

**INDUSTRIAL POLICY AND TECHNOLOGY MANAGEMENT
MASTER'S PROGRAMME
IPT 501 INDUSTRIAL POLICY**

Course Objectives and Scope	
The aim of this course is to review the basic tools, models, theories, concepts, and discussions related to industrial policies. Growth theories, innovation, and development discussions are also included in the course content due to their relationship with industry and public policies. Students will be required to conduct research and presentations in an industrial policy area of their choice and present it as a report. After the completion of the course, it is aimed that the students will have basic knowledge about the tools, concepts, and discussions of industrial policy, to be able to interpret these and to form a deeper expertise in a selected sub-topic.	
Lecturer	
Prof. Dr Murat Yülek murat.yulek@ostimteknik.edu.tr	
Assessment	
- Attendance and class participation: 20 % - Research report: 40 % The research report should be on a development economics topic (to be approved by the lecturer) with a word count of 2500-3500. Formatwise, it should stick to Ostim Technical University Dissertation Guidelines (https://sbe.ostimteknik.edu.tr/web/content/107829?unique=d993787ebfbb10df75ee36ca95afb92c8fb31ba&download=true). For guidance on the selection of the topic; some topics that previous students have selected are as follows: Political Instability and Its Impact on Jordanian Economy and Industrial Policy; European Green Deal and Effects of the New European Industrial Policy; Industrial development History of Kenya; Assessment of China's Technological Progress and Independence Policy. - Paper presentation: 20 % The students will make <u>two</u> different presentations (PowerPoint or similar format). The first is “paper presentation” which is the presentation of a paper (or a book/report chapter) associated with development economics or industrial policy. You can select one of the papers in the reading list of this syllabus or from another source. - Research paper presentation: 20% The second is the presentation of your research report.	
Weekly Schedule	
Week	Theme
1-3	Manufacturing, Knowledge, R&D Innovation, Long term Economic Growth and Development <i>National accounts: Value added and GDP, productivity, Manufacturing, Industrialization; Industrial firms and industrial layer</i> <i>Innovation and protecting innovation</i> <i>Theories of economic growth</i> <i>Macroeconomics of current account balance</i>
	Key reading

	- Yülek, M. A. (2018). How nations succeed. Palgrave Macmillan US. Chapters 5, 6, 7, 9, 10, 12. Other reading - Arrow, K. (1962), “The Economic Implications of Learning by Doing” <i>Review of Economic Studies</i>, Vol. 24. - Yülek, M. (1997), “İçsel Büyüme Teorileri, Gelişmekte Olan Ülkeler ve Kamu Politikaları Üzerine”, <i>Hazine Dergisi</i>, Nisan 1997, Sayı 6. - Romer, P. (1986), “Increasing Returns and Long Run Growth” <i>Journal of Political Economy</i>, Vol. 94, No. 5. - Lucas, R. (1988), “On the Mechanics of Development” <i>Journal of Monetary Economics</i> Vol. 22. - Young, A. (1992), “A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore” <i>NBER Macroeconomics Annual 1992</i>, Vol. 7. - Salahuddin, T., & Yülek, M. A. (2022). Structural breaks, manufacturing revolutions, and economic catch-up: empirical validation of historical evidence from South Korea. <i>J. Asian Finance Economics Business</i>, 9(1), 13-24. Other references - Akkemik, K. A., Yülek, M., & Salahuddin, T. (2026). Does Industrial Policy Drive Economic Development? A Synthetic Control Assessment of South Korea. <i>Journal of Industry, Competition and Trade</i>, 26(1), 14. - Grossman, G. and E. Helpmann (1991), <i>Innovation and Growth in the Global Economy</i>, Cambridge: MIT Press. Chapter 1-13 - Barro, R. and Sala-i-Martin, Z. (2004) <i>Economic Growth</i>, MIT Press. C. Castaldi, M. Cimoli, N. Correa and G. Dosi “Technological Learning, Policy Regimes, and Growth: The Long-Term Patterns and some Specificities of a ‘Globalized ‘Economy’” in Cimoli, M. , G. Dosi and J.E. Stiglitz (Eds) <i>Industrial Policy and Development: The Political Economy of Capabilities and Accumulation</i>, Oxford University Press. 2009. - Hoffman, K., M. Parejo, J. Bessant & L. Perren (1998) “Small firms, R&D, technology and innovation in the UK: a literature review” <i>Technovation</i>, Vol 18, No 1. - Uzawa, H. (1965), “Optimum Technical Change in An Aggregative Model of Economic Growth”, <i>International Economic Review</i>, Vol. 6, No. 1. January 1965, pp. 18-31.
4-5	Introduction to Public Policy and Industrial Policy: Background and Discussion <i>Economics of market failures, externalities, spill overs, public goods</i> <i>State and State Capacity</i> <i>What is Public Policy? Why Public Policy?</i> <i>What is Industrial Policy? Why Industrial Policy? When Industrial Policy?</i> Key reading Yülek, M. A. (2018). How nations succeed. Palgrave Macmillan US. Chapters 11, 13

