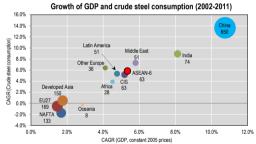






Demand Analysis in the ASEAN region -Overview-

- ✓ ASEAN has experienced rapid growth in economic activity and steel demand. Steel consumption: 44 mmt (2006)→63 mmt (2011).
- ✓ ASEAN's share of global consumption has been rising gradually.



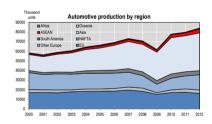
Notes: ASEAN-6 refers to Indonesia, Malaysia, the Philippines, Thailand, Singapore and Vietnam. Developed Asia denotes the aggregate of Japan, Korea and Chinese Taipei. Bubble size and number represent crude steel consumption (mmt) in 2011.

Sources: OECD Secretariat based on GDP data from the IMF (at purchasing power parity) and the World Steel Association (worldsteel) or crude steel consumption.



Demand Analysis in the ASEAN region -Special focus: the automotive industry-

- \checkmark The automotive industry has expanded rapidly.
- ✓ Share of global car production: 2.3% (2002) \rightarrow 5.0% (2012).
- ✓ Steel mills are making an effort to increase their rolling capacity.





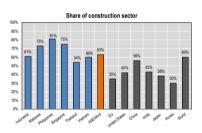
Notes: Data for "Other Europe" include Turkey.

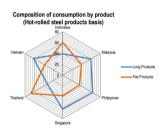
Sources: OICA for automotive production by region and Jetro and FOURIN for automotive sales in ASEAN countries.



Demand Analysis in the ASEAN region -Consumption by sector and product-

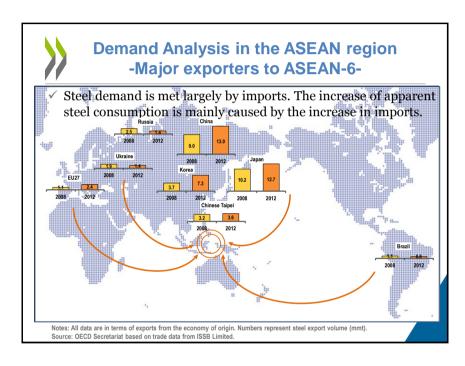
- ✓ Construction has been the major driver of steel consumption.
- ✓ Patterns of steel consumption vary across economies. Flat products account for a high share of steel consumption in Indonesia and Thailand.

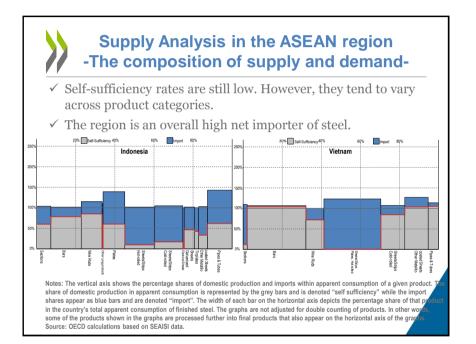


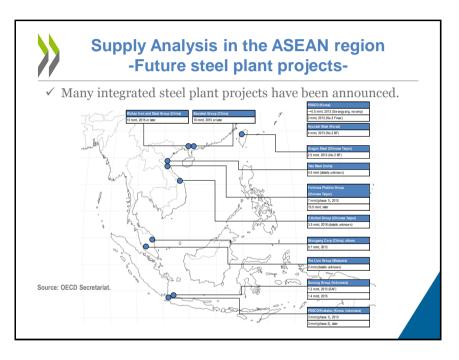


Notes: The ratios for the United States and Korea are shipments. Japanese data are on an ordinary steel basis. Steel consumption is calculated by the formula: Production (Hot-rolled steel products) + Import – Export.

Sources: The South East Asia Iron and Steel Institute (SEAISI), EUROFER, the American Iron and Steel Institute (AISI), China Iron and Steel Association (CISA), Spark Steel & Economy Research Centre (P) Ltd. (SSERC), the Japan Iron and Steel Federation (JISF), Korea Iron and Steel Association (KOSA) and Metal Bulletin Research.



