

University Roma Tre – PhD Program
 Course on:

**Firm-level innovation and learning in developing countries:
 technological capabilities, enterprise clusters, global value chains**

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Innovation at the firm-level plays a central role in development. In developing countries innovation takes forms that sometimes differ in some important respects from firm-level innovation in advanced countries, and that include learning processes, the development of human technical capacities and in general incremental and marginal changes to strengthen technological capabilities. Moreover, innovation and learning are also largely influenced by the linkages that firms develop in their activities with other firms – similar firms competing for the same markets as well their suppliers and customers, including large firms and buyers – and with the environment and the territories where they operate.

This course will explore these different dimensions of firm-level innovation in developing countries, and will discuss recent research on:

- the measurement of technological capabilities in developing countries;
- enterprise clusters;
- global value chains, their governance and impact on firm-level innovation and learning;
- the concept and role of proximity and market size in global value chains;
- innovation and global value chains in natural resource-intensive and mining sectors.

The course will be made of lectures and of student-led presentations and discussions. Each student will have to choose one paper to present based on the list below.

The assessment will be based on: attendance and participation (30%), presentation and discussion of one paper (40%), short final essay (30%).

<p>Unit 1. Firms’ innovation and technological capabilities in developing countries</p>	<p><u>Readings</u></p> <ul style="list-style-type: none"> • Bell M.R., Pavitt K., 1993, ‘Technological Accumulation and Industrial Growth: Contrasts between Developed and Developing Countries’, <i>Industrial and Corporate Change</i>, Vol.2 No.2. • Lall S., 1992, "Technological Capabilities and Industrialization", <i>World Development</i>, Vol.20 No.2 <p><u>Additional (Optional) Readings:</u></p> <ul style="list-style-type: none"> • Nelson R.R., 2008, “Economic Development from the Perspective of Evolutionary Theory”, <i>Oxford Development Studies</i> Vo.36 No.1 March, pp.9-22
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	<ul style="list-style-type: none"> • Pietrobelli C., 1997, 'On the Theory of Technological Capabilities and Developing Countries' Dynamic Comparative Advantage in Manufactures', <i>Rivista Internazionale di Scienze Economiche e Commerciali</i>, Vol.XLIV, No. 2, June. <p>For additional useful references, data and examples: UNCTAD, 2007, <i>The Least Developed Countries Report. Knowledge, technological learning and innovation for development</i>, Geneva: United Nations, http://unctad.org/en/docs/lcd2007_en.pdf</p> <p><u>Students' activity:</u></p> <ul style="list-style-type: none"> • WB work on TC measurement (TO BE ASSIGNED)
<p>Unit 2. Firms and linkages. Clusters. Collective efficiency and joint actions. Policies and programs</p>	<p><u>Readings</u></p> <ul style="list-style-type: none"> • Casaburi G., Maffioli A., Pietrobelli C., 2014, Policies to Promote Coordination among Interlinked Firms, in Crespi et al., <i>Rethinking Industrial Policy: Sound Policies and Institutions for Productive Transformation</i>, Palgrave, chapter 7. • Rodriguez-Clare A., 2007, "Clusters and comparative advantage: Implications for industrial policy", <i>Journal of Development Economics</i> 82, pp. 43– 57 • Schmitz H. and Nadvi K., (1999). "Clustering and Industrialization: Introduction", <i>World Development</i>, Vol. 27, No.9., pp. 1503-14. <p><u>Additional (Optional) Readings:</u></p> <ul style="list-style-type: none"> • Chatterji A., Glaeser E.L., Kerr W.K., 2013, "Clusters of Entrepreneurship and Innovation", NBER Working Paper 19013 http://www.nber.org/papers/w19013 • EIU, "Innovation Clusters: Understanding life cycles", The Economist Intelligence Unit, London http://destinationinnovation.economist.com/category/cluster-effects/ • Podcast: <i>What is a cluster?</i>, Podcast by Meyer-Stamer http://www.ledcast.net/Concept/concept01.html • VIDEO: Interview to Giacomo Becattini, https://www.youtube.com/watch?v=XopyCJEKJMJ <p><u>Students' activity:</u></p> <ul style="list-style-type: none"> • Martin and Sunley (2003)
<p>Unit 3. Firms and linkages. Global Value Chains (GVCs). GVC governance and development.</p>	<p><u>Readings</u></p> <ul style="list-style-type: none"> • Baldwin R., 2011, "Trade and Industrialization after Globalization's 2nd Unbundling: How Building and Joining a Supply Chain are Different and Why it Matters", NBER Working Paper 17716, http://www.nber.org/papers/w17716 • Gereffi G., Humphrey J., Sturgeon T., 2005, "The governance of global value chains", <i>Review of International Political Economy</i>, 12:1, 78-104. • Giuliani E., Pietrobelli C. and Rabellotti R. (2005) "Upgrading in Global Value Chains: Lessons from Latin American Clusters", <i>World Development</i>, Vol.33(4), pp. 549–73. <p><u>Additional (Optional) Readings:</u></p> <ul style="list-style-type: none"> • Humphrey J. and Schmitz H. (2002) "How does insertion in global value chains affect upgrading industrial clusters?", <i>Regional Studies</i>, Vol. 36, No.9. • Pietrobelli C., Rabellotti R., 2007, <i>Upgrading to Compete. Global Value Chains, SMEs and Clusters in Latin America</i>, Cambridge Ma.: HARVARD University Press, http://www.hup.harvard.edu/catalog.php?isbn=9781597820325 • Pietrobelli C. and Saliola F., 2008, "Power Relationships along the Value Chain: Multinational Firms, Global Buyers, and Local Suppliers' Performance", <i>Cambridge Journal of Economics</i>, Vol.32, No.6.

