

The Architecture of Collapse: The Global System in the 21st Century by Mauro F. Guillén, Oxford University Press, UK (2015), 240 Pages, £25.00*

The post-crisis global efforts directed at entrenching financial stability do not seem to have adequately recognised the fact that a complex and interconnected financial system is extremely unstable. *The Architecture of Collapse* argues that the modern global system has ‘become intricate, interconnected, unwieldy and unpredictable’, that it has become unstable due to the way it is currently structured. The author, Mauro F. Guillén, is Director of the Joseph H. Lauder Institute at Penn, and also holds the Dr. Felix Zandman Endowed Professorship in International Management at the Wharton School of the University of Pennsylvania. According to Guillén, the broad indicators – demographic, economic, financial, political, social and cultural – suggest a likely persistence of global systemic instability. He highlights the fact that crises and other episodes of abrupt change seem to occur rather frequently. He refers to the ‘current structure of global system’, as the ‘*The Architecture of Collapse*’ due to its inherent propensity to lead to ‘instability, disruption and crisis’. The book contains seven chapters.

Chapter 1 on the global system traces its origin, and compares and contrasts the old and modern global systems using a framework of nodes, network and system. The ‘Global System’ as an idea has evolved over the years. Guillén alludes to the definition of the global system by Immanuel Wallerstein in his first volume of *The Modern World-System* (1974) as one of hierarchy exhibited by ‘core’ and ‘periphery’ countries. Highly industrialised countries form the core and the less industrialised countries, the periphery.

Guillén, drawing from several indicators as well as theories, advances the idea that the global system has indeed collapsed and is a result of several shock waves. He argues, again drawing from well-argued empirical literature, that ‘interactive complexity’ and ‘tight coupling’ ‘create a situation in which the system cannot easily return to equilibrium if something throws it off balance’.

Guillén effectively uses the network theory to analyse the emerging complexities in growth, structure, dynamics, and functioning of nodes and

networks and their mutual interrelationships in the global system so as to identify whether it leads to shock diffusion or shock absorption. A complex network could be shock absorbing as well as shock diffusing. It could be shock absorbing when the structure and pattern of relationships among the different nodes is complex but impervious to the global isomorphic forces, making it difficult to contribute to a contagion. It is shock diffusing when the nodes are complex and tightly coupled with other nodes.

The term ‘interactive complexity’ refers to many parts moving in an intricate arrangement, interacting with one another in non-linear ways. The term ‘tight coupling’ refers to the extent to which the parts are tightly related to one another, thus reducing the buffers and/or degrees of freedom, the tolerance, or the margin for error. The author clarifies that two parts may be interdependent but not necessarily tightly coupled.

In Chapter 2, Guillén delves into the complexities of inter- and intra-country interactions. The frequency of currency, inflation, stock market, domestic debt, external debt, and banking crises has significantly increased in recent times. This has been illustrated with the use of several data on economic and financial crises sourced from the works of Reinhart and Rogoff (“This Time is Different: Eight Centuries of Financial Folly”, Princeton University Press, 2009), the World Bank, Bank for International Settlements (BIS), United Nations Industrial Development Organization (UNIDO), World Trade Organization (WTO) and International Monetary Fund (IMF).

While analysing complexity and networks, the author views complex networks as generally shock-absorbing while those which are tightly coupled as shock-diffusing. The author also distinguishes between network complexity and node complexity, which together lead to systemic complexity. The network complexity arises due to factors like increase in number of countries in the global system, foreign direct investment, information flows, tourism and migration, and trade in goods and services. The network complexity such as portfolio investments could be shock-diffusing during a crisis. The node complexity arises due to factors such as democracy, size of the state/country, industrial diversification and state failure. The author further explains that network coupling arises due to factors such as current account imbalances, foreign portfolio investment, cross-border banking (can also generate node coupling as in the case of Euro Zone), currency trading, and trade in intermediates,

while node coupling takes place on account of factors like population ageing, public debt, wealth inequality, income inequality and urbanisation. The node and network complexities contribute to systematic complexity. Some of the famous instances of coupling-induced troubles (CIT) include France in 1981, Mexico in 1994–95, the Asian Flu of 1997, Argentina in 2001–02 and Euro Zone in 2009. Germany and Europe represent an example of tight coupling since Europe is tightly integrated but is dependent on Germany. Likewise, Germany is dependent on Europe. The coupling has become tighter over time, especially in the wake of the crisis. The implications are that the Euro Zone would remain unstable for the foreseeable future. The United States-China relationship is one of interactive complexity (trade and foreign direct investment) and tight coupling in terms of portfolio investments (government bonds). This, according to Guillén, has serious implications for the global system, impacting trade, capital flows and reserves.