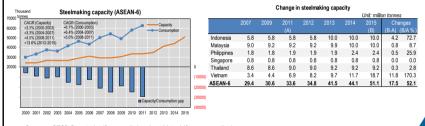






Supply Analysis in the ASEAN region -Steelmaking capacity-

- ✓ Crude steelmaking capacity is likely to continue to increase.
- ✓ It is expected to gradually increase the region's self sufficiency.
- ✓ Some industry analysts note that the risk of oversupply is rising because many projects are coming on stream.

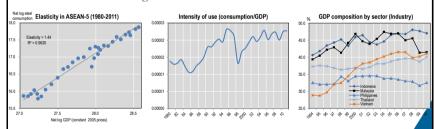


Sources: OECD Secretariat (for capacity) and worldsteel (for consumption).



Future Prospects for the ASEAN Steel Industry -Steel intensity and GDP growth (1)-

- ✓ Crude steel consumption in ASEAN-5 grew faster than GDP.
- ✓ Steel intensity (consumption/GDP) has not changed that much since the beginning of the 2000s.
- ✓ Elasticity might increase slightly in the future because of growth in manufacturing and increased investment in fixed assets.

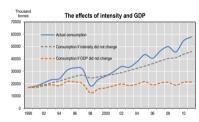


Notes: ASEAN-5 refers to Indonesia, Malaysia, the Philippines, Thailand and Vietnam. This elasticity was not estimated econometrically and does not take into account other factors that may cause changes in steel consumption besides GDP, such as relative prices. Sources: OECD Secretariat based on GDP data from the IMF and worldsteel. The Asian Development Bank for GDP composition by sa



Future Prospects for the ASEAN Steel Industry -Steel intensity and GDP growth (2)-

- ✓ High GDP growth has been the main driver of steel consumption.
- ✓ ASEAN-5's real GDP growth will be sustained above 5% (IMF).
- ✓ The region's steel consumption will continue its gradual growth.



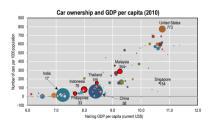


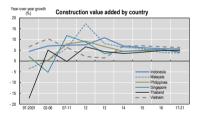
Notes: Future scenarios are constructed using a steel consumption-GDP elasticity of 1.18, which is the actual elasticity estimated over the past decade (2002-2011). This elasticity is slightly lower than the long-run elasticity of 1.44, observed from 1980-2011. Sources: OECD calculations based on the IMF and worldsteel data.



Future Prospects for the ASEAN Steel Industry -Demand for steel consuming industries-

- ✓ Rising income should have significant impacts on car ownership.
- ✓ Construction activity is expected to maintain strong growth.
- ✓ Steel demand in the ASEAN region is expected to be further supported by various infrastructure projects (e.g., AEC).





Notes: Bubble size represents population, and numbers represent car ownership in 2010.

Sources: OECD calculations based on the Japan Automobile Manufacturers Association, Inc. (JAMA) and the United Nations data. The Wor



Summary of findings

Steel demand

- There was significant growth in demand over the past decade.
 The automotive industry has expanded rapidly.
 Construction has been the major driver of steel demand.
 The region is an overall high net importer of steel.
 Much of the increase in steel consumption has been met by imports.

- Steel supply

 ✓ Self-sufficiency rates are still low. Imports are necessary especially for flat products.

 ✓ Many integrated steel plant projects have been announced.

 ✓ Crude steelmaking capacity is likely to continue to increase.

 ✓ It is expected that many projects will increase the region's low self-sufficiency.

 ✓ However, some industry analysts note the risk of oversupply.

- Future Prospects for the ASEAN Steel Industry

 Crude steel consumption in ASEAN-5 usually grows faster than GDP.

 The region's elasticity might increase slightly in the future.

 High GDP growth will be the main driver of steel consumption.

 Rising income should have impacts on car ownership.

 Construction activity is expected to maintain strong growth.



Thank you for your attention!