**Fall 2016**

**Seoul National University**

## Global value chains:

## Measurement, impact and policies

Dr. Sébastien Miroudot

Senior Trade Policy Analyst

Organisation for Economic Co-operation and Development

***Course description***

The international fragmentation of production in global value chains (GVCs) challenges the way we look at the global economy. Understanding how GVCs work and how they affect economic performance is essential, as is determining which policies help derive the greatest benefits. This course will discuss recent approaches to the analysis and measurement of GVCs, their policy implications for developed and developing countries, as well as the new challenges they pose for the regulation of trade and investment at the national, regional and global levels.

***Course evaluation***

Students are responsible for the material covered in the compulsory reading each week. Three homework assignments will be given in week 2, 5 and 9, due two weeks later. Course grading will be based on the final exam (80%), homework assignments (10 %) and class attendance and participation (10 %).

***Main readings***

There is no comprehensive text book for the analysis of GVCs. The following material provides general information that covers most of the themes that will be dealt with in the lecture.

* Cattaneo, O., G. Gereffi and C. Staritz (eds) (2010), *Global Value Chains in a Postcrisis World. A Development Perspective*, The World Bank. <http://elibrary.worldbank.org/doi/pdf/10.1596/978-0-8213-8499-2>
* Elms, D. and P. Low (eds) (2013), *Global Value Chains in a Changing World*, Fung Global Institute, Nanyang Technological University and World Trade Organization, WTO Publications. <http://www.wto.org/english/res_e/booksp_e/aid4tradeglobalvalue13_e.pdf>
* OECD (2013), *Interconnected Economies: Benefitting from Global Value Chains*, OECD Publishing. <http://www.oecd-ilibrary.org/interconnected-economies_5k8zl60zdgtl.pdf>

**Course outline and reading material**

**Week 1** **Global Value Chains: definition and concepts**

The lecture will introduce the concept of Global Value Chain (GVC) and discuss its origin and main applications. It will highlight why it is relevant to look at GVCs to understand globalisation and design efficient economic policies.

Compulsory reading:

* Gereffi, G. and K. Fernandez-Stark (2011), *Global Value Chain Analysis: A Primer*, Center on Globalization, Governance & Competitiveness (CGGC), Duke University, Durham NC. <http://www.cggc.duke.edu/pdfs/2011-05-31_GVC_analysis_a_primer.pdf>

Optional reading:

* Bair, J. (2005), “Global capitalism and commodity chains: Looking back, going forward”, *Competition & Change*, Vol. 9/2, pp. 153-80. <http://spot.colorado.edu/~bairj/Research_&_Publications_files/Global%20Capitalism%20and%20Commodity%20Chains%20Looking%20Back%20Going%20Forward.pdf>

**Week 2 Micro-evidence on GVCs**

The GVC literature was initially relying on case studies to describe how companies operate and the governance structure of value chains. More recently, firm-level data have been used to characterise GVCs.

Compulsory reading:

* Dedrick, J, K. Kraemer and G. Linden (2008), “Who profits from innovation in global value chains? A study of the iPod and notebook PCs”, paper prepared for the Sloan Industry Studies Annual Conference, Boston MA. <http://web.mit.edu/is08/pdf/Dedrick_Kraemer_Linden.pdf>

Optional reading:

* Gereffi, G. and K. Fernandez-Stark (2010), “The offshore services value chain: Developing countries and the crisis”, in O. Cattaneo, G. Gereffi and C. Staritz (eds), *Global Value Chains in a Postcrisis World*, The World Bank, pp. 335-372. <http://elibrary.worldbank.org/doi/pdf/10.1596/978-0-8213-8499-2>

**Week 3 Mapping GVCs through input-output techniques**

At the macro level, GVCs can be analysed through the input-output structure of the world economy, building on the work of Leontief and the foundations of input-output analysis. A non-technical overview of the methodology will be provided.

Compulsory reading:

* De Backer, K. and S. Miroudot (2013), “Mapping Global Value Chains”, *OECD Trade Policy Papers*, No. 159, OECD Publishing. <http://dx.doi.org/10.1787/5k3v1trgnbr4-en>

Optional reading:

* Miller, R. and P. Blair (2009), *Input-Output Analysis. Foundations and Extensions*, Second edition, Cambridge University Press. Chapter 2.

Week 4 Trade in value-added

The lecture will explain how value-added trade statistics are constructed and provide an overview of the patterns of world trade in value-added terms. It will distinguish the decomposition of gross exports and indicators based on final demand.