- Mackay, M., & Shaxton, L. (2011). Understanding and applying basic public policy concepts. *University of Guelph*.
https://www.uoguelph.ca/alliance/sites/uoguelph.ca.omafra_partnership/files/Understanding%20and%20applying%20basic%20public%20policy%20concepts_ac.pdf
- The Economist (5 August 2010) “The global revival of industrial policy- Picking winners, saving losers.”
<http://www.economist.com/node/16741043/print>
- Yülek, M.A. and dos Santos, M. G. F. (2021) “Why Income Gaps Persist: Productivity Gaps, (No-) Catch-up and Industrial Policies in Developing Countries”, *Journal of Economic Issues*.
- Yülek, M.A., Lee K.H., Kim, J. and Park, D. (2020) “State capacity and the role of industrial policy in automobile industry: a comparative analysis of Turkey and South Korea,” *Journal of Industry, Competition and Trade* (<https://doi.org/10.1007/s10842-019-00327-y>)
- Yulek, M.A. (2016) “On the Middle Income Trap, the Industrialization Process and Appropriate Industrial Policy,” *Journal of Industry, Competition and Trade*, 17(3), 325-348. (DOI 10.1007/s10842-016-0237-9), 1-24.
- Yülek, M. (2016) Industrial Policies and Outcomes: A Comparison of Pre-liberalized Korean and Turkish Economies, *Journal of Comparative Asian Development*, Vol 15.No 1 (DOI:10.1080/15339114.2015.1128843).

Other references

- Gunnar Eliasson (2010), *Advanced Public Procurement as Industrial Policy: The Aircraft Industry as a Technical University*, New York: Springer.
- OECD (2012),” Resurrecting industrial policy “Can governments play a positive role in boosting their countries’ industrial sectors?”,
http://www.oecdobserver.org/news/fullstory.php/aid/3814/Resurrecting_in_dustrial_policy.html/2012
- Barro, R,. (1990), “Government Spending in a Simple Model of Endogenous Growth” *Journal of Political Economy*, Vol.98, No.5, pp.103-125.
- Di Maio, M. (2009), “Industrial Policies in Developing Countries: History and Perspectives” in M., G. Dosi, and J.E. Stiglitz (Eds) *Industrial Policy and Development*, Oxford University Press.
- Cimoli M., G.Dosi, R. Nelson and J.E. Stiglitz (2009), “Institutions and Policies Shaping Industrial Development: An Introductory Note” in Cimoli M., G. Dosi, and J.E. Stiglitz (Eds) *Industrial Policy and Development*, Oxford University Press.
- Bianchi P. and Labory (2006), Jacques Pelkmans, Sanjaya Lall, Patrizio Bianchi and Sandrine Labory , *From ‘Old’ Industrial Policy to ‘New’ Industrial Development Policies*, Edward Elgar Publishing.
- Yülek, Murat (1998), *Asya Kaplanları*, Alfa Yayınları: İstanbul.
- Rodrik, D. (2006), Normalizing Industrial Development: Stylized Facts and Policies”, in, *Industrial Development for the 21. Century*, in UN-DESA Publication.

