

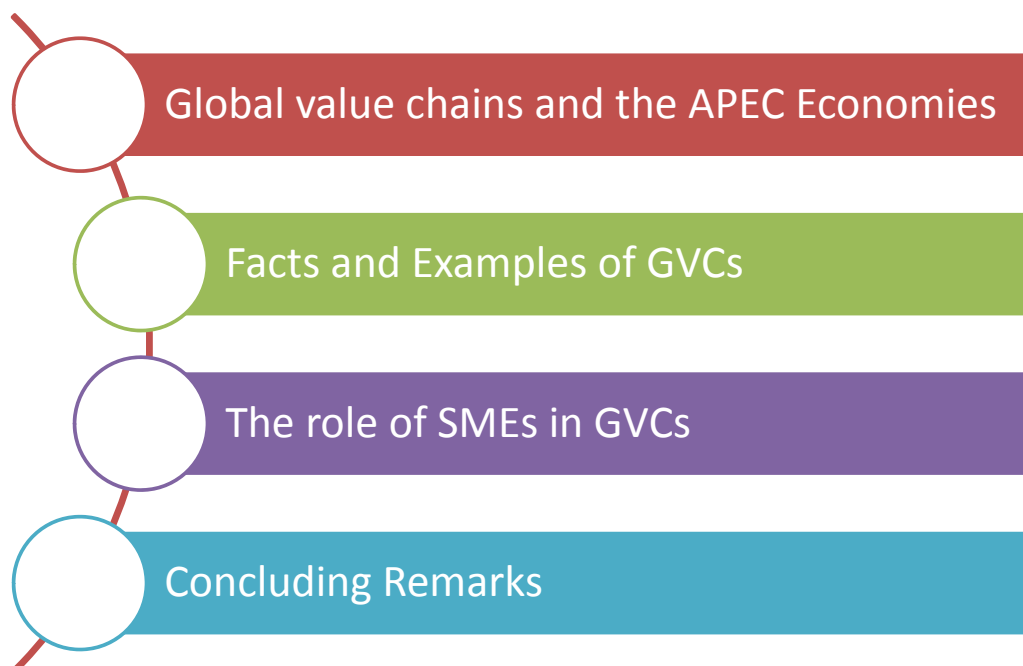
SMEs in Global Value Chains

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Outlines



Global value chains and the APEC Economies

There exists great divergence about value-added ratios of export by each country. Bigger countries with larger supply chains enjoy higher ratio.

Unit : \$ Million USD

Economies	Gross export	VA in Gross export	VA/Export ratio
EU27	2,228,065	1,924,502	86.38%
United States	1,458,183	1,293,570	88.71%
China	1,283,964	864,984	67.37%
Germany	1,159,444	850,566	73.36%
Rest of the World	967,022	838,841	86.74%
Japan	618,022	526,587	85.21%
France	584,015	439,480	75.25%
United Kingdom	559,729	462,846	82.69%
Italy	499,540	399,220	79.92%
Korea	401,162	238,123	59.36%
Canada	367,569	295,733	80.46%
Netherlands	363,330	232,870	64.09%
Russian Federation	331,375	308,530	93.11%
Spain	312,612	247,803	79.27%
India	255,032	199,121	78.08%
Belgium	253,648	164,794	64.97%
Switzerland	243,842	174,423	71.53%
Mexico	231,899	161,572	69.67%
Taiwan	225,657	131,964	58.48%
Singapore	212,449	106,401	50.08%

Source : OECD, Trade in Value-Added(TiVA) Database.

