

Conceptualizing Financial Resilience: The Challenges for Urban Theory*

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Abstract

This chapter outlines an urban theory of ‘financial resilience’ that accounts for the fact that the concurrent processes of urbanization and financialization render the economic system at once resilient and unstable. The notion of financial resilience thus conceived helps to advance our understanding of the processes of globalized urbanization in an era of financialized capitalism. Rejecting the classical notion of ‘monetary neutrality’, such a theory of resilience highlights that the particular behavioral attributes of a capitalist economy evolve around the (spatial) impact of money, credit and finance upon system behavior. One of my central claims in this regard is that the resilience of the monetary-financial system is an enduring theme that characterizes the historical reality of the American metropolis. The position outlined here envisions establishing ‘financial resilience’ as an analytical concept for urban theory that captures the systemic behavior of capitalist development in terms of the historical and institutional co-evolution of the process of urbanization and the monetary-financial system as a whole. In relating financial resilience to modes of urban capitalist governance and regulation, the discussion of the spatial aspects of financial resilience is cast both in terms of an *institutional view of resilience* (the resilience of both micro- and macro-level entities) and, in terms of a *functional view of resilience* (the resilience of funding flows and asset flows).

Keywords: Financial resilience, non-neutrality of money, monetary-financial system, urbanization, financialization.

JEL classification: B52, E42, G28, R1.

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Short author bio

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“To analyze how financial commitments affect the economy it is necessary to look at economic units in terms of their cash flows. The cash flow approach looks at all units – be they households, corporations, state and municipal governments, or even national governments – as if they were banks.” – Hyman Minsky (2008, p.221)

1 The ‘resilience turn’ in urban theory

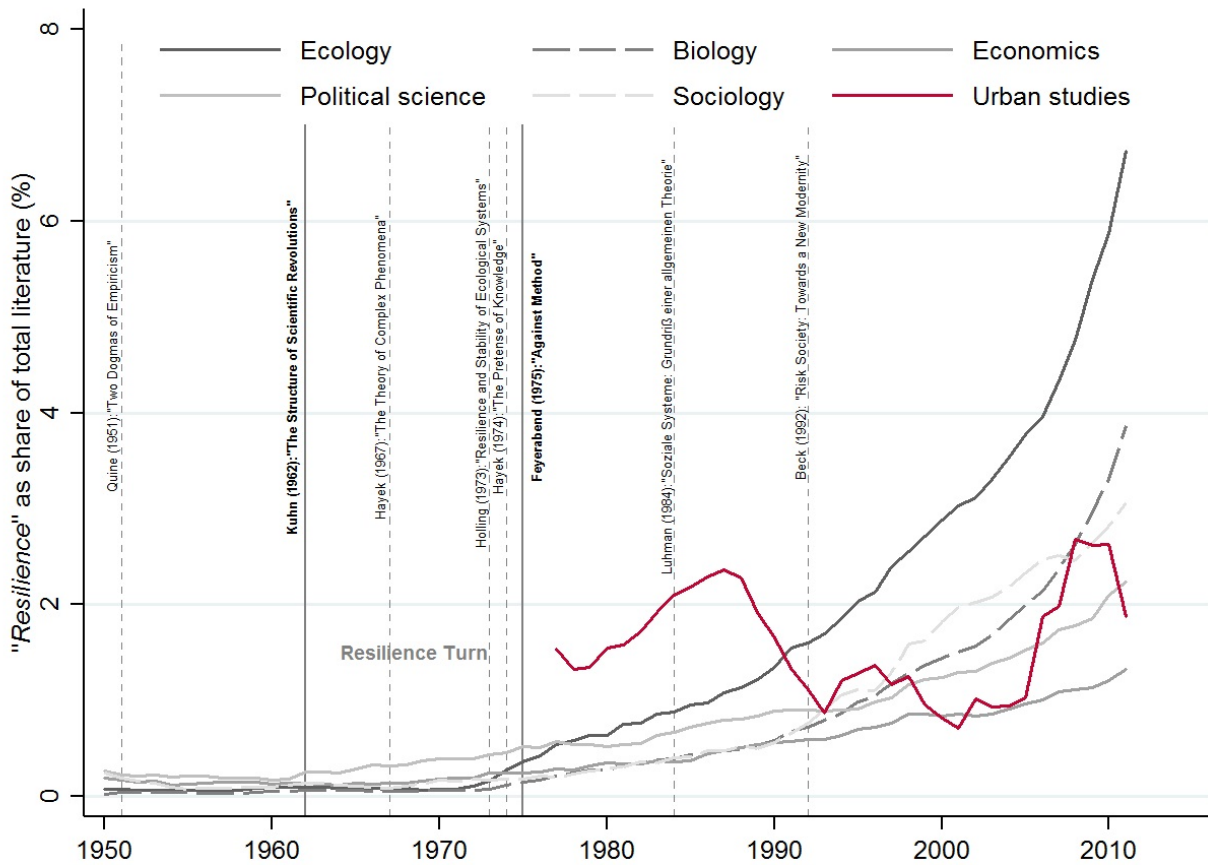
In the wake of the recent financial crisis, the notion of ‘resilience’ has become firmly established in a wide range of academic and political discourses as well as in contemporary practice. ‘Resilience thinking’ has emerged as a palatable vignette that is readily accessible to a broad variety of urban scholars, promising to open up a truly pluralistic discourse among otherwise deeply fragmented social science disciplines and sub-disciplines. Paradoxically, perhaps, much of the idea of resilience’s wide appeal is rooted in its own conceptual fuzziness. In most instances, it remains difficult to define what precisely is meant by resilience, what its components are, how it is measured, how it relates to the long-term trajectory of global, regional, and local development, and what it offers as a means of understanding inter- and intra-regional social disparities. Indeed, despite such a wide-spread embedding of resilience in the conceptual framework and analytical toolkit of urban and regional research, considerable ambiguity about key ontological dimensions of resilience continues to persist.¹ Resilience of *what*? Resilience towards *what*?