Chapter 3 explains the differences between network and node coupling; and the implications of current account imbalances, international trade, growth of cities, debts of countries, and income inequality that have resulted from structural changes in the global landscape over the last 30 years. Guillén demonstrates that the dynamics of complexity and coupling unfolds not only at the global systemic level but also within the sub-components (e.g. industries and regional trade block). Chapter 4 investigates the recent global crisis of 2008. It demonstrates how interactive complexity and tight coupling at the node level can jointly destabilise one large country like the US and the crisis can spread to other parts of the world depending upon the patterns of complexity and coupling at the network level.

Focusing on case studies of complexity and decoupling, Chapter 5 analyses the relationship between China and the US to illustrate the dynamics of complexity and coupling at the dyadic level, noting how it contributed to the crisis and how it might evolve in the future. Guillén argues that the China-US relationship can be seen as both stabilising as well as destabilising. Chapter 6 compares the European Union (EU) and the Euro Zone in the context of the debt crisis that emerged in 2009. According to the author, the EU is a more complex subsystem but not tightly coupled. On the other hand, the Euro Zone is both complex and tightly coupled, such that it is extremely sensitive to the disruptions and failures originating even from the smallest countries within the zone.

Guillén takes stock of evidence and issues in Chapter 7, charting out specific recommendations to make the global system more predictable, subject to lesser failures and overall safer. The current global system is characterised by spread of practices, crises and events from one country to another and these processes of diffusion tend towards “isomorphism” due to the network complexity and tight coupling at the network and node levels. High levels of state capacity in terms of ability to intervene during normal and crises times, build buffers/firewalls against instability, disruption, crisis and breakdown whether the menace is due to financial, ethnic conflict or natural disaster, he argues, make the adoption of new models more likely in response to normative, mimetic or emulative isomorphism. He adds that the role of state capacity during crisis involves independence of central banks. He illustrates how the independent central banks during the recent global crisis in Europe (debt crisis) and US (political gridlock) were in a better position to act than governments in restoring confidence and accelerating growth. States with more capacity have the means to identify and evaluate alternatives proposed or adopted elsewhere in the world, assess their impact, and conduct follow-up studies after implementation.

This book analyses the stability of the global economy in a different perspective using concepts of network, nodes and the links between them. In the context of financial systems, the nodes of the network represent financial institutions, while the links are created through mutual exposures between banks, acquired in the interbank market by holding similar portfolio exposures or by sharing the same mass of depositors. A network approach to economic and financial systems for assessing macroeconomic and financial stability is insightful. Such an approach can be particularly helpful in capturing the externalities – risk associated with a single country or institution may spread to the entire global system. A better understanding of network externalities may facilitate the adoption of a macro-prudential framework for financial supervision. Regulations that target an individual country or institutions, and those which take into account vulnerabilities emerging from network interdependencies, may prevent a local crisis from becoming global.

With his elegant style of writing, Guillén helps the reader navigate a complicated global landscape by offering clarity on instability and crisis. The resilience of an economy/financial entity can only be improved by (i) enhancing the shock-absorbing components of the system, especially the

capacity of states and governments to act, and (ii) by containing the shock-diffusing mechanisms, in particular those related to phenomena such as trade imbalances, portfolio investment, cross-border banking, population ageing, and income and wealth inequality.

In sum, Guillén's book outlines the high-impact risks facing both local and global economies and details how the evolution of interconnected markets designed for efficiency have left many economies exposed. Apart from opinion and analysis, the book also offers a wealth of empirical evidence presented in the form of comprehensible visual displays, graphs and charts. This book promises utility to a wide range of readers who may be interested in today's finance-driven global society and the evolution of nations.

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