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Facts about Value-Added Ratios of Exports

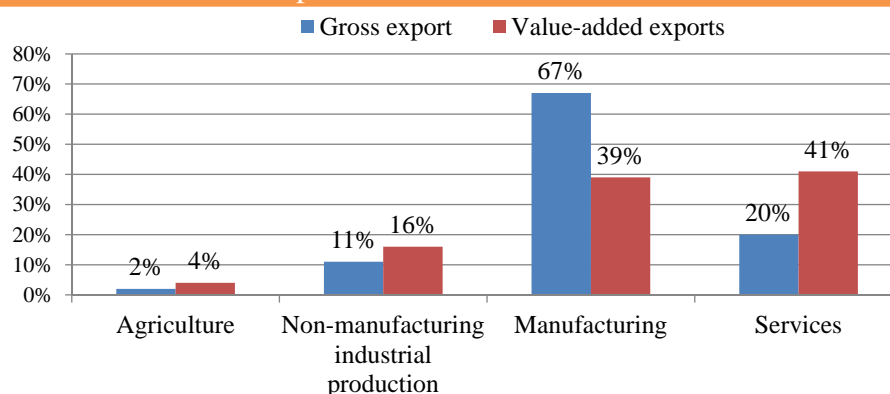
World value-added exports are equal to about 70–75 percent of gross exports today, down from about 85 percent in the 1970s and 1980s

When measured in value-added terms, manufacturing trade is relatively smaller, and services trade relatively larger

Across countries, value-added exports range from 50 to 90 percent of the value of gross exports.

Gaps between bilateral value-added and gross exports are large and heterogeneous across trade partners.

Changes in value-added relative to gross exports have been heterogeneous across countries and bilateral trade partners.



Source : Robert C. Johnson(2014), Five Facts about Value-Added Exports and Implications for Macroeconomics and Trade Research, Journal of Economic Perspectives.

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The evolution of GVC in the world

- The value added share of the small open economies are lower than big countries. For example, Taiwan is 58.48%, Singapore is 50.08%, and Korea is 59.36%. By participating the GVC, small countries can also enjoy the higher growth.
- Japan and USA keep high value added share of gross exports, which means both countries leave more value to themselves than other countries.

Total domestic value added share of gross exports,

Countries \ Year	1995	2000	2005	2008	2009
Taiwan	64.16	64.63	57.76	52.24	58.48
China	88.13	81.19	63.61	66.73	67.37
Japan	93.15	90.09	86.25	80.65	85.21
Korea	76.29	67.07	62.28	56.58	59.36
Singapore	53.3	49.28	47.65	46.9	50.08
USA	91.64	91.12	88.88	85.39	88.71
Germany	81.31	75.6	74.39	72.19	73.36

Source : OECD, Trade in Value-Added(TiVA) Database.

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GVC example : Apple's suppliers in 2014

- By RIETI(2014) studies
 - About 792 factories with locations are identified, 349 (44.1%) of which are located in China.
 - Large part of the value would be added by the Head Quarters.
 - In terms of HQs, share of Japan and Taiwan are relatively high.
 - Factory-level comparison underestimates the other countries competitiveness, especially Taiwan.

	By home country of HQs		By factory location					
	Number of HQs	Factories	Home	East Asia		Europe	North America	Others
				China	Other			
USA	45	220	52	71	62	20	7	8
Japan	43	276	130	74	66	4	2	0
Taiwan	44	138	22	112	2	0	1	1
Korea	12	43	23	17	2	0	1	0
China	16	25	-	25	0	0	0	0
Others	31	90	12	50	12	9	5	2
	191	792	239	349	144	33	16	11

Source: Fujita and Hamaguchi "Supply Chain Internationalization in East Asia: Inclusiveness and Risks", RIETI. ⁶

The market share of the key countries in China's import

- ✓ Since most of the global supply chains move to China, the market share in China's import for one country could be a proxy to measure its participation extents of GVC.
- ✓ Taiwan and Japan have many tough year in the China market since 2008. On the contrary, Korea's market share keeps growing, 9.38% in 2013.