Instead of being a panacea for a unifying common ground, the ostensibly intuitive qualities of the concept of resilience may yet turn out to contain the seeds of its own demise as far as ‘scientific usefulness’ is concerned. Resilience is thus at risk of the same academic profusion that has rendered ‘sustainability’ by and large an unhelpful analytical category. What then are the prospects for resilience not to morph into an ideational Trojan horse for urban and regional theory? This raises the deeper question of whether the ‘metaphysical ambiguity’ in the conventional resilience discourse itself presents an insurmountable, latent hazard, capable of undermining any project to develop an internally consistent theory of urban and regional resilience.

In dealing with these challenges, this chapter proposes the argument that resilience’s future as a useful theoretical and empirical concept depends entirely on its precise ontological and epistemological grounding in the intellectual tradition of a specific class of urban and regional theory. More specifically, I suggest that resilience as an analytical concept can play a pivotal role in advancing our understanding of the *process of globalized urbanization in an era of financialized capitalism*. As such, this chapter introduces the notion of ‘*financial resilience*’ as a particular lens for reading the spatio-temporal evolution of financially sophisticated capitalist economy – a lens that above all engages with the question of why the concurrent processes of urbanization and financialization render such an economy at once *resilient* and *unstable*.

¹In the context of ‘regional resilience’, see Hassink (2010) and Martin (2012) for some recent conceptual and empirical progress in terms of identifying epistemological pitfalls and addressing the definitional fuzziness of the concept.

Figure 1: The ‘resilience turn’ in the social sciences



Notes: Bibliometric frequency analysis for the share of journal articles that have ‘resilience’ in the title, abstract or as keyword. Vertical lines mark the publication of an influential text in the literature on resilience. Source: Author’s calculations from JSTOR data.

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However, before engaging with the main thesis of this chapter, it is helpful to situate our discussion of resilience and urban theory within a broader conceptual genealogy of the idea of ‘resilience’ in the social science literature.² A cursory tracing of the origins of resilience thinking suggests that it emerged rapidly after a period of deep epistemological and methodological introspection in the philosophy of science during the 1960s and early 1970s – a period that I will henceforth refer to as the ‘resilience turn’. Thus delineated, the ‘resilience turn’ roughly coincides with the publication of Kuhn’s (1962) seminal *Scientific Revolutions* and fully takes off around the time of Feyerabend’s (1975) radical manifesto *Against Method*. Figure 1 documents the remarkable rise of resilience thinking in the academic literature after the resilience turn. In particular, the graph highlights the concept’s importance in a rapidly expanding literature in ecology from where it first rose to prominence and eventually spread to other disciplines – a development that is commonly attributed to Holling’s (1973) seminal article “Resilience and Stability of Ecological Systems”.

