Market Summary
- SE Asia Tissue Market Focus
- Opportunities for Vietnam as a Tissue Exporter
- Thank you!

Global Tissue Capacity Trends



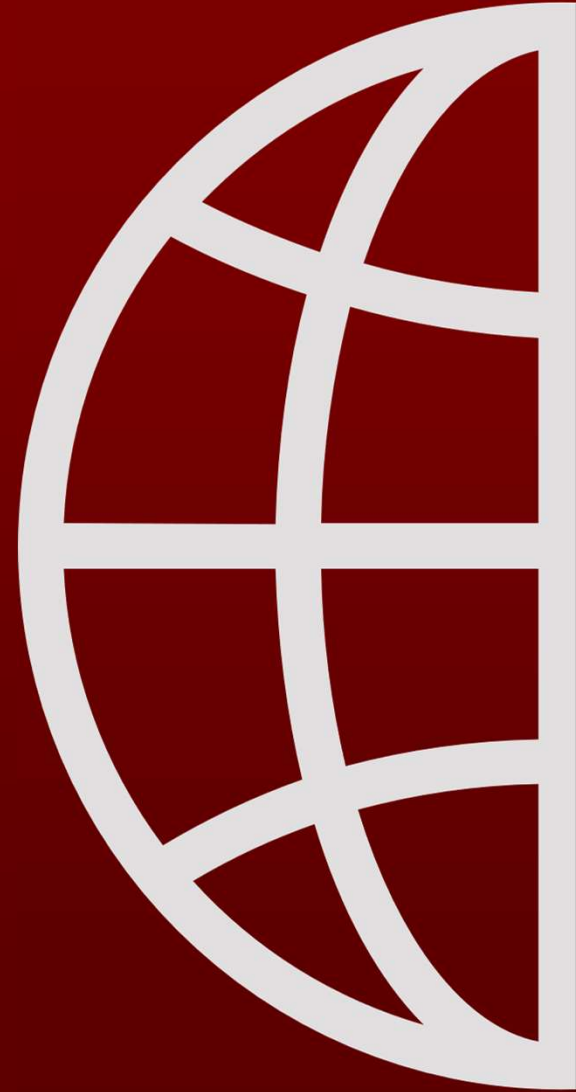
Average Tissue Consumption per Person (Kg/Year)

Region	Capacity Million Tonnes	Per Capita Consumption (Kg/year)
North America	9	24
Europe	11	10 - 20
Asia Pacific	24	5.6
China	17	12
Japan	2.2	18
India	0.2	0.2
Middle East	1.2	5
Latin America	5.3	8.5
Africa	0.9	1

Tissue Product Expectations

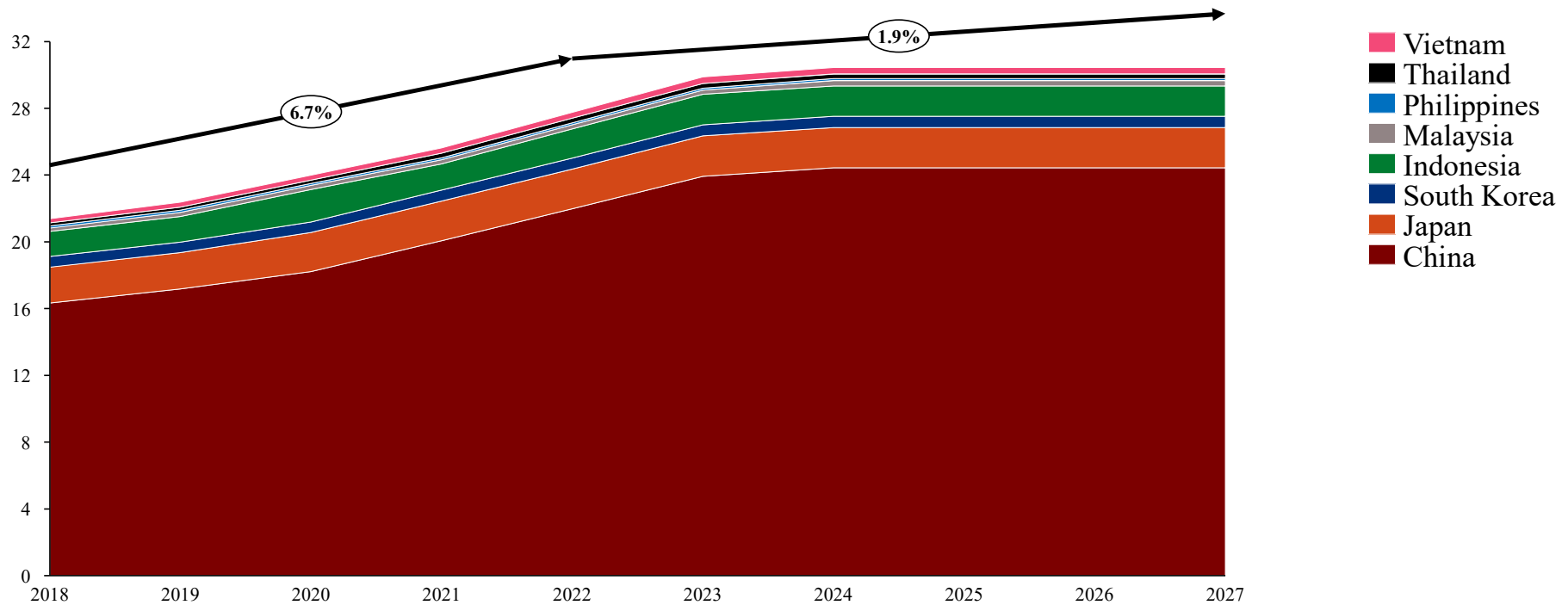
Segment	Consumer	Commercial
Bath Tissue	Soft, Absorbent, Tensile Strength	Dispensing Strength, Soft and Absorbent
Roll Towels	Absorbent, Tensile Strength, Soft	Absorbent, Tensile Strength, and High Capacity
Napkins	Absorbent, Tensile Strength, Decoration	High Capacity, Brand Display
Facial Tissue	Soft, Absorbent, Tensile Strength	Absorbent, Tensile Strength