Compulsory reading:

* OECD and WTO (2012), “Trade in value-added: Concepts, methodologies and challenges”, Joint OECD-WTO note. <http://www.oecd.org/sti/ind/49894138.pdf>

Optional reading:

* Koopman, R., Z. Wang and S.-J. Wei (2014), “Tracing value-added and double counting in gross exports”, *American Economic Review*, Vol. 104/2, pp. 459-494. <http://dx.doi.org/10.1257/aer.104.2.459>

**Week 5 The impact of GVCs on international trade**

Empirical evidence on the evolution of trade over the three last decades will be reviewed, discussing the role played by GVCs, including in the recent trade ‘slowdown’.

Compulsory reading:

* Baldwin, R. and J. Lopez-Gonzalez (2015), “Supply-chain trade: A portrait of global patterns and several testable hypotheses”, *The World Economy,* Vol. 38/11, pp. 1682-1721. <http://dx.doi.org/10.1111/twec.12189>

Optional reading:

* Nagengast, A. and R. Stehrer (2016), “The great collapse in value-added trade”, *Review of International Economics*, Vol. 24/2, pp. 392–421. <http://dx.doi.org/10.1111/roie.12218>

**Week 6 The impact of GVCs on trade policy**

The emergence of GVCs has important implications for trade policy. The main results from trade theory are not changed by GVCs but there is a shift in the incidence of specific types of trade barriers.

Compulsory reading:

* Ferrantino, M. (2013), “Policies to improve the supply chain: what needs to be done?”, in D. Elms and P. Low (eds), *Global value chains in a changing world,* Geneva, WTO publications, pp. 263-277, WTO Publications. <http://www.wto.org/english/res_e/booksp_e/aid4tradeglobalvalue13_e.pdf>

Optional reading:

* Miroudot, S., D. Rouzet and F. Spinelli (2013), “Trade policy implications of global value chains: Case studies”, *OECD Trade Policy Papers*, No.161, OECD Publishing. <http://www.oecd-ilibrary.org/trade/trade-policy-implications-of-global-value-chains_5k3tpt2t0zs1-en>

**Week 7 The impact of GVCs on trade negotiations**

The political economy of trade negotiations is also affected by GVCs and the lecture will review and discuss efforts of trade negotiators in designing GVC-friendly trade agreements, at the multilateral and regional level.

Compulsory reading:

* National Board of Trade (2015), *Global value chains and trade negotiations*, National Board of Trade, Sweden. <http://www.kommers.se/Documents/dokumentarkiv/publikationer/2015/Publ-global-value-chains-and-trade-negotiations.pdf>

Optional reading:

* Blanchard, E., C. Bown and R. Johnson (2016), “Global supply chains and trade policy”, World Bank Policy Research Paper, No. 7536, The World Bank. <http://documents.worldbank.org/curated/en/2016/01/25801220/global-supply-chains-trade-policy>

**Week 8 GVCs and development**

While GVCs have first emerged in developed economies, an increasing number of countries are participating in GVCs. The lecture will discuss the challenges and opportunities for developing and emerging economies.

Compulsory reading:

* Cattaneo, O., G. Gereffi, S. Miroudot and D. Taglioni (2013), “Joining, Upgrading and Being Competitive in Global Value Chains. A Strategic Framework”, *World Bank Policy Research Working Paper*, No. 6406, The World Bank, Washington DC. <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6406>

Optional reading:

* Gereffi, G. (2015), “Global value chains, development and emerging economies”, *Research, Statistics and Industrial Policy Branch Working Paper*, No. 18, UNIDO. <http://www.unido.org/fileadmin/user_media/Research_and_Statistics/WPs_2010/WP_18.pdf>

**Week 9 The role of services in GVCs**

One of the main findings of the trade in value-added literature is that services account for a much larger share of world trade in value-added terms. The lecture will discuss the ‘servicification’ of economies and how the lines between goods and services become blurred in GVCs.

Compulsory reading:

* Low, P. (2013), “The role of services in global value chains”, in D. Elms and P. Low (eds), *Global value chains in a changing world,* Geneva, WTO publications, pp. 263-277, WTO Publications. <http://www.wto.org/english/res_e/booksp_e/aid4tradeglobalvalue13_e.pdf>

Optional reading:

* Lanz, R. and A. Maurer (2015), “Services and global value chains –some evidence on servicification of manufacturing and services networks”, *WTO Working Paper*, ERSD-2015-03. <https://www.wto.org/english/res_e/reser_e/ersd201503_e.pdf>

**Week 10 The relationship between trade and investment in GVCs**

While the concept of GVCs goes beyond Foreign Direct Investment and encompasses all the companies involved in a production network, many of these companies share the same ownership and belong to Multinational Enterprises (MNEs). The role of MNEs in GVCs will be analysed with implications for investment policy.