²See Walker and Cooper (2011) for an alternative, more comprehensive reading of the genealogy of resilience.

49 While ecological notions of resilience would have certainly appealed to social the-
50 ory in their own right, the rapid absorption into the social sciences was undeniably
51 precipitated by Hayek's (1967, 1974) foundational work on complexity in economic
52 systems. It was this novel thinking and its theoretical focus on the behavior of com-
53 plex adaptive systems that provided much of the intellectual accelerant that allowed
54 the resilience literature to spread into economics, sociology, and political science. In
55 the urban studies literature, notions of resilience first rose to prominence during the
56 late 1970s in the context of more planning-oriented problems that dealt with issues
57 in the realm of traditional disaster risk management, such as flooding, earth quakes,
58 or other natural disaster. This remains one of the predominant strands of the urban
59 resilience literature today, particularly as it pertains to climate change adaptation.

60 At the same time, however, the last decade or so has also seen the emergence of
61 important alternative bodies of work on urban resilience around normative dimen-
62 sions of *resilience as (neoliberal) governance* on the one hand, and around *resilience*
63 *in urban political ecology* on the other.³ As such, resilience thinking offers an attrac-
64 tive conceptual bridge that spans much of the vast interdisciplinary grounds among
65 spatially-inclined social scientists - an exceptionally appealing feature of the concept
66 in light of rapid disciplinary specialization. Indeed, it is arguably for these very rea-
67 sons that resilience thinking has regained much of its original appeal as an organizing
68 principle in post-crisis theorizing today, particularly among urban theorists (cf. Fig-
69 ure 1).

70 In the wake of the financial crisis, a third strand of literature on urban and regional
71 resilience has established itself, focusing on the concept's relevance with regard to the
72 economic performance of cities and regions. This literature tends to be broadly orga-
73 nized around public policy efforts of 'constructing' or 'building' *regional and urban*
74 *economic resilience* in the face of unanticipated shocks.⁴ In the next section, I begin
75 to develop the idea of 'financial resilience' in more detail against the backdrop of this
76 specific strand of literature on regional resilience, while, at the same time, recogniz-
77 ing the specific relevance of institutional and functional elements of the governance
78 discourse on resilience.

79 2 Conceptualizing financial resilience

80 In what follows, I attempt to outline a theory of financial resilience that is relevant for
81 a financially sophisticated capitalist economy. One of the key tasks of such a theory
82 is to engage with the concurrent processes of urbanization and financialization that
83 render the economic system at once *resilient* and *unstable*. As I explore in more detail
84 elsewhere (Bieri, 2016), the notion of financial resilience might help advance in im-
85 portant ways our understanding of the *processes of globalized urbanization* in an era of
86 *financialized capitalism*. At the core of this argument stands the Post-Keynesian (and

³See Chandler (2014) and Pough (2014) for accessible summaries of the recent literature on resilience as gover-
nance, and Angelo and Wachsmuth (2015) for the resilience literature on urban political ecology.

⁴Martin and Sunley (2015) provide a comprehensive overview of the recent resilience literature on regional eco-
nomic development.

87 to some extent Marxian) notion that capitalism is essentially a financial system in
88 which money is not ‘neutral’.⁵ Such a theory of resilience rejects the classical notion
89 that the monetary sector is merely a proverbial veil behind which the fundamental
90 exchange processes of a barter economy take place. Instead of assigning money and
91 financial interrelations at best a role for short-term frictions, the view developed here
92 theorizes money as a particular form of credit that is created by government (‘outside
93 money’) and the banking sector (‘inside money’), thus assigning it direct relevance
94 for the determination of real sector phenomena.⁶ In fact, in a remarkable flouting
95 of the conjecture of monetary neutrality, the financial crisis was powerful proof that
96 money and credit are also – always and everywhere – local phenomena with real ef-
97 fects.

98 Consequently, the particular behavioral attributes of a capitalist economy evolve
99 around the (spatial) impact of money, credit and finance upon system behavior. One
100 of my central claims in this regard is that money is *non-neutral with regard to space*,
101 principally because the institutional arrangements of finance matter for how the built
102 environment evolves (Bieri, 2013, 2014b, forthcoming). In particular, the resilience
103 of the monetary-financial system is an enduring theme that characterizes the histori-
104 cal reality of the American metropolis.⁷ Focusing on the spatial consequences of the
105 U.S. financial system since the 1830s, I argue elsewhere that a general theory of urban
106 rise and decline must establish explicit linkages between money, credit and banking
107 and urban spatial structure (Bieri, 2014a).