Asia Tissue Market



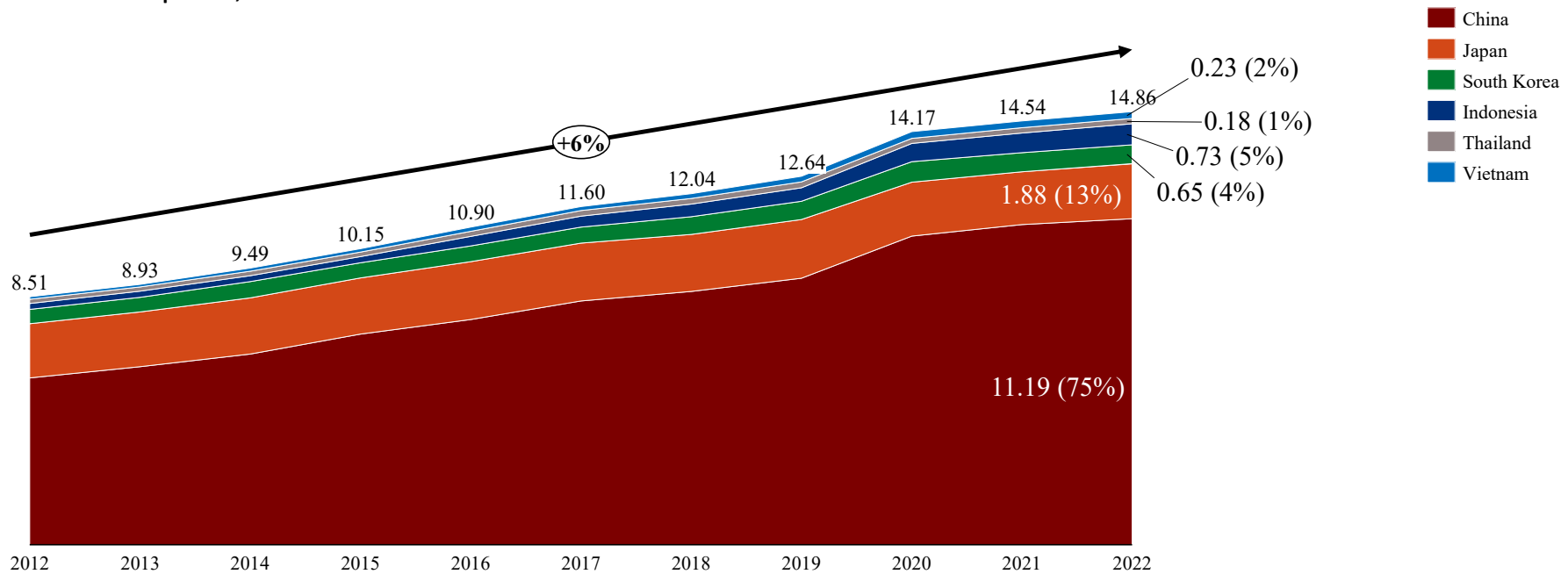
Capacity Trends in Major Asian Countries