Compulsory reading:

* Siedschlag, I. and G. Murphy (2015), “Firms’ engagement in global value chains”, in J. Amador and F. di Mauro (eds), *The Age of Global Value Chains: Maps and Policy Issues*, VoxEU, CEPR Press, pp. 175-186. <http://voxeu.org/sites/default/files/GVCs-ebook.pdf>

Optional reading:

* Yeaple, S. (2013), “The multinational firm”, *Annual Review of Economics*, Vol. 5, pp. 193-217. <http://dx.doi.org/10.1146/annurev-economics-081612-071350>

**Week 11 The impact of GVCs on employment**

The lecture will explain how GVC indicators are also used to analyse the number of workers involved in international production networks and analyse structural changes in the demand for labour. It will look at the role of routine tasks in explaining employment patterns in GVCs.

Compulsory reading:

* Miroudot, S. (2016), “Global value chains and trade in value-added: an initial assessment of the impact on jobs and productivity”, *OECD Trade Policy Papers*, OECD Publishing, forthcoming.

Optional reading:

* Marcolin, L., S. Miroudot and M. Squicciarini (2016), “GVCs, jobs and routine content of occupations”, *OECD Trade Policy Papers*, No. 187, OECD Publishing. <http://dx.doi.org/10.1787/5jm0mq7kr6s8-en>

Week 12 The impact of GVCs on skills

Related to employment is the issue of skills and policies that can improve the skills of the workforce to increase the participation of countries in GVCs. Skills are also behind the process through which firms can move to higher value-added activities in a process described as “upgrading”.

Compulsory reading:

* Timmer, M., A. Erumban, B. Los, R. Stehrer and G. de Vries (2014), “Slicing Up Global Value Chains”, *Journal of Economic Perspectives*, Vol. 28/2, pp. 99-118. <http://dx.doi.org/10.1257/jep.28.2.99>

Optional reading:

* Gerefffi G, K Fernandez-Stark and Psilos (2011), “Skills for upgrading: workforce development and global value chains in developing countries”. <http://www.cggc.duke.edu/pdfs/2011-11-12_CGGC-RTI_Upgrading-for-Skills_Conclusion.pdf>

Week 13 GVCs, productivity and growth

Global value chains are the next level in the division of labour which is the main explanation for productivity growth. The lecture will review the evidence on the positive impact of GVCs on growth as well as some paradoxes related to productivity and its recent slowdown.

Compulsory reading:

* Baldwin, R. and B. Yan (2016), “Global value chain participation and the productivity of Canadian manufacturing firms”, in S. Tapp, A. van Assche and R. Wolfe (eds), *Redesigning Canadian Trade Policies for New Global Realities*, The Art of the State, Volume VI, IRPP. <http://irpp.org/research-studies/aots6-baldwin-yan/>

Optional reading

* Feenstra, R., B. Mandel, M. Reinsdorf and M. Slaughter (2013), “Effects of Terms of Trade Gains and Tariff Changes on the Measurement of U.S. Productivity Growth”, *American Economic Journal: Economic Policy*, Vol. 5/1, pp. 59-93. <https://www.aeaweb.org/articles?id=10.1257/pol.5.1.59>

Week 14 The digital economy and next-generation GVCs

GVCs are always evolving, particularly in the context of technological change. Transformations related to the digital era have already an impact on GVCs and with ‘3D printing’ and the ‘Internet of things’ some authors are already anticipating further radical changes. The lecture will discuss the potential impact on the structure of GVCs and new policy implications.

Compulsory reading:

* Lund, S. and J. Manyika (2016), “How digital trade is transforming globalisation”, E15 Expert Group on the Digital Economy, International Centre for Trade and Sustainable Development. <http://e15initiative.org/wp-content/uploads/2015/09/E15-Digital-Economy-McKinsey-FINAL.pdf>

Optional reading:

* Kelly, E. (2015), *Business ecosystems come of an age*, Business Trends series, Deloitte University Press. <http://bit.ly/1IsMR77>

Week 15 Final exam