Countries	2008	2009	2010	2011	2012	2013	Performances
Taiwan	9.12%	8.52%	8.29%	7.18%	7.27%	8.03%	Growth after recession
Korea	9.90%	10.16%	9.89%	9.29%	9.17%	9.38%	Stable
Japan	13.30%	13.00%	12.63%	11.17%	9.77%	8.31%	Lower and lower
Hong Kong	1.14%	0.82%	0.68%	0.60%	0.60%	0.44%	Stable
Singapore	1.78%	1.76%	1.76%	1.60%	1.56%	1.54%	Lower and lower
Malaysia	2.83%	3.21%	3.61%	3.57%	3.21%	3.08%	Increasing
Thailand	2.26%	2.48%	2.38%	2.24%	2.12%	1.95%	Slightly lower
Indonesia	1.27%	1.36%	1.49%	1.80%	1.76%	1.61%	Incresing
Vietnam	0.38%	0.47%	0.50%	0.64%	0.89%	0.87%	Higher and higher
Germany	4.93%	5.54%	5.33%	5.33%	5.06%	4.83%	Recession after growth
U.S.A.	7.19%	7.70%	7.26%	6.79%	7.03%	7.48%	increasing

Source : TIER, Customs Databases.

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The GVC evolution of the industries

- ✓ Taiwan and Japan both have recession in the intermediate input share of China's machinery industry and electrical and optical equipment.
- ✓ The intermediate input from Korea in China's electrical and optical equipment have slightly increased, while the share of Taiwan and Japan have decreased.
- ✓ Even though, Taiwan is still the key intermediate goods supplier of ICT industries in China.

China's intermediate input from JKT : Machinery

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Japan	2.06%	2.19%	3.42%	2.94%	2.61%	2.22%	1.45%	1.18%	1.34%	1.72%	16% ↓
Korea	0.93%	1.19%	1.69%	1.56%	1.43%	1.25%	1.01%	0.96%	1.05%	0.93%	
Taiwan	1.28%	1.32%	1.72%	1.58%	1.30%	1.10%	0.67%	0.55%	0.61%	0.73%	44% ↓

China's intermediate input from JKT : Electrical and Optical Equipment.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Japan	3.76%	4.35%	4.75%	4.11%	3.46%	3.13%	2.55%	1.99%	2.06%	1.89%	50% ↓
Korea	2.15%	2.75%	3.49%	3.73%	3.10%	2.86%	2.55%	2.29%	2.63%	2.23%	3.7% ↑
Taiwan	4.46%	5.27%	6.34%	6.33%	5.50%	5.00%	3.98%	3.56%	3.95%	3.53%	20% ↓

Source : European Commission, World Input Output Database.

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SMEs and GVC

Situations

In most cases, large firms dominate GVC; however, it is important to include SMEs in the GVC as SMEs serve as the major driving force for Asia-Pacific economic performance and sustainability.

Benefits

Added benefits for pushing SMEs to engage in GVCs consist of

- Enhancing industrial capabilities by meeting international standards and requirements.
- Encouraging production upgrades by associating with leading global firms.

Constraints

Lacks of : *access to finance; advanced technology; skilled working force; networking and market information; economy scale.*

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Promote SMEs to join GVC

- Chinese Taipei has identified 5 key operational areas to help advance its SMEs
 - *Creating a healthy environment for nurturing SMEs*
 - *Strengthening the SMEs management guidance function*
 - *Building a platform for enterprise start-up and incubation*
 - *Enhancing information technology capabilities of SMEs*
 - *Integrating the SMEs financing mechanism.*
- These operational areas aim at addressing the constraints facing SMEs, therefore the policies also help SMEs to engage in cross-border production networks, a critical move for SMEs to join GVC.
- According to the OECD “GVC Participation Index”, which was calculated based on the extent of each economy’s export production connected with others, Chinese Taipei is about 71%, top among the Asia-Pacific economies.

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SMEs' contributions in GVC for Taiwan

- In contrast to Korea with dominant big firms and Japan with vertical industrial Keiretsu, there are few globally famous firms and brands in Taiwan. However, SMEs sectors are strong in Taiwan and make Taiwan a hidden industrial powerhouse in the World.(WEF 2012)
- The proportion of SME by firm number is 98%, and 29.44% by domestic sales value in Taiwan.
- The export contributed by SMEs is 30% in 1980s, while it lowered to 14.48% in 2014. That is , it is also full of challenges for SMEs to participate in GVC even for Taiwanese SMEs.