Capacity trends, in million tons



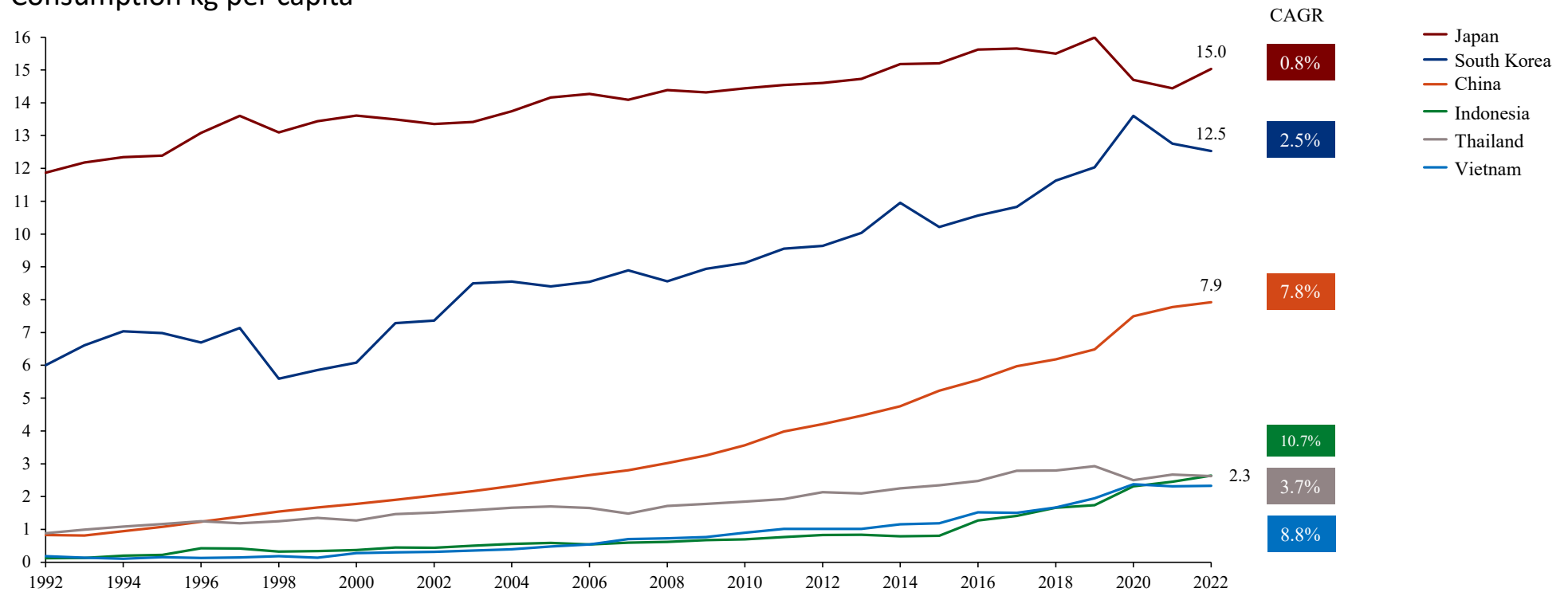
Consumption in Major Asian Countries

Consumption, in million tons

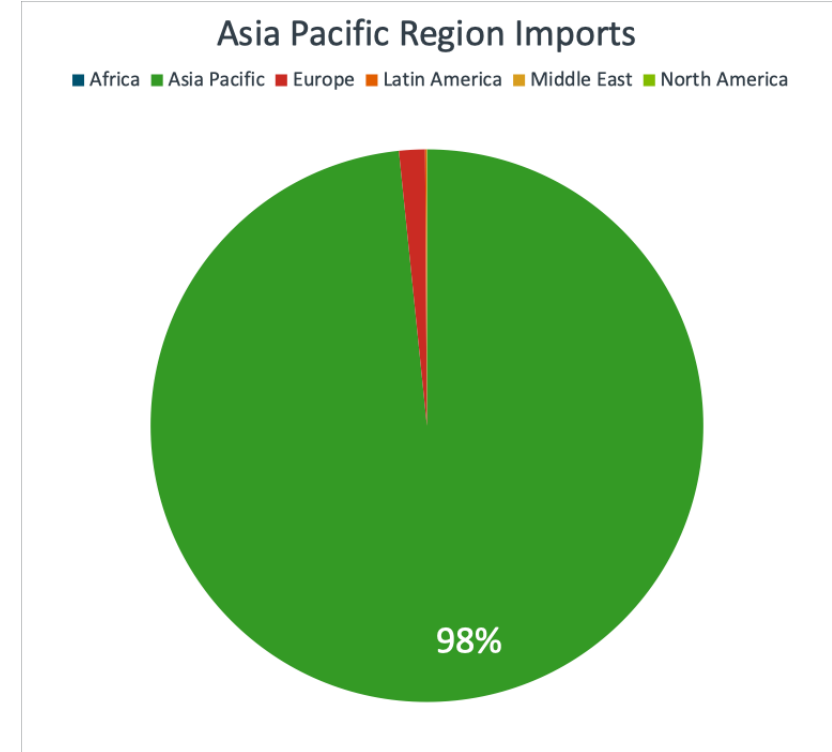
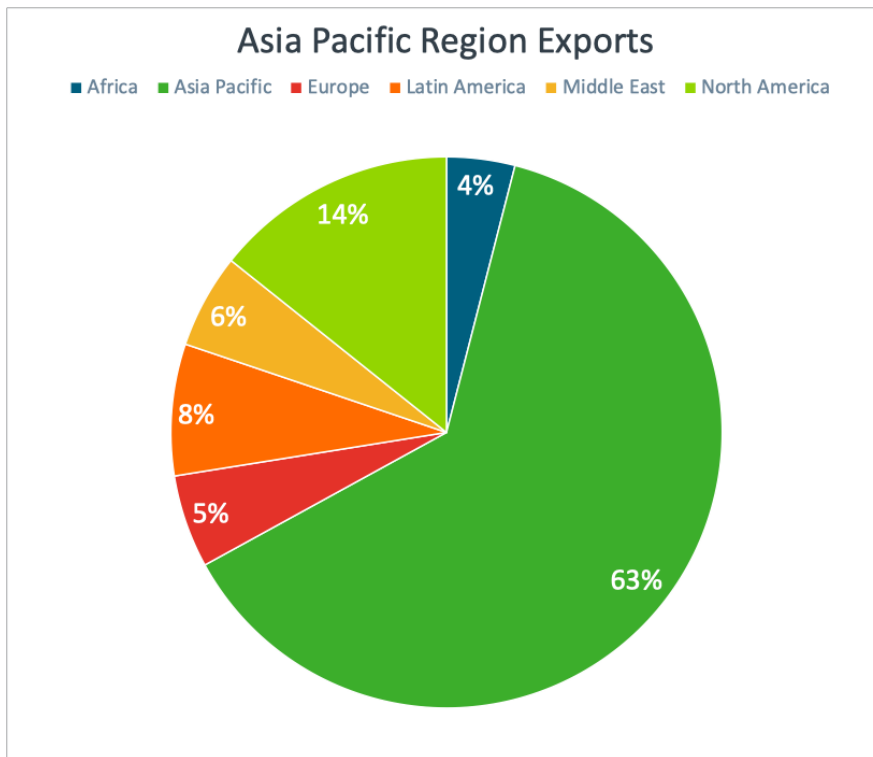