	<ul style="list-style-type: none"> • Sako M. and Zylberberg, 2017, “Supplier Strategy to Shape Governance and Profit from Upgrading: A Management Studies Approach to Global Value Chains” mimeo submitted to: <i>Socio-Economic Review</i> • Interviews from GVC Summit, Duke University, here: https://www.youtube.com/playlist?list=PLKRhvmTb8kVhXBGB9IZrgsNuRnPA5i4e • Global Value Chains: Open Learning Campus from World Bank, https://aulavirtual.ulead.cr/mod/url/view.php?id=1591
<p>Unit 4. GVCs, learning and Innovation Systems</p> <p>(in students’ activity: GVCs, proximity and scale. Advantages and disadvantages)</p>	<p><u>Readings:</u></p> <ul style="list-style-type: none"> • Morrison A., Pietrobelli C., Rabellotti R (2008), “Global Value Chains and Technological Capabilities: A Framework to Study Industrial Innovation in Developing Countries”, <i>Oxford Development Studies</i>, Vol.36 Issue 1, 2008. • Pietrobelli, C., Rabellotti, R., 2011. "Global Value Chains Meet Innovation Systems: Are There Learning Opportunities for Developing Countries?". <i>World Development</i>, 39(7), 1261-1269. <p><u>Students’ activity:</u> Read, present and discuss:</p> <ul style="list-style-type: none"> • Sturgeon T.J., Farole T., Ortega L., Pietrobelli C., 2017.
<p>Unit 5. GVCs and innovation in Natural Resources and mining</p>	<p><u>Readings:</u></p> <ul style="list-style-type: none"> • Andersen, Allan Dahl. 2012. “Towards a new approach to natural resources and development: the role of learning, innovation and linkage dynamics”. <i>Int. J. Technological Learning, Innovation and Development</i>, vol. 5(3). http://dx.doi.org/10.1504/IJTLID.2012.047681 <p><u>Students’ activity:</u></p> <ul style="list-style-type: none"> • Kaplinsky R. and Morris M., 2016, • Morris M., Kaplinsky R. and Kaplan D., 2011 • Kaplan D., 2012
<p>STUDENTS’ ACTIVITY. Each student (or group of students depending on number of participants) will have to read, present, discuss and stimulate in-class discussion on one of the following papers:</p>	<ol style="list-style-type: none"> 1. WB, 2017, report on TC measurement (TO BE ASSIGNED) 2. Martin, R. & P. Sunley (2003): Deconstructing clusters: Chaotic concept or policy panacea? – <i>Journal of Economic Geography</i> 74/3: 5-35. https://doi.org/10.1093/jeg/3.1.5 3. Sturgeon T.J., Farole T., Ortega L., Pietrobelli C., 2017, “Overcoming Scale and Distance and Upgrading in Global Value Chains”, World Bank and IDB mimeo, January. 4. Kaplinsky R. and Morris M., 2016, “Thinning and Thickening: Productive Sector Policies in The Era of Global Value Chains”, <i>The European Journal of Development Research</i>, September Vol.28 (4), pp.625-45. http://dx.doi.org/10.1057/ejdr.2015.29 5. Morris M., Kaplinsky R. and Kaplan D., 2011, “One Thing Leads to Another” – Commodities, Linkages and Industrial Development: A Conceptual Overview “, MMCP Discussion Paper No. 12 (Revised) October. http://commodities.open.ac.uk/discussionpapers 6. Kaplan D., 2012, “South African mining equipment and specialist services: Technological Capacity, export performance and policy”, <i>Resources Policy</i>, 37 pp.425–33, http://dx.doi.org/10.1016/j.resourpol.2012.06.001

Students may find some additional references to my research work in this website: <http://host.uniroma3.it/docenti/pietrobelli/index.html>

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3 April 2017