	• Page, J. (1994), “The East Asian Miracle: Four Lessons for Development Policy”, John F. Kennedy School of Government-Harvard University, September 2007 (http://www.hks.harvard.edu/fs/drodrik/research%20papers/”, <i>NBER Macroeconomics Annual 1994</i>, Vol.9. pp.219- 282. • Noland, M. and Pack H. (2002), “Industrial Policies and Growth: Lessons from International Experience” <i>Central Bank of Chile Working Papers</i> No.169, July 2002. • Dani Rodrik (2006), “Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform”, <i>Journal of Economic Literature</i>, Vol.4, No.4, December 2006, pp.983- 987. • Pack, H. & Saggi, K. (2006), “Is There a Case for Industrial Policy? A Critical Survey” <i>The World Bank Policy Research Observer</i>, Vol.22, No.2, pp.267- 297. • Amsden A. H. (1989), <i>Asia’s Next Giant, South Korea and Late Industrialization</i>, New York: Oxford University Press.
6	Trade, Industrial Revolutions and the Stages of Industrialization <i>History of colonization</i> <i>International trade and industrial revolutions</i> <i>Stages of Industrialization</i> <i>Rostow’s stages of development</i>
	Key reading • Yülek, M. A. (2018). How nations succeed. Palgrave Macmillan US. Chapters 1,2,3,4, 8 • Yülek, M., & Akkemik, K. A. (2023). Stages of industrial development and appropriate industrial policy. In <i>Handbook of Industrial Development</i> (pp. 338-356). Edward Elgar Publishing. Other references • Rostow, W. W. (1959). The stages of economic growth. <i>The economic history review</i>, 12(1), 1-16. https://www.jstor.org/stable/2591077 • Rostow, W. W., & Rostow, W. W. (1990). <i>The stages of economic growth: A non-communist manifesto</i>. Cambridge University Press.
7	Reverse Engineering, Imitation vs. Innovation
	Key readings • Samuelson, P., & Scotchmer, S. (2001). The law and economics of reverse engineering. <i>Yale LJ</i>, 111, 1575. • Counterfeit, imitation, reverse engineering and learning: reflections from Chinese manufacturing firm • Ohly, A. (2009). Reverse engineering: Unfair competition or catalyst for innovation?. In <i>Patents and technological progress in a globalized world</i> (pp. 535-552). Springer, Berlin, Heidelberg. Additional reading • Kucklick, T. R. (2012). 9 Reverse Engineering in Medical Device Design. In <i>The Medical Device R&D Handbook</i> (pp. 204-231). CRC Press.

	• Akkemik, K. A., & Yülek, M. (2020). Imitation, Innovation and State Capacity: What Do East Asian Industrial Policies Imply?. <i>Istanbul University Journal of Sociology</i>, 40(2), 701-722. • Segerstrom, P.S.(1990), <i>Innovation, Imitation and Economic Growth</i>, East Lansing. • Grossman, G. and E. Helpman (1991), <i>Innovation and Growth in the Global Economy</i>, Cambridge: MIT Press. Chapter 11-12 • Geisendorf,S. (2009), “The Influence of Innovation and Imitation on Economic Performance”, <i>Economic Issues</i>, Vol.14, Part.1. • Polterovich,Victor and Tonis (2003), ”Innovation and Imitation at Various Stages of Development”, <i>SSRN Research Network</i>, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1753524 • Joachim Henkel (2012), ”Thoughts on Imitation from the Field of Innovation Economics” <i>13 th EIPIN Congress Munich</i>, 3-5 February 2012. • Reinert E. (2006), “Emulation vs Comparative Advantage: Competing and Complementary Principles in the History of Economic Policy”, in Cimoli M., G. Dosi, J.E. Stiglitz (2009), <i>Industrial Policy and Development: The Political Economy of Capabilities and Accumulation</i>, Oxford University Press. • Kim, L. , Dahlman, C., J.(1992) ”Technology policy for industrialization: An integrative framework and Korea’s experience”, <i>Research Policy</i>, Vol.21, No.5, pp. 437- 452. • Samuelson, P. and Scotchmer, S. (2002) “ The Law and Economics of Reverse Engineering” Yale :Law journal, Vol. 111,No:7 2002, pp.1575-1663. • Ansgar (2009), ” Reverse Engineering: Unfair Competition or Catalyst for Innovation?”, <i>Patent and Technological Progress in a Globalized World</i>, Vol.6, pp.535- 552. • Minagawa, T. Jr., Trott, P. and Hoecht, A. (2007), “ Counterfeit, Imitation, Reverse Engineering and Learning: Reflections from Chinese Manufacturing Firms”, <i>R&D Business</i>, Vol.37,No.5, pp.455- 467.
8	Development-based Public Procurement, Global Value Chains
	Key readings • Watermeyer, R. (2011), “Linking Developmental Deliverables to Public Sector Contracts” in Murat Yülek & Travis Taylor (2012) ,<i>Designing Public Procurement Policy in Developing Countries: How to Foster Technology Transfer and Industrialization in the Global Economy</i>, Springer. • Yülek, M. A. (2018). How nations succeed. Palgrave Macmillan US. Chapters 13 • Yülek, M., Celik, B. A., Celik, S., & Yülek, G. G. (2027). Türkiye and South Korea's atomic energy programs since 1958: A comparative study of industrial policy, technological learning, and localization strategies. <i>Energy Policy</i>, 220, 115597. Additional reading • Yülek, M. & Tiryakioğlu, M. (2014) Development-based Public Procurement Policies: A Selective Survey of Policy Experience, <i>Supplement</i>