Consumption Per Capita in The Past 30 Years

Consumption kg per capita

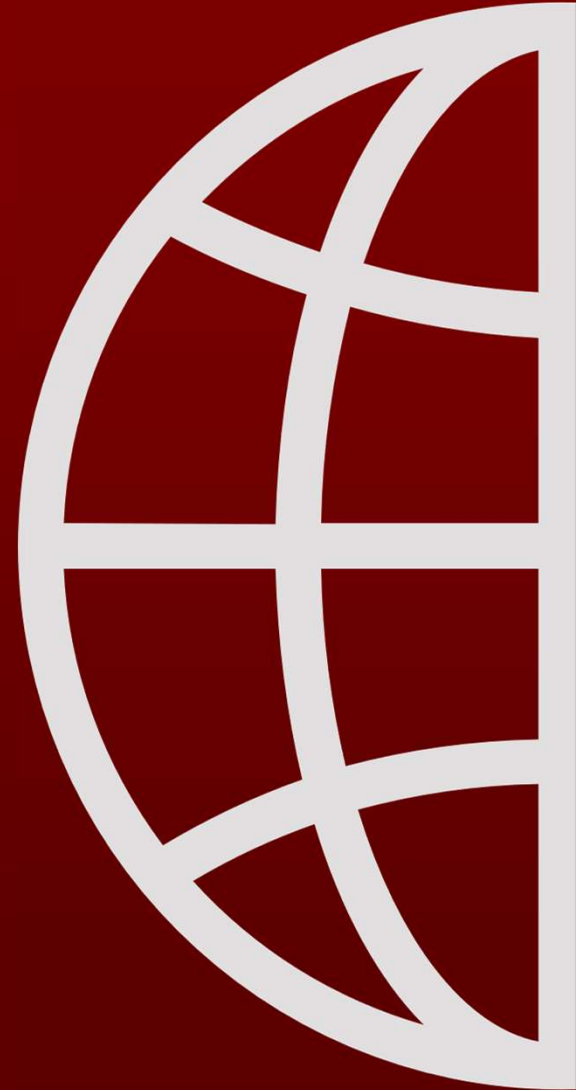


Asia Pacific Tissue Trade

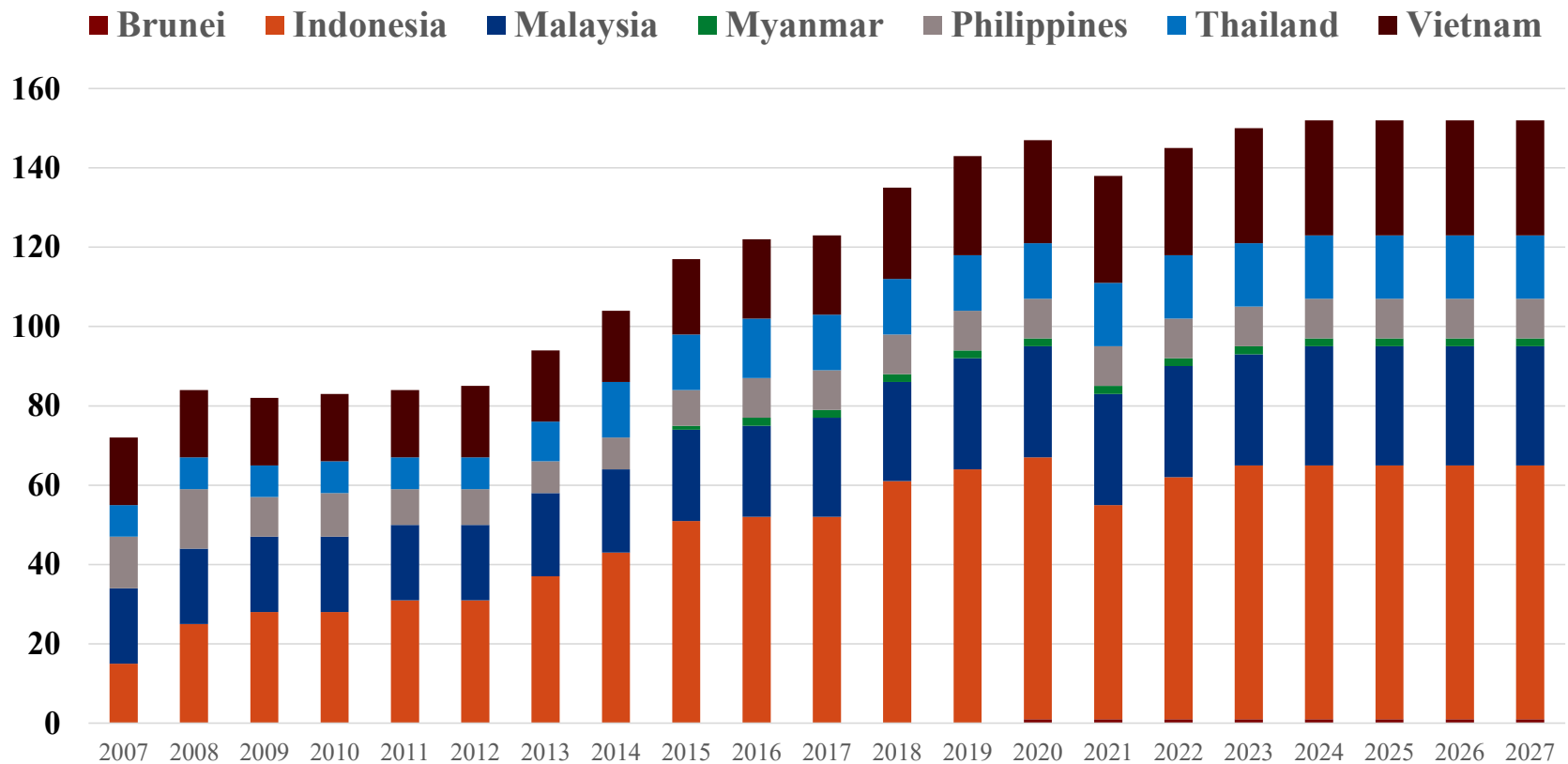




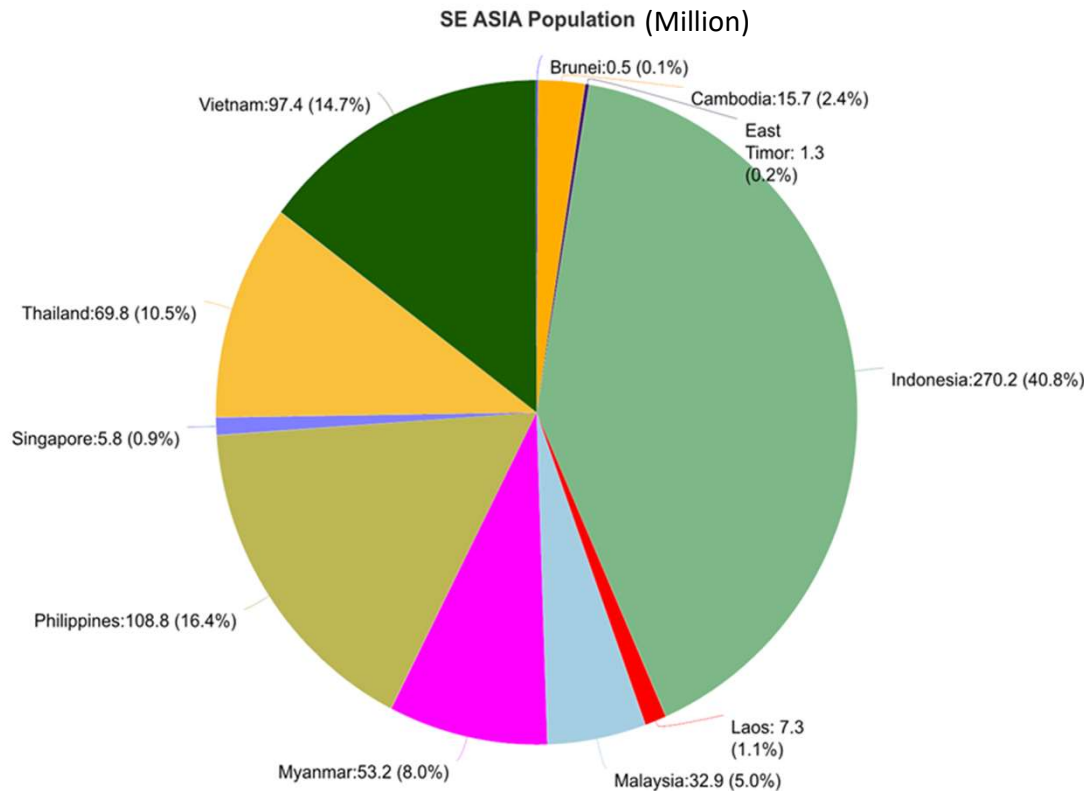
SE Asia Tissue Market Focus



SE Asia Tissue Machines

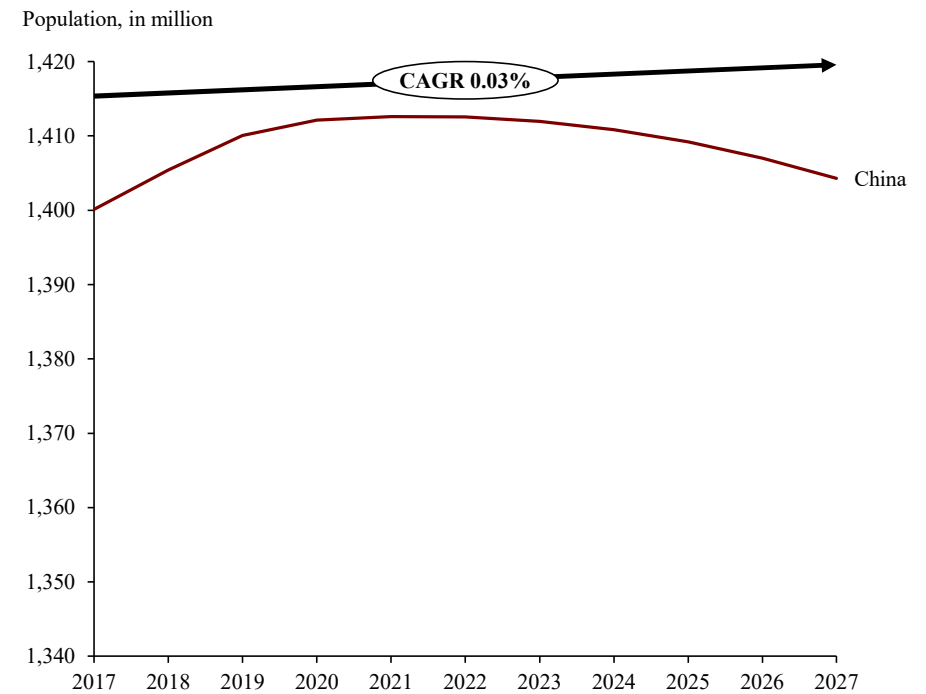
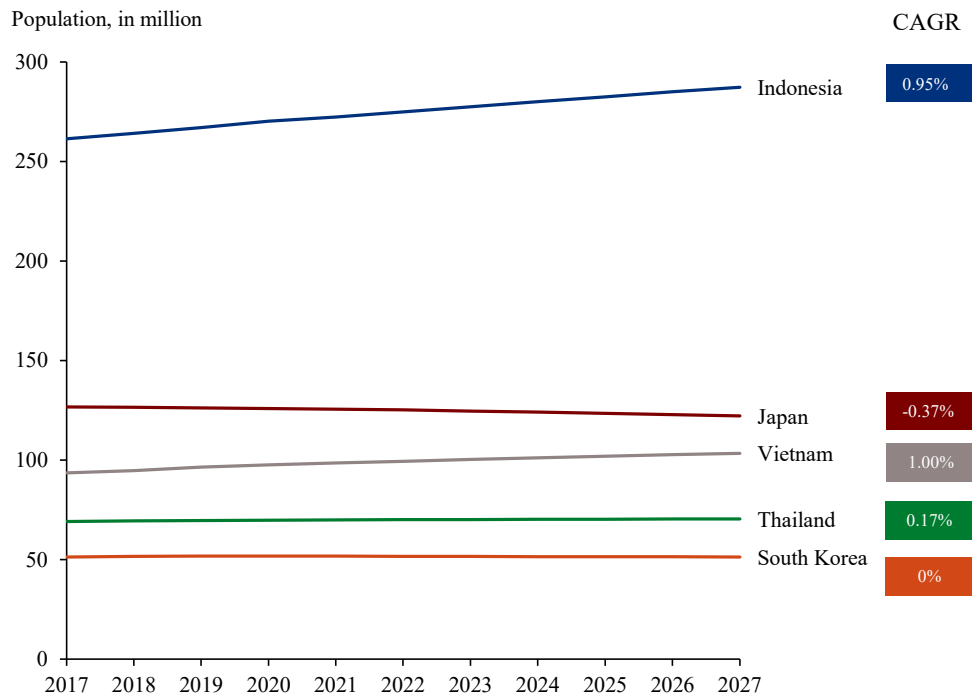