108 2.1 Dimensions of financial resilience

109 The project of theorizing ‘financial resilience’, then, is not limited to simply describ-
110 ing the behavior of financial characteristics of singular actors - such as, e.g., the indebt-
111 edness of households, the solvency of firms, or the liquidity of government - in terms
112 of a specific temporal trend of an accounting ratio or an economic benchmark. Nor
113 should conceptualizations of financial resilience be reduced to mere illustrative exer-
114 cises that document the changing dimensions of fiscal, financial or monetary relations
115 among various spatial aggregates (cities, regions or nations). Instead, the position
116 outlined here envisions establishing ‘financial resilience’ as an analytical concept that
117 captures the systemic behavior of capitalist development in terms of the historical and
118 institutional co-evolution of the process of urbanization and the monetary-financial
119 system as a whole. In relating financial resilience to modes of capitalist governance
120 and regulation, it will be useful to cast the discussion of the spatial aspects of finan-

⁵The notion of ‘monetary neutrality’ is a central tenet of neoclassical mainstream economics, suggesting that the spheres of money and production are analytically distinct. By contrast, heterodox monetary theories – including Marxian, Institutional, and Post-Keynesian – emphasize the importance of the financial sector as a source of fluctuations in the real sector, thus opening up a pathway for the non-neutrality of money.

⁶The distinction between ‘outside money’ and ‘inside money’ goes back to seminal work of Gurley and Shaw (1960). In this context, ‘outside money’ is either of a fiat nature or backed by some asset that is not in zero net supply within the private sector (e.g. gold), whereas ‘inside money’ is an asset backed by any form of private credit that circulates as a medium of exchange.

⁷The term ‘monetary-financial system’ reflects the view that monetary institutions and financial markets now overlap to such a degree that they are best viewed as parts of a larger whole (cf. Chandler, 1979; Bieri, 2009).

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cial resilience both in terms of an *institutional view* of resilience (i.e. the resilience of both micro- and macro-level entities, from households, financial intermediaries and governments to monetary arrangements and financial markets) and, perhaps more importantly, in terms of a *functional view* of resilience (i.e. the resilience of funding flows and asset flows).⁸

Table 1: Dimensions of financial resilience

	<i>Micro-financial resilience</i>	<i>Macro-financial resilience</i>
<i>Institutional focus</i>	Liquidity and solvency of individual firms, households, or (local) governments; rate of profit, financial leverage	Aggregate sectors of the economy (financial corporations, non-financial corporations, households, government)
<i>Functional focus</i>	(Spatial) flow of funds (credit, assets)	Distribution of income (macro-importance of financial industry; 'financialization')
<i>Resistance:</i> Reaction to a shock	Volatility of profit margins; financial leverage	Amplitude of financial cycle, financial fragility
<i>Recovery:</i> Speed of 'bounce-back'	Adjustment of corporate profit margins; de-leveraging of individual balance sheets	Length of financial cycle
<i>Re-orientation:</i> Change post-shock composition	Profitability of financial vs. non-financial corporations; post-crisis leverage	Increasing or decreasing financialization, regime of accumulation
<i>Renewal:</i> Re-direction of (growth) path	Level of corporate profitability; fiscal sustainability	Financial stability, 'secular stagnation'

Source: Bieri (2016).

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As a baseline for what follows, Bieri (2016) distinguishes between 'micro-financial resilience' and 'macro-financial resilience' in applying this institutional and functional approach to Martin's (2012) four dimensions of resilience (resistance, recovery, re-orientation and renewal). The cornerstones of this approach are summarized in Table 1 below. Beyond the straightforward scalar dimensions of financial resilience implied by Table 1, financial resilience emerges as an inherent quality of the capitalist process, simultaneously operating in various guises as the system evolves. In addition to a differentiated treatment of the *spatial dimensions* of money and finance, the discourse on financial resilience also needs to grapple with the phenomenon of *temporality*, rising above the wide-spread conflation of historical and logical time that plagues much the conventional treatment of resilience.⁹ This requires analytical clarity about the concept of time in so far as it matters for how economic systems evolve

⁸Institutional notions of 'financial resilience' are increasingly gaining traction as a policy target among central bankers in the context of a broadening of the scope of what macro-prudential policy ought to focus on. As a policy target, the term 'financial resilience' offers as alternative to 'financial stability', capturing systemic interconnectedness and tail risks (e.g. Berry, Ryan-Collins, and Greenham, 2015; Mester, 2015). See Bieri (2016) for a more detailed treatment of this literature and its relation to the broader notion of 'financial resilience' introduced in this chapter.

