THE ROLE OF GLOBAL VALUE CHAINS TO STRENGTHEN THE CONNECTIVITY BETWEEN EUROPE AND ASIA

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INTRODUCTION
GLOBAL VALUE CHAIN

- GVC allows quite a lot of opportunities for developing countries to participate in global trade and improve productivity.
- Before the rise of GVC, nations had to build a deep and wide industrial base before becoming competitive (e.g. Japan, USA, Germany).
- Some of East Asian countries demonstrate that participating in GVC may decrease poverty.
- Yet, before implementing GVC, some considerations should be considered, i.e. the use of innovation to encourage progress, foreign direct investment and the development of human resources by improving education quality.
METHODOLOGY
GLOBAL VALUE CHAIN

- All secondary data were obtained from the ASEM Sustainable Connectivity Portal. Data used for the analysis were extensive aggregated data obtained from the “Indicator Explorer” and “Connectivity map”.
- The aggregated data consist of Physical, Economic and Financial, Political, Institutional, People to People, Social, and Economic and Financial. For the connectivity, only Foreign Direct Investment (FDI), Trade in Goods and Research output with international collaboration were selected.
- The analyses used in this research were Biplot Principal Component Analysis (in short PCA), Self Organizing Map Kohonen artificial neural networks (in short SOM) for clustering the countries and Social Network Analysis (in short SNA) to evaluate the modularity of the networks.
RESULTS
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<tr>
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<td>IN India</td>
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<td>PK Pakistan</td>
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<td>GB U Kingdom</td>
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<td>VN Vietnam</td>
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Countries in Asia and Europe exhibit different characteristics. Almost all the Asian countries are located on the opposite side of the arrow direction which represents the indicators.

BN(33) and KZ(39) are negatively related to the Social and Institutional indicators. VN(51) is negatively related to the Politics indicator. MY(42) and RU(48) negatively related to the Environmental indicator. MM(44) and LA(41) are negatively related to the Economic/Financial and People to People Connection indicator.

GB(30), FR(10) and DE(11) are very strong in Economic and People to People Connection, NO(21) in Sustainability, CH(29) in Social and Institutional indicators.

CN (35) is very strong in Economic/Financial and People to People Connection but at the cost on its environment.
SOM-KOHONEN

**Codes plot**

- Physical
- Economic/Financial
- Political
- Institutional
- People-to-people
- Connectivity Index
- Environmental
- Social
- Economic/Financial_1
- Sustainability Index

**Mapping plot**

Countries and regions: FR, DE, GB, CN, MY, RU, BN, KZ, MN, IT, ES, JP, LU, NL, PT, BE, PL, SE, CH, AU, KR, SG, NZ, CY, GR, AT, FI, CZ, EE, LA, VN, KB, BD, MM, DK, NO, SE, CH, BG, HR, HU, IN, ID, PH, PK, TH, SI.
(1) Political, Institutional, Social, Economic, Sustainability

(2) Institutional, Social, Economic, Sustainability

(3) Environment, Financial1, Sustainability

(4) Environment, Financial1, Sustainability

(5) Physical, Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(6) Economic, Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(7) Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(8) Environment

(9) Physical, Economic, Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(10) Physical, Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(11) Social, Sustainability

(12) Political, Institutional, People, Environment

(13) Physical, Economic, Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(14) Physical, Economic, Political, People, Connectivity, Environment, Social, Sustainability

(15) Physical, Economic, People, Connectivity, Environment, Social, Sustainability

(16) Economic, Institutional, People, Connectivity, Social, Sustainability

(17) Physical, Economic, Political, Institutional, People, Connectivity, Environment, Social, Sustainability

(18) Physical, Economic, People, Connectivity, Financial1, Sustainability

(19) Physical, Economic, People

(20) --- (institutional?)
For FDI, three clusters of modularity are identified.
• RU, KR, VN, and PK becomes small cluster along with the bigger Europe and Asia Clusters

Trade in Goods
• Trade in Goods provides a more complex structure. Europe cluster divided into four sub-clusters.
• Connection between Europe and Asia mostly occurs through West European Countries.
• Central and East European countries are more closely related to the West Europe.
• It seems that connection is more intense if the countries located in the same region or sharing a common history.
CN is the main source of FDI in ID, IN, and MY whilst KR is the main source of FDI in CN and VN. GB also has a prominent role in IN. Tough, the pattern of FDI is not so apparent in Europe.

Trade in goods, CN and DE are the main player in their respected region, followed by JP and KR in Asia, and NL in Europe. NL, SG are small countries, but they have major roles in logistics and distribution.
DISCUSSION
Based on the SOM and PCA, none of the Asian countries is related closely to the institutional indicators. Yet, Europe is excelling in Institutional indicators compare to its counterpart in Asia.

FDI in Asia is concentrated in some countries. **IN and ID are among the largest recipient of FDI**, mainly from China whilst **VN receive FDI mostly from KR**. **CN also receives FDI from JP and KR** whilst **ID also receives FDI from GB**. Both ID and IN are the largest economy in SE Asia and South Asia, therefore they have opportunities to be the economic powerhouse in their region.

Central European countries, such as **BG, HR, HU, LV, LT, MT, RO, SK, SI** are constrained by their scale. **Some of these countries are trying to capture FDI and flow of trade through the modern silk-road from China and compete to be the main gates between Asia and Europe** (especially after BRI was launched in China). But these countries have overlooked the potential of the other Asian Countries such as **IN, ID, PH, TH, SG and MY** which are traditionally connected to the West Europe for their exports and trades, especially with GB and NL.
• The networks for BN and KZ, which are rich in natural resources, are limited. Thus, these countries need to improve the networks and participation in GVC to diversify their economy, in anticipation when their oil depleted or alternative energy is used to replace the fossil fuel as the main source of energy

• MM, LA and KH are lack of resources in all aspects. Implementing GVC may put their countries at risk to be controlled by foreign investors. Inclusion for these countries can be started from the nearest neighbour countries, for instance, MM, LA, KH with TH and VN rather than with CN which involving a large amount of money
CONCLUSIONS
Joining GVC is faster than the old import-substitution route. The developing nations that adopted this new strategy are called emerging market economies. It shifts the locus of globalization from sectors to stages of production.

GVC not only stimulates economic growth, but it also creates economic polarization into three economic regions, i.e. China in Asia, Germany in Europe and the United States in North America.

These opportunities can be improved by enhancing the networks outside the traditional ones which are still undeveloped.

Countries in Central Europe may exploit the opportunities of GVC and higher education collaboration with Asian countries.
THANK YOU
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