Tissue Consumption Drivers

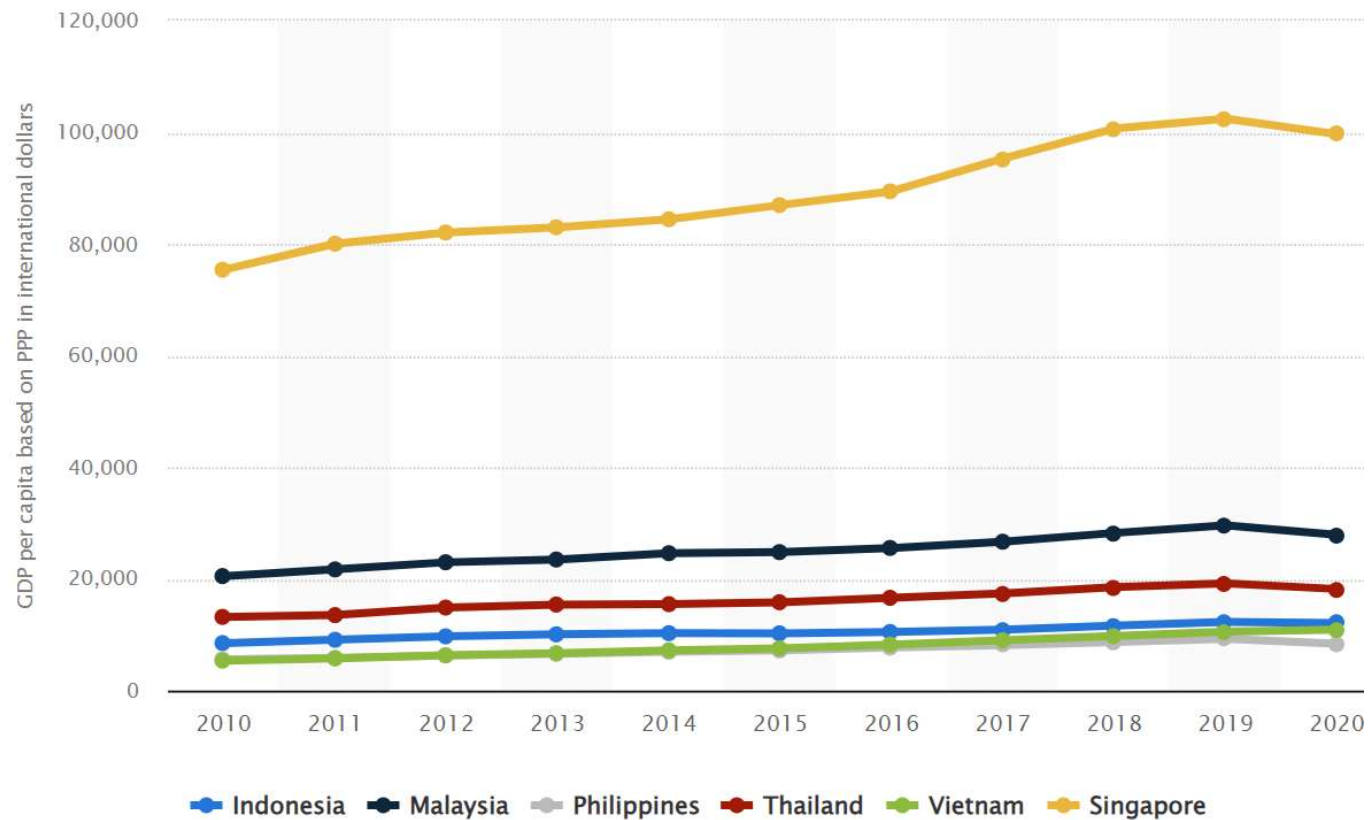


- Population Growth & Urbanization
- GDP/Consumer Purchasing Power
- Consumer Inflation & Unemployment
- Cultural shifts

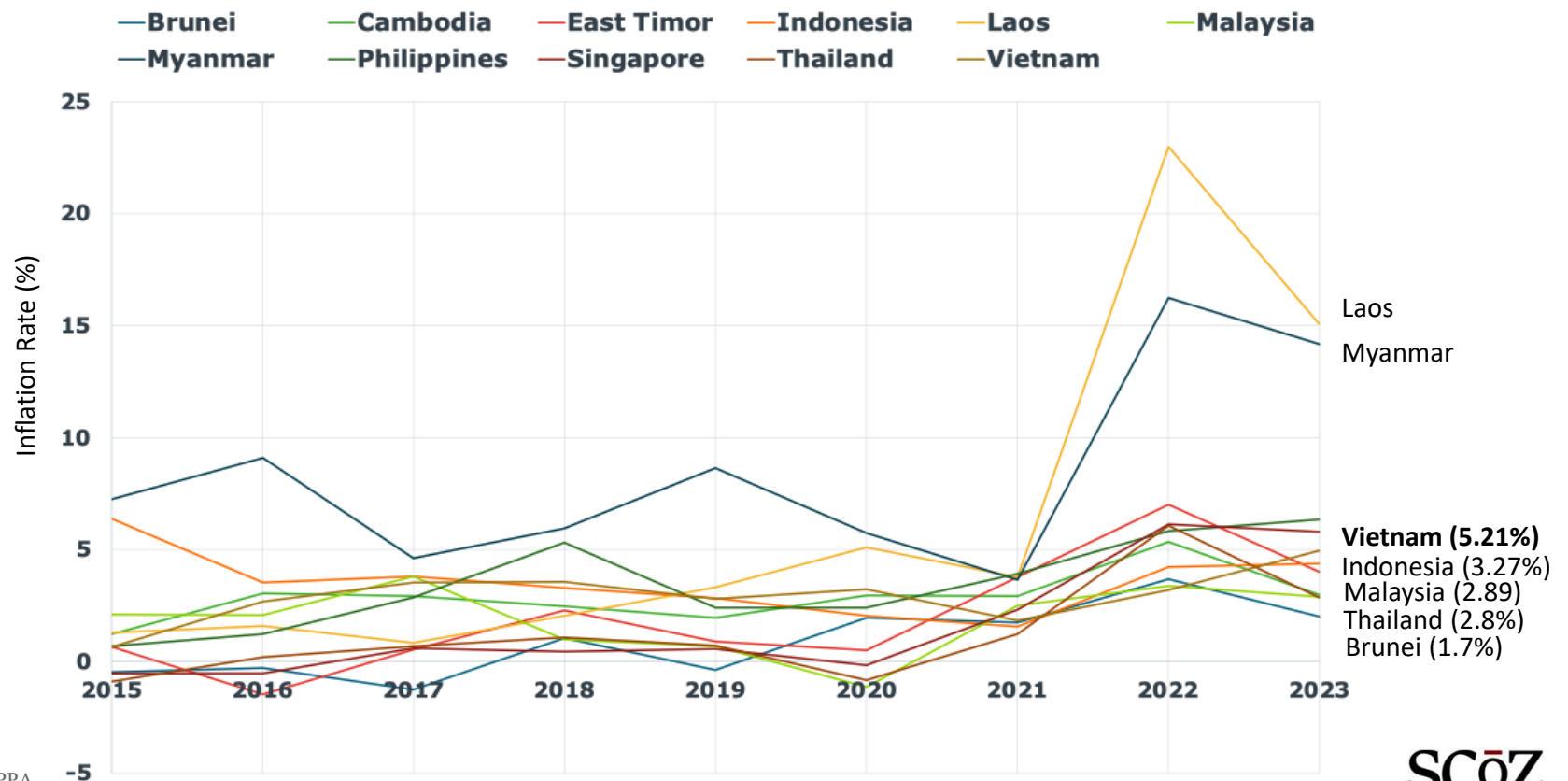
Population Growth Rate



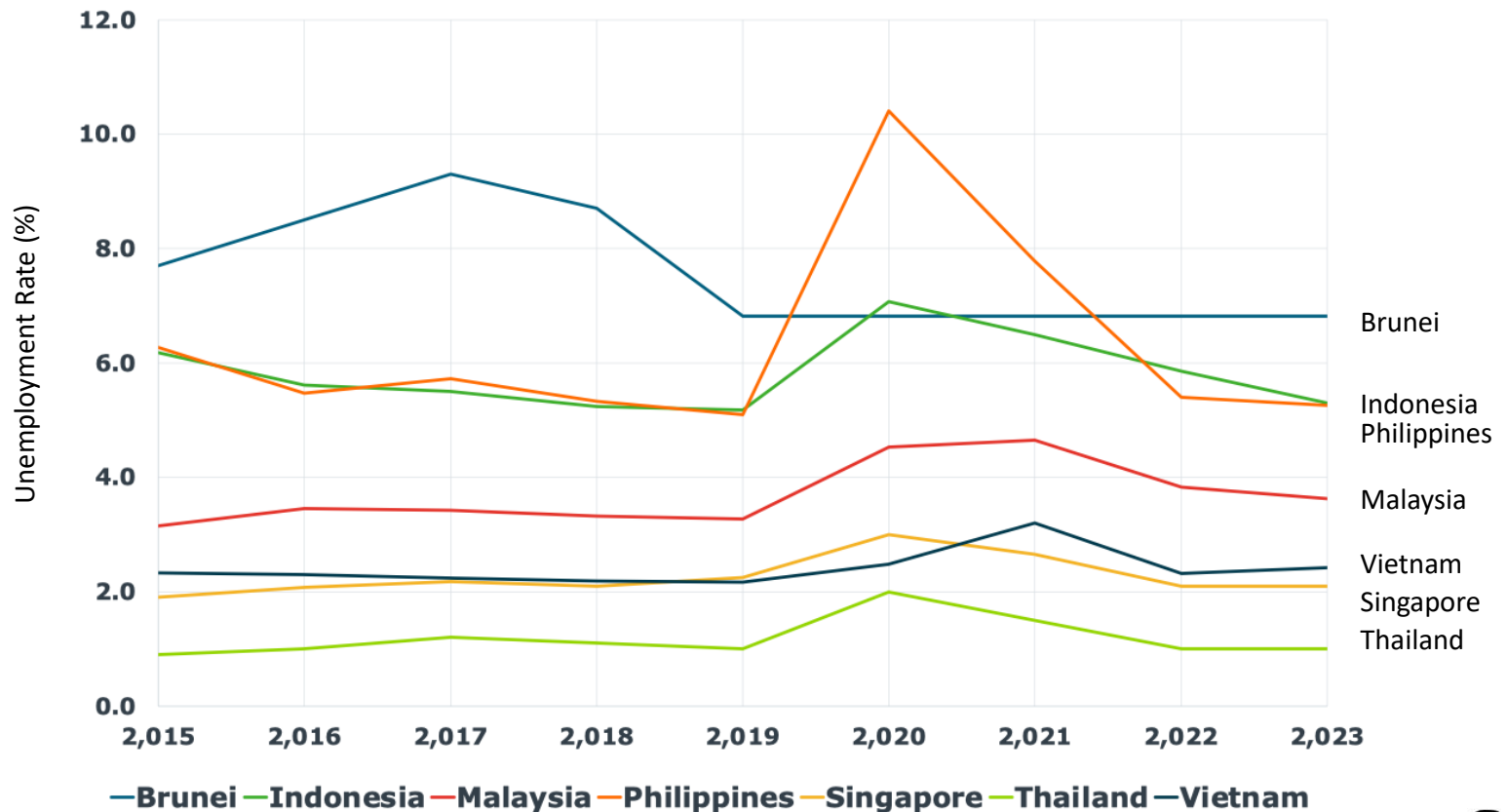
SE Asia Consumer Purchasing Power



SE Asia Consumer Inflation

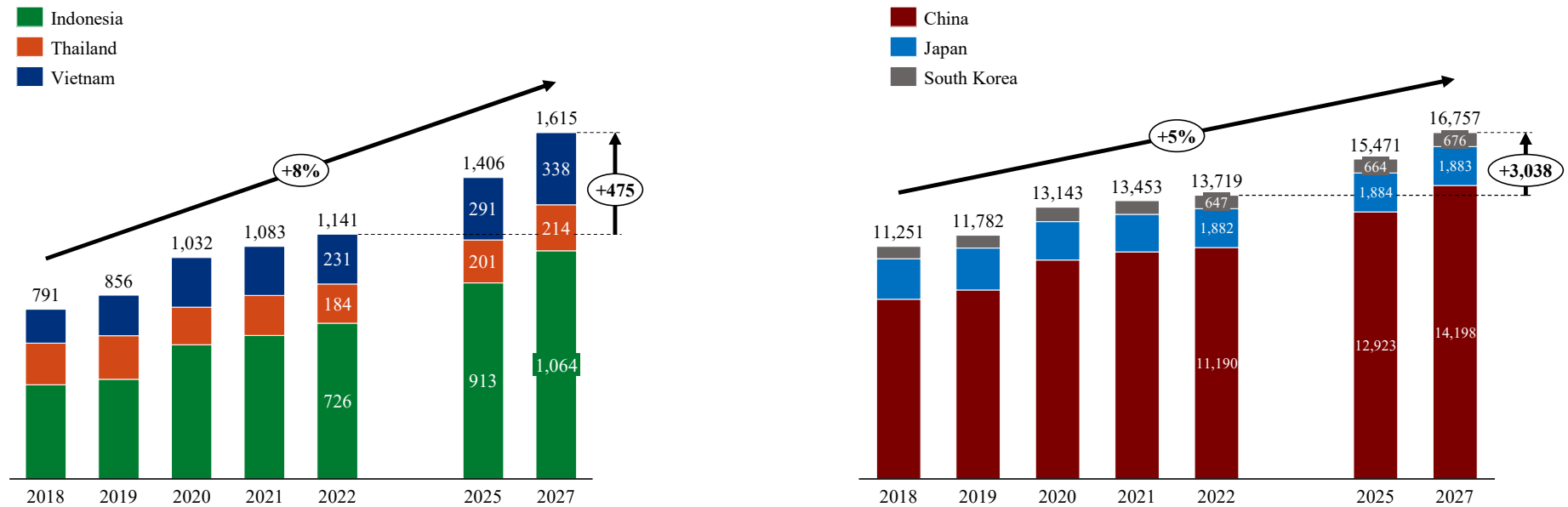


SE Asia Consumer Unemployment



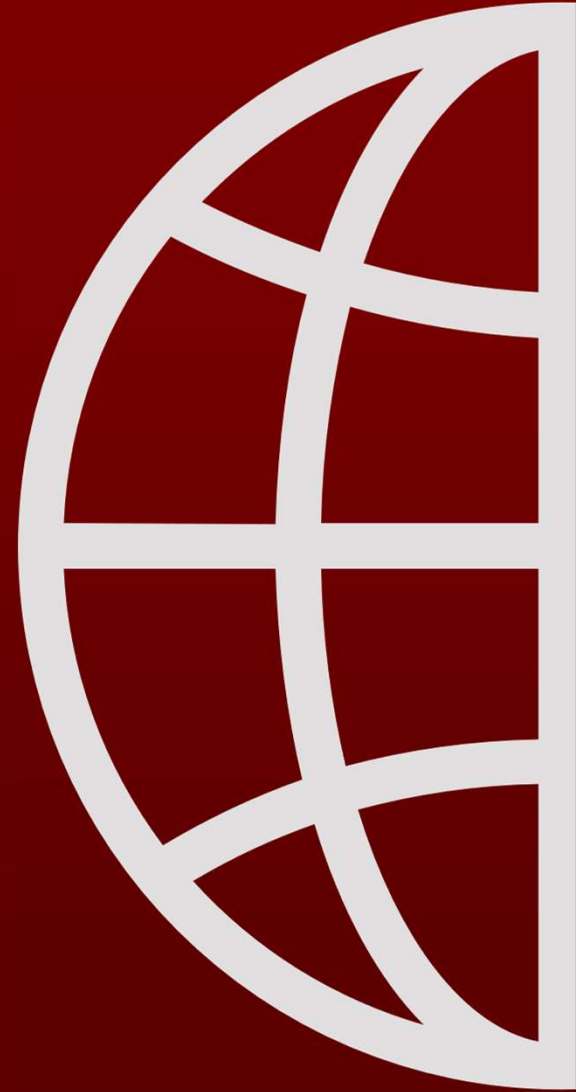
Consumption Growth Potential

Consumption Projection, in 000 tons





Vietnam Tissue Market Focus



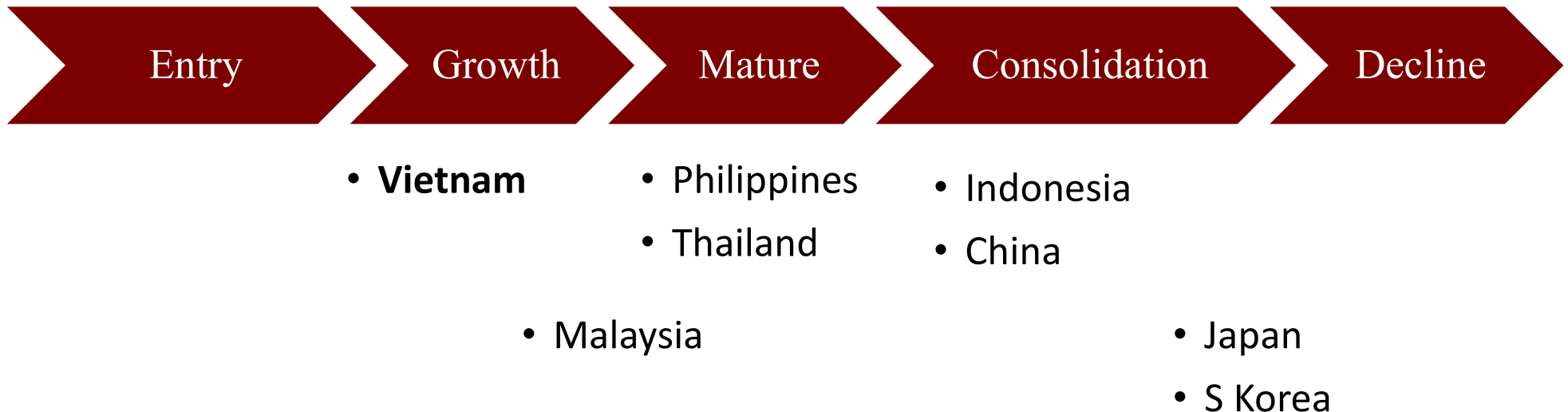
Vietnam Tissue Machine Quality Observations

- 65% are competitive with the big Indonesian Machines for technical age.
- 25% are in the middle of the SE Asian fleet for technical age. None are below average.
- Indonesia has faster machines than 65% of Vietnam's machines
- Vietnam's Tissue Fleet is of higher quality than Thailand, the Philippines, and Myanmar, and about 50% of Malaysian machines
- 40% of Indonesian machines have a cost advantage of virgin or recycled fiber integration

Tissue Market Dynamics

- **Global:** Pulp producers forward integration with tissue makers
- **South America:** Tax credits
- **Asia:** Rising e-commerce penetration, private labeling, cost optimization (less cost impact from pulp side)