⁹Economic theory generally distinguish between 'logical', 'mechanical' and 'historical' time. See Setterfield (1995) for an overview of these different concepts of time in the history of economic analysis. Most relevant for

138 and for their tendency to exhibit (in)stability or to revert to a specific development
139 trajectory in particular. Time is indispensable in the discussion of all phenomena re-
140 lated to equilibrium, resilience, and path-dependent development, precisely because
141 all economic activity – as Joan Robinson (1969, p.23) puts it – “takes place in the
142 present, firmly inserted between an uncertain future and an immutable past”. Tak-
143 ing seriously the implications of historical time as analytical device that famously
144 “prevents everything from happening at once”, a theory of financial resilience offers
145 the prospect for advancing a framework that reconciles Post-Keynesian and Marxian
146 perspectives on money, credit and banking as spatial theories of the medium term
147 and long term, respectively.¹⁰

148 Overall, then, financial resilience is a scale-dependent spatio-temporal property
149 of financialized capitalism, providing a framework through which to theorize the
150 spatial consequences of notions of governance, (dis)equilibrium, and regulation. A
151 prospective urban research agenda on financial resilience has to be deeply anchored
152 in the analytical tradition of political economy, rendering it compatible with a crit-
153 ical discourse on resilience more broadly conceived. Without overemphasizing the
154 contemporary relevance of C.P. Snow’s (1961) ‘two cultures’ in this regard, notions
155 of financial resilience rooted in social science thought thus ought to be theorized in
156 ways that prioritize nuances among different *ideas*, the evolution of socioeconomic
157 *institutions*, and the particularities of historical *events*. Not in terms of imported
158 metaphors such as ‘entropy’, ‘exaptation’, and ‘metabolism’.

159 **2.2 Resilience = f (equilibrium, regulation, complexity, gover-** 160 **nance)**

