

KÖNYVSZEMLE / BOOK REVIEW

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Henry Wai-Chung Yeung:

Interconnected Worlds. Global electronics and production networks in East Asia.
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The Global Production Network (GPN) approach has become a central conceptual piece in the explanation of transnational organizational forms of the economic activity since the early 2000s. The original heuristic framework labeled as GPN 1.0 was later developed into a more explanatory theory labeled as GPN 2.0 (Coe and Yeung, 2015), by proposing an intellectually challenging explanation on the interconnectedness of regions, economic sectors and organizations.

The author of this outstanding monograph, Henry Yeung, is a distinguished professor of economic geography at the National University of Singapore, and one of the proponents and main exponents of the GPN approach. He proposes in his book a comprehensive, theory-driven and empirically sound analysis of electronics global production networks. Written in an accessible language, the book represents a significant geographical contribution to the understanding of complex relationships and networks shaping the electronics industry.

Using the motif of “worlds” - as did Michael Storper in his famous work on the “regional worlds” – Yeung argues that the interconnected worlds as a predominant model of organizing electronics production started in the 1990s when the production of the sector moved from the multinational worlds of lead firm located in the United States, Western Europe, and Japan towards globalized and macroregional worlds centered in East Asia (China, Japan, South Korea, Taiwan, Indonesia, Malaysia, Singapore, and Vietnam). The author considers the 2010s as a crucial period when East Asian economies and lead firms became dominant in electronics manufacturing.

Based on a rich empirical material (proprietary data at the firm and component levels) and an extensive fieldwork in East Asia during 2017 and 2018 (64 interviews across 44 lead firms from East Asia) the book reveals the interrelationships between geographical space and companies in four sectors of the electronics industry: semiconductors, personal computers, mobile handsets and consumer electronics/televisions. These interrelationships are perceived as asymmetrical: lead firms have the active role of integrating macroregions and national economies into so-called “interconnected worlds” of global electronics. The outsourcing of production and the organization of intricate GPNs connecting diverse regional economies are the main sources for the emergence of these “interconnected worlds”.

The book came out in the right moment, when during the Covid-19 pandemic in 2020 and 2021 the shortage in semiconductor supply has captured the attention of governments, companies and academia. The perceived fragility of global supply chains was additionally exacerbated by the increasing geopolitical tensions between China and the United States, and recently by the war

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between Russia and Ukraine. As a consequence, a range of economic policy regulations in Europe and the United States are intending to support the direct state investment in the semiconductor industries in order to reduce the dependency (decoupling from) on supply chains based in East Asia.

The book is not only anchored in the GPN theoretical perspective developed by the Manchester School (Peter Dicken, Henry Yeung, Neil Coe, Jeffrey Henderson, Martin Hess), but moreover: one of its main novel contribution to the existing literature is related to the alignment of an in-depth empirical analysis to the recent GPN 2.0 theory. Acknowledging the outstanding role played by semiconductors as critical intermediate goods for ICT end products, the empirical discussion of each chapter follows the same logical order: it starts with semiconductors before analysing the end products.

Chapter 1 describes the interconnected worlds of electronics understood as an outcome of a co-evolutionary process which has emerged from the innovative production systems of Silicon Valley. Yeung illustrates convincingly the coevolutionary global shift in electronics from the nationally based production systems in the US, Japan and Western Europe prior to 1990 toward highly interconnected worlds underpinned by complex and spatially dispersed production networks comprising US, Western European and East Asian lead firms in the 2010s. This major shift is explained by the changing national and institutional contexts in East Asia and by the strategic coupling of East Asian firms and economies with GPNs.

Chapter 2 offers a brief overview of the historical evolution of three segments of global electronics, from the 1970s/1980s onward, focusing on leading national firms. The author documents comprehensively how indispensable semiconductors are to the development of complex production networks in ICT devices. Chapter 3 presents the theoretical framework of the book based on Coe and Yeung's (2015) conceptual work. It is an essential part of the book which needs additional effort from the readers less familiar with the GPN literature. The effort is worth it, because it frames the empirical parts of the following three chapters, which are explicitly related to the GPN 2.0 theory. Chapter 4 brings empirical facts for outlining the geography of electronics industry ("where"), following two dimensions: industrial-organizational (worldwide production locations) and intrafirm configurations (worldwide locations of key corporate functions). Chapter 5 focuses on the firm level identifying the business strategies and organizational innovations of the sector ("how").

The key chapter of the book is chapter 6, where he considers that the success of East Asia can be explained by organizational innovations that enabled East Asian companies to gain important competitive advantages ("why"). He identifies four drivers of GPNs success in East Asia: optimizing cost-capability ratios, capitalizing on the market imperative, managing financial discipline and mitigating risks by ensuring good governance.

The concluding Chapter 7 addresses some challenges for corporate and public policy; knowledge gaps to be addressed in future research such as how technological innovations occur. Yeung's public policy recommendations are balanced, arguing for global strategic partnerships, nurturing competitive advantage within key locations and an open pro-ecosystem approach rather protectionism and return to "national worlds".

Beside impressive recent book reviews (Huggins and Johnston, 2022), it is certainly very interesting to read this book from an Eastern European perspective. What can learn the regional science and regional policy community of this region of the world from Henry Yeung's impressive case study analysis on East Asia? Especially the actual geopolitical situation in Eastern Europe makes this question to be very difficult to answer for. The macroregional differences between East Asian countries and Central and Eastern European countries (CEE) are evident, and economic history is not repetitive: that means, I am convinced that the phantastic development path of the four Eastern Asian "tigers" (South Korean, Hong Kong, Taiwan and Singapore) can not be imitated and repeated in different cultural, economic, geopolitical and territorial contexts. However, there are some clear takeaways from the Eastern Asian experiences: first, the central role of national policies enhancing the endogenous capacities for

research and development, and for higher education. Second, the strategic coupling of national firms to the international market dynamics, or, in other words, the strengthening of the international competitiveness of national champion firms. The crucial question remains, are there enough learning and adapting capacities in the firms, organizations or central governments of CEE countries to learn this lesson?

References

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