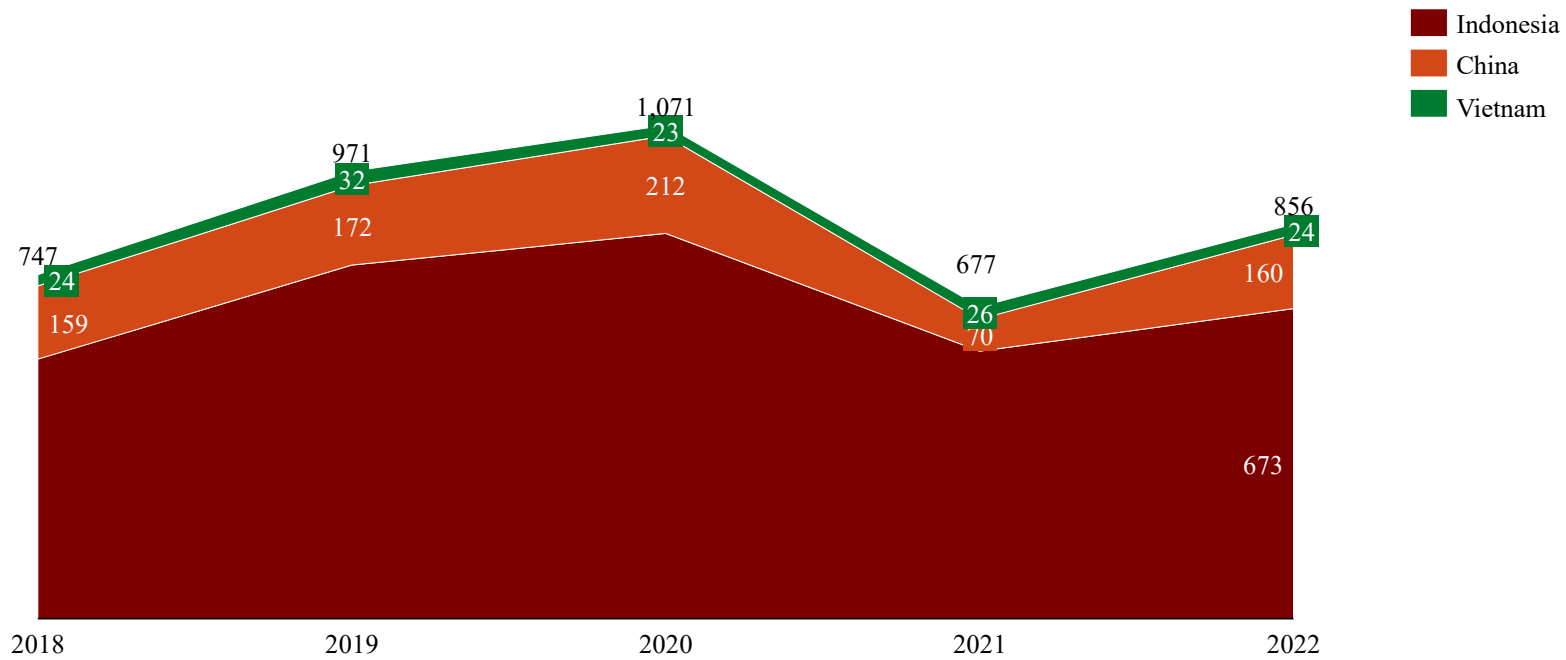
Sample Life Cycle Phases



Export Attractiveness Factors

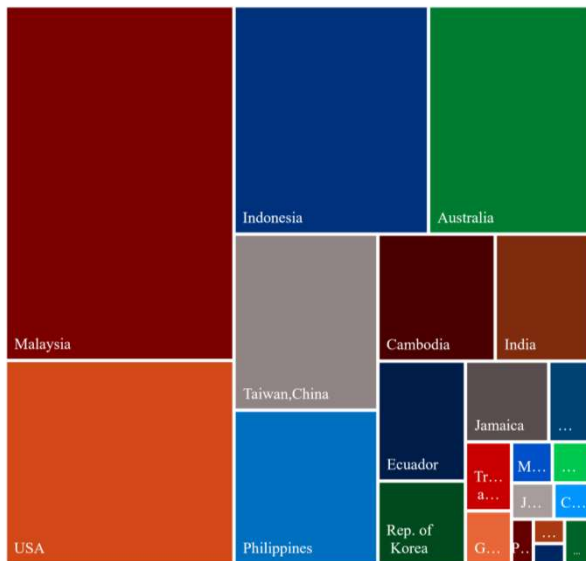
- Delivered Cost (Manufacturing and Transportation)
- Tissue Machine Technology/Quality (Size, Tech Age, etc.)
- Import Attractiveness i.e., ESG/Sustainability, logistics

Net Export (000 tons)



Export Destination Comparison

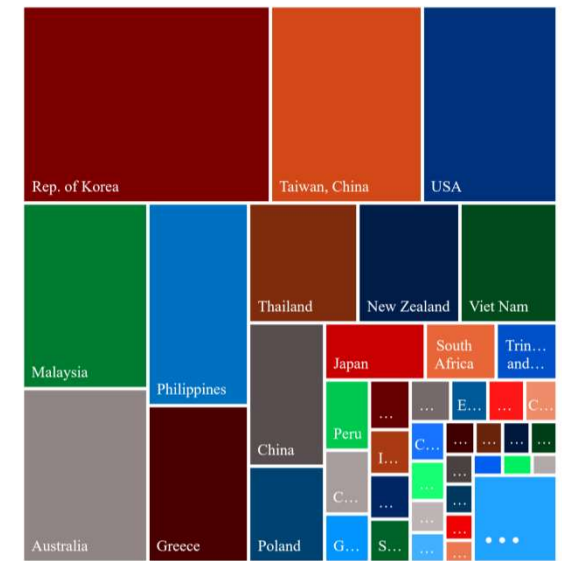
Vietnam



China



Indonesia



Vietnam Tissue Trade Flows

Tissue Import Trends

- Represents ~8% of domestic capacity
- Indonesia, China, and Japan are its primary sources
- Trend Spiked in 2022 (Covid?)

Tissue Export Trends

- 4X more than it imports
- >20% of total tissue capacity
- Australia, Japan, Malaysia, the USA, and Philippines are its primary destinations

Vietnam Tissue Producer Opportunities

- Expand integrated recycled fiber to be the un-China
- ~470K tons in domestic consumption growth potential by 2027
- >3MM tons in Asia consumption growth potential export market by 2027
- Fiber availability
- Low labor cost
- Competitive energy cost
- Transportation advantage (Proximity)
- Lower technical age than some peers

Vietnam Tissue Producer Cautions

- Indonesia's backward integration with their pulp mills for export
- Avoid TAD, but be ready to plan as consumer towels could develop in the region
- Avoid too many little machines due to higher labor operating costs and edge effect wastes (fiber, water, and energy).
- Future-proof growth with modern technologies such as steel Yankee or shoe press for productivity and energy cost advantages

Improving Vietnam's Export Potential

- Improving its machine quality and, therefore, production cost
- Aligning its product quality to its target market
- Aligning with its target growth segment (AFH, AH)
- Improving import attractiveness such as ESG, Sustainability, etc.



INSPIRING SUSTAINABLE PERFORMANCE

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Thank You

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