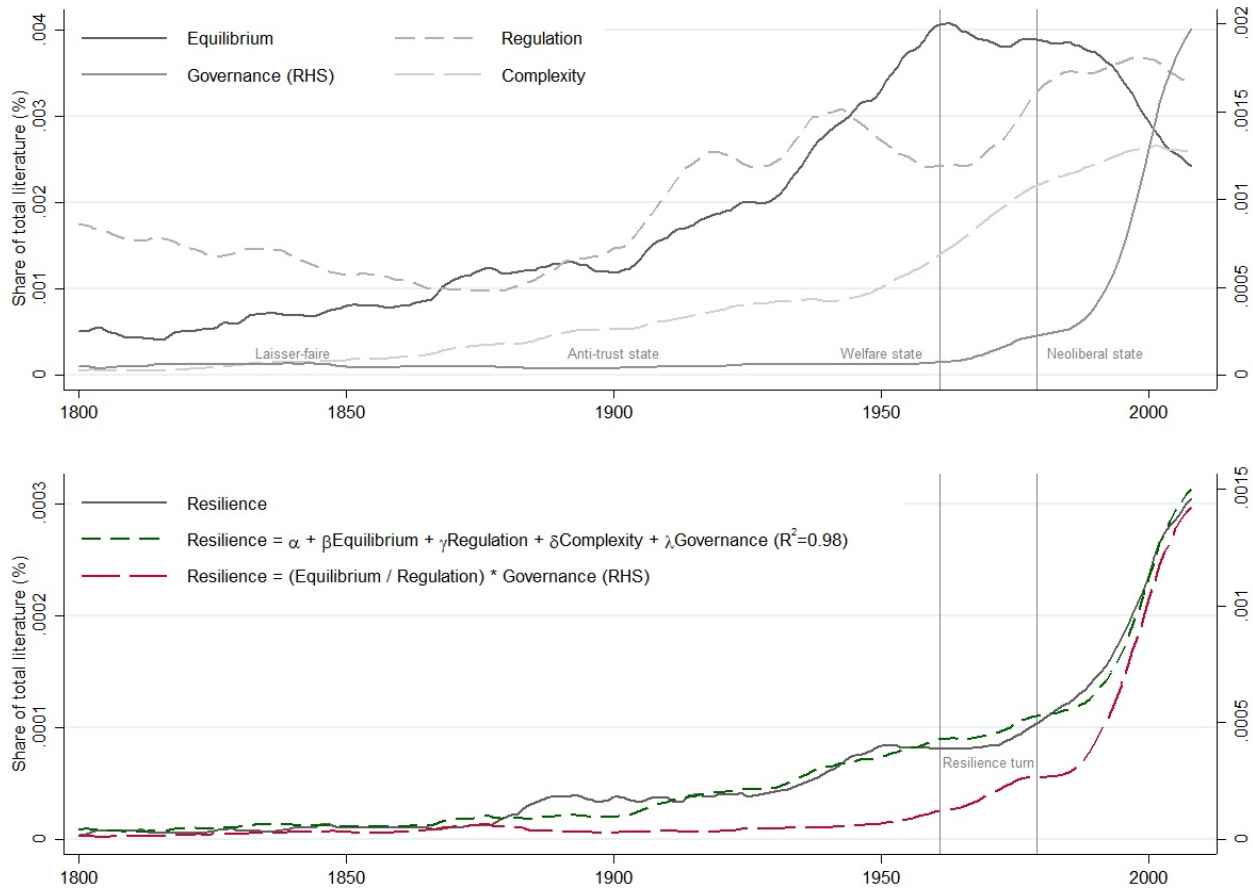
161 In our conceptualization of resilience as part of urban theory thus far, this chapter
162 argues that financial resilience offers a particular analytical lens through which to
163 view the spatial development of cities as inextricably linked to the evolution of the
164 modern monetary-financial system. In this context, it becomes necessary to sketch
165 out some latent ontological issues related to the term ‘resilience’ itself that deserve
166 a broader engagement when employing the term for the purposes outlined above.
167 Above all, the definitional uncertainty of resilience in many ways is very reminiscent
168 of a few other terms that are central to the structure and substance of how related
169 disciplines in the social sciences conduct their discourse on the nature and evolution
170 of capitalist regimes. These concepts are ‘equilibrium’ and ‘regulation’ in economics
171 and ‘governance’ and ‘complexity’ in political science and its sub-disciplines. In some
172 ways, tracking the changing focus on and prevalence with which that each of these
173 concepts appears in the literature permits some limited inference on the larger shifts
174 and turning points among the basic tenors of specific disciplinary discourses.

175 One appealing way of substantiating this claim is by a simple lexical analysis of
176 the terms ‘equilibrium’, ‘regulation’, ‘complexity, and ‘governance’ across major his-

our discussion here is the concept of ‘historical time’ and key attribute that “past, present and future are qualita-
tively different, linked by expectations and plan” (Termini, 1981, p.10).

¹⁰See also Duménil and Lévy (1999, 2012) for recent efforts that focus on the role of historical time as a means for
reconciling Post Keynesian and Marxian perspectives.

Figure 2: The rise of ‘resilience’ as a ‘derived concept’



Notes: Bibliometric frequency analysis for the share of English language books that contain the respective search works in the text. The bottom panel visualizes the rise of ‘resilience’ in the literature as a simple linear transformation of the concepts of ‘equilibrium’, ‘regulation’, ‘complexity’ and ‘governance’. The parameterized version of the linear prediction for resilience is $\text{Resilience} = -0.001 + 0.016 * \text{Equilibrium} + 0.004 * \text{Regulation} + 0.011 * \text{Complexity} + 0.121 * \text{Governance}$ (with all parameters are significant at the 1% level; adjusted $R^2 = 0.983$). Source: Author’s calculations from Google Books Ngram data set.

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torical epochs of capitalist development.¹¹ The top panel of Figure 2 visualizes the frequency with which each of the four concepts has evolved in the literature over the past two centuries or so.¹² Among the most striking features of this graph, perhaps, is the fact that the occurrence of the term ‘governance’ is a much more recent phenomenon than the long-standing uses of ‘equilibrium’ and ‘regulation’. In fact, the widespread use of the term ‘governance’ broadly coincides with the rise of the neoliberal state and the market-based public policy recommendations that are commonly

¹¹Pechenick, Danforth, and Dodds (2015) discuss the scope and limitations to inference in the use of the frequency trends from the Google Books data sets as indicators of the popularity of various words.