	to the 2013 Annual Statistical Report on United Nations Procurement: Procurement for Innovation, Copenhagen: UNOPS. • Taylor, T. K. (2012). Countertrade offsets in international procurement: Theory and evidence. In <i>Designing Public Procurement Policy in Developing Countries</i> (pp. 15-34). Springer, New York, NY. • Taylor, T. K., & Yülek, M. A. (2012). Leveraging international public procurement in support economic development: Forecasting public sector expenditures and market size in Turkey. In <i>5th The International Public Procurement Conference, USA</i>, http://www.ippa.org/IPPC5/Proceedings/Part9/PAPER9-6.pdf. • Yülek, M. A. (2012). Public expenditures on machinery and equipment in developing countries: A potential driver of technological development and industrialization. In <i>Designing Public Procurement Policy in Developing Countries</i> (pp. 3-13). Springer, New York, NY. • Eliasson, G. (2011), “Advanced Purchasing, Spillovers and Innovative Discovery”, <i>Journal of Evolutionary Economics</i>, Vol.21, No.1, pp.121-139. • Tiryakioğlu, M., & Yülek, M. A. (2015). Development-based public procurement policies: a selective survey of literature, cross-country policy experience, and the Turkish experience. <i>Innovation: The European Journal of Social Science Research</i>, 28(3), 344-359. • Eliasson, G. (2010) “Advanced Purchasing as Industrial Policy: On the Advanced Firm as a Technical University” in Eliasson, G. (2010) , <i>Advanced Public Procurement as Industrial Policy the Aircraft Industry as a Technical University</i>, Springer Verlag. • Watermeyer, R. (2011), “Linking Developmental Deliverables to Public Sector Contracts” in Murat Yülek & Travis Taylor (2012) ,<i>Designing Public Procurement Policy in Developing Countries: How to Foster Technology Transfer and Industrialization in the Global Economy</i>, Springer. • Yülek, M. & Taylor, T. (2012), <i>Designing Public Procurement Policy in Developing Countries: How to Foster Technology Transfer and Industrialization in the Global Economy</i>, Springer.
9	National Champions
	Key reading • Bürken, S., Yülek, M. & Öngüt, E. (2021). Industrial Policy and Economic Planning: The Case of Development-Based Public Procurement and National Champions in Supporting Local Manufacturing Base?. <i>Industrial Policy</i>, 1(1), 22-32. • Goldstein, A.(2006), “State-owned enterprises, privatization and industrial policy ” in P. Bianchi & S. Labory (Eds), <i>International Handbook on Industrial Policy</i>, Edward Elgar Publishing. Additional readings • Hoffman, K., M. Parejo, J. Bessant & L. Perren (1998) “Small firms, R&D, technology and innovation in the UK: a literature review” <i>Technovation</i>, Vol.18, No.1, pp.39- 55. • Lazzarini, S.G., A. Musacchio, R. Bandeira-de-Mello, R. Marcon (2011) “What Do Development Banks Do? Evidence from Brazil 2002-2009”

	Working Paper 12-047, Harvard Business School, http://www.iepecdg.com.br/uploads/artigos/SSRN-id1969843.pdf. • Alexandersson, G. and Hulten, S. (2005) "Public Procurement and the Rise of National Champions in the Deregulated European Markets for Public Transportation", Stockholm School of Economics and Ecole Centrale Paris, http://userwww.sfsu.edu/ibec/papers/26.pdf. • Vlachos-Dengler, K. (2002), "From National Champions to European Heavyweights: The Development of European Defense Industrial Capabilities Across Market Segments, Rand Corporation", http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA408130 • Mosconi, F. (2002), "The Age European Champions: A New Chance for EU Industrial Policy" <i>The European Union Review</i>, Vol.11, No.1, pp.29-60. • Chiang, Tsong, J. (1990) "National Champion Strategy in Technology Development" <i>Working Paper of Alfred P. Sloan School of Management</i>, Cambridge.
10	Industrial layer, industrial finance, WTO regulations
	Key reading • Yülek, M. A. (2018). How nations succeed. Palgrave Macmillan US. Chapters 9 - Yülek, M. A., & Yeda, V. (2018). Broadening Financial Intermediation in Sub-Saharan Africa. <i>Financing Sustainable Development in Africa</i>, 93-119. - Yülek, M. A. (2017). Why governments may opt for financial repression policies: selective credits and endogenous growth. <i>Economic research-Ekonomska istraživanja</i>, 30(1), 1390-1405. Additional reading • H. Brooks, D. "Industrial and Competition Policy: Conflict or Complementarity," ABDI Research Policy Brief No.24, http://www.quebec.ca/observgo/fichiers/75871_AEEPP.pdf • Yulek, M., & Gur, N. (2017). Foreign direct investment, smart policies, and economic growth. <i>Progress in Development Studies</i>, 17(3), 245-256. - Yulek, M. (1997) "On the Financial Repression in Japan During the High Growth Period (1953-73)", <i>METU Studies in Development</i>, 4/1997. • Thomas Hellman, Venture Capitalists "The Coaches of Silicon Valley" http://strategy.sauder.ubc.ca/hellmann/pdfs/coaches04.pdf 2000. • Darian M. Ibrahim, Washington University Law Review "Financing the Next Silicon Valley" http://digitalcommons.law.wustl.edu/cgi/viewcontent.cgi?article=1094/87 (4),2010.
11-14	Cases of industrial policy in the world: China, USA, EU and beyond
	Green Industrial Policy Economic Planning Key reading • Yülek, M. A. (2018). How nations succeed. Palgrave Macmillan US. Chapters 13, 14 • Yülek, M. (2015). Revisiting national economic planning and industrial policy: Concepts, experiences, and the ecosystem. In <i>Economic planning and industrial policy in the globalizing economy</i> (pp. 3-27). Springer.

	• Additional reading • Amsden, A. H. (1989). <i>Asia's next giant: South Korea and late industrialization</i>. Oxford University Press on Demand • ERDOĞDU, M. M. (2016). Türkiye için Bir Yeşil Sanayi Politikası Önerisi. <i>Economic Development: Social & Political Interactions</i>, (25), 67. • https://www.washingtonexaminer.com/opinion/op-eds/the-hidden-costs-of-bidens-made-in-america-policy • Mosconi, F. (2015). <i>The new European industrial policy: Global competitiveness and the manufacturing renaissance</i>. Routledge. • Akkemik, K. A., & Yülek, M. (2020). Imitation, Innovation and State Capacity: What Do East Asian Industrial Policies Imply?. <i>İstanbul University Journal of Sociology</i>, 40(2), 701-722 • Ricardo Hausmann, Dani Rodrik, and Charles F. Sabel (2007), "Reconfiguring Industrial Policy: A Framework with an Application to South Africa", Harvard University Working Papers, Mayıs 2008 • Yülek, M. (1998). <i>Asya kaplanları: sanayi politikaları ve kalkınma</i>. Alfa. • http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1245702
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