Year	2007	2008	2009	2010	2011	2012	2013
Number of firms	1,237,270	1,234,749	1,232,025	1,247,998	1,279,784	1,306,729	1,331,182
proportion(%)	97.63	97.7	97.91	97.68	97.63	97.67	97.64
Domestic sales value (million TWD)	10,481,910	10,462,696	9,189,463	10,709,005	11,226,933	11,381,770	11,321,842
proportion(%)	28.34	29.69	30.65	29.55	29.64	30.23	29.44
Export Value (million TWD)	1,638,927	1,644,707	1,316,352	1,620,033	1,649,985	1,748,080	1,424,225
proportion(%)	17.06	17.36	16.87	16.16	16.29	17.74	14.48

Source : White Papers of SMEs in Taiwan, 2013, 2014 .

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Potential for SMEs to participate in GVC for APEC economies

- For SMEs in developing economies, they face more difficulties to be part of the GVC when product quality, financial soundness, and geographic location are critical factors, such as food processing and automobiles.
- For SMEs in developed and newly-industrialized economies, most of the key factors to participate in electronics GVC are satisfied, except the product price.

Key factors	SMEs in developed and newly-industrialized economies			SMEs in developing economies		
	Food processing	automobiles	Electronics	Food processing	automobiles	Electronics
Product quality	v	v	v	x	v	v
Product price	x	x	x	v	v	v
Product delivery	v	v	v	x	v	v
Financial soundness	v	x	v	x	x	v
Production capacity	v	v	v	v	x	v
Flexibility	x	x	v	v	x	v
Geographic location	x	v	v	x	x	x
ICT level of business operation	v	v	v	x	v	v
Talent and innovative capacity	v	v	x	v	v	x

Source : APEC Policy Support Unit(2014), " Integrating SMEs into Global Value Chains: Policy Principles and Best Practices ".

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Concluding Remarks

- The evolution of GVC implies globalization's second unbundling : production stages previously performed in closed proximity were dispersed geographically(Baldwin, 2013)
- Traditional indicators of globalization by trade value of each country may be misleading, because the export value are double-counted from one country to another. To trace the domestic value-added from the export can be the better measures.
- Higher value-added exports are associated with higher growth rates , part of which come from participating in GVCs.(IMF, 2013)
- The SMEs with unique niche in different stages of manufacturing or different tasks of service could be the driving force for one country to participate more in GVCs.
- Policymakers need to fully understand how GVCs are or could be linked with the domestic economy, so as to help SMEs to participate in GVCs.(APEC 2014)

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Thank you for listening.

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Appendices

- References
- Global Value Chains : Definitions
- Global Value Chains : How it works ?
- REI vs. GVC

References

- APEC(2014), “Integrating SMEs into Global Value Chains: Policy Principles and Best Practices”, Policy Support Unit.
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Global Value Chains : Definitions

Value Chain-Porter(1985)

- The value chain provides a way to identify a firm's sources of differentiation, and the fundamental factors that drive it.

Global Value Chain-OECD

- International production, trade and investments that are organized within the different stages of the production process and located across different countries.

Global Value Chain-UNCTAD(2013)

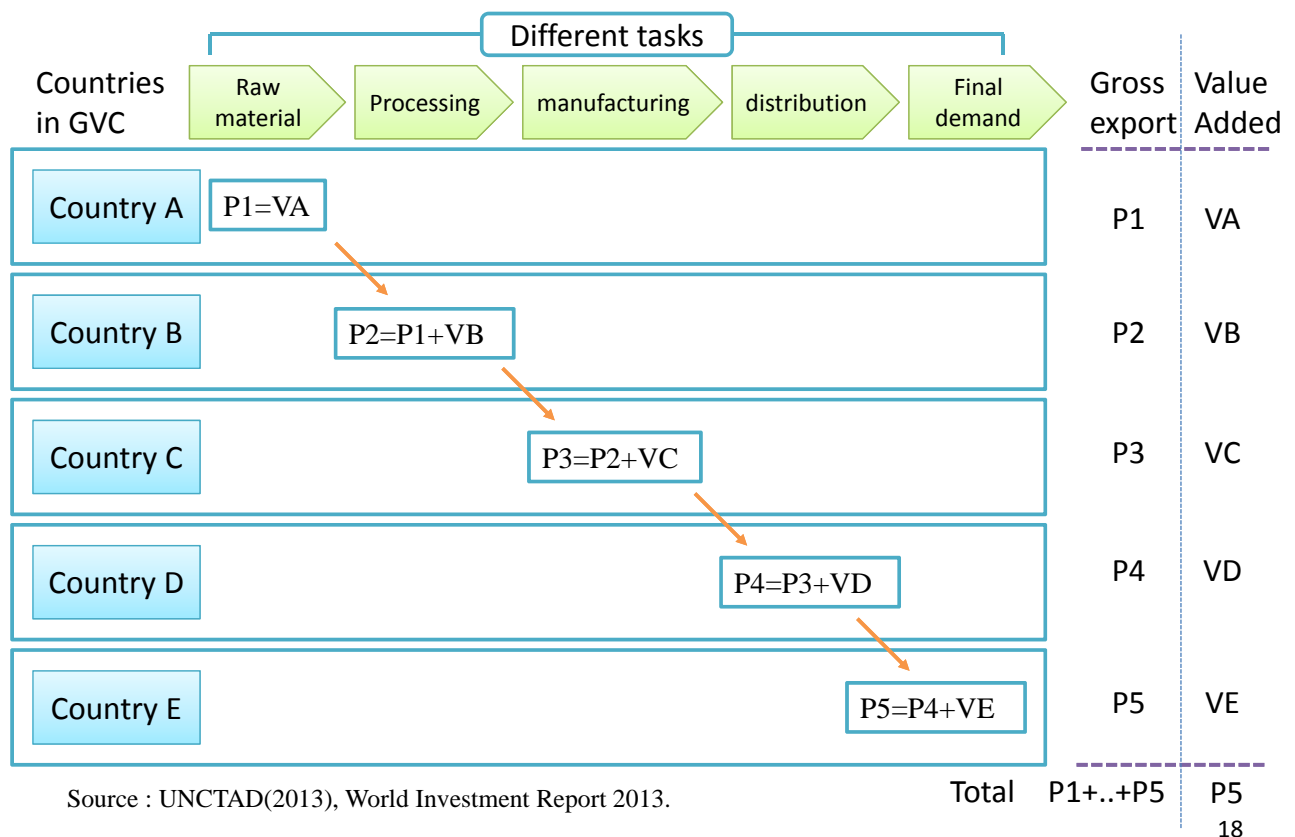
- The fragmentation of production processes and the international dispersion of tasks and activities within them have led to the emergence of borderless production systems.

Global Value Chain-APEC(2014)

- A GVC refers to a value chain that operates in more than one economy. GVCs not only cover vertical links (among different tiers of suppliers along the chain), but also horizontal links (the interaction among suppliers of the same tier)

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Global value chain : How it works ?



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REI vs. GVC

- The arrangement of REI also puts forth extensive influences on the performances of GVC connectivity as well as the configuration of comparative advantages among economies.
- As different designs of REI provide various incentives in terms of where to produce and where to sell, emerging processes also intend to utilize new trade regulations and rules to establish individually exclusive environments to improve supply chain connectivity and amplify the benefits of trade creation.
- Therefore, one can expect that the consequences of REI initiatives are likely to create favorable conditions within their blocs, alter existing comparative advantages of members and non-members, influence business calculations and eventually reshape production networks.