¹²The year 1800 is used as an arbitrary cut-off point as it loosely represents the beginning of the industrial revolution and its associated rise the writings of the Classics in the history of economic thought, straddling the publication of Smith’s (1776) *Wealth of Nations* and Ricardo’s (1817) *Principles of Political Economy and Taxation*.

184 associated with the ‘Washington Consensus’.¹³

185 In a similar sense, relative usage of the term ‘regulation’ maps fairly neatly into
186 different thought paradigms in terms of the state-market nexus – ebbing for much
187 of the Golden Age of ‘laissez-faire’ during the 19th century, then rising rapidly at the
188 dawn of the age of the antitrust movement during the Progressive Era in the early
189 20th century until reaching a temporary peak as the Western liberal democracies and
190 their welfare states emerge triumphantly from World War II. As ‘regulation’ becomes
191 the norm during the early post-war period, its cultural usage declines until – in the
192 wake of the collapse of Bretton Woods, the OPEC oil shocks, and stagflation – the
193 crisis of Keynesianism ushers in a new age of de- and re-regulatory thinking which
194 sees both the emergence of the French Regulation School and its North American
195 pendent, the ‘social structure of accumulation’ theory.¹⁴

196 With regard to the term ‘equilibrium’, the monotonic rise of its usage peaks dur-
197 ing what can be best described as the beginning of the ‘end of history’ in orthodox
198 economics. This is an epoch where Samuelson’s (1947) *Foundations of Economic Anal-*
199 *ysis* – the origins of the neoclassical synthesis – sets the general tone for how economic
200 theory was undertaken for many years after the World War II, reaching its intellectual
201 climax with the Arrow-Debreu characterization of general equilibrium.¹⁵ Figure 2
202 also suggests that the period we have identified above as the ‘resilience turn’ is a par-
203 ticularly pivotal epoch of socio-cultural and linguistic evolution in terms of the four
204 expressions ‘equilibrium’, ‘regulation’, ‘complexity, and ‘governance’.

205 One way to visualize the close connection between the rise of ‘resilience’ and the
206 ideational trajectory of the social sciences is by mapping the use of ‘resilience’ as a
207 function of the above four terms. The bottom panel of Figure 2 emphasizes that the
208 lexical frequency pattern of the term ‘resilience’ can be almost perfectly expressed as
209 a linear projection of these four concepts. In fact, the remarkably tight fit of a simple
210 linear model suggests that almost 99 percent in the variability of the textual usage of
211 ‘resilience’ can be explained by a weighted average of the other four concepts. Put
212 differently, ‘resilience’ constitutes a ‘*derived concept*’ whose principal components –
213 ‘equilibrium’, ‘regulation’, ‘complexity and ‘governance’ – are deeply and unequivocally
214 rooted in the social sciences.

215 Beyond its simple arithmetic appeal, this remarkable facet in the emergence of re-
216 silience underlines a deeper ontological point, namely that – in the sense of Durkheim
217 – the sociological importance of any concept is tied to an underlying explanatory
218 structure of related ideas. The theoretical conceptualization of resilience appears
219 therefore at its most productive if conducted within an intellectual space that is spanned

¹³See, e.g., [Bevir \(2010\)](#) for an intellectual history of the concept of governance, and critical assessment of how governance fits into contemporary political theory.

¹⁴See [Kotz \(1990\)](#) for a comparative analysis of the theory of ‘régulation’ and the social structure of accumulation theory.

¹⁵In this regard, it might be somewhat surprising, even to economists, how contentious a concept ‘equilibrium’ has been in the history of thought in economics. It is not an overstatement to suggest that there is more disagreement over the nature of equilibrium in economics than there is agreement. The oft-asserted dominance of Arrow-Debreu Walrasian general equilibrium thinking is historically exaggerated and the apparent hegemony of equilibrium thinking thus largely a result of the post-war reign of orthodoxy of the neoclassical synthesis ([Setterfield, 1997](#)).

220 by the vectors of ‘equilibrium’, ‘regulation’, ‘complexity and ‘governance’.

221 3 Financial resilience and the process of urbanization

222 Against the background of resilience as a derived concept, I now briefly outline some
223 specific example where important inroads in theorizing the notion of financial re-
224 siliance in urban theory are to be made, particularly with regard to *monetary dis-*
225 *equilibrium*, *financial instability* à la [Minsky \(2008\)](#), and *fiscal imbalances* along the
226 lines of the recent federal ‘fiscal cliff’ in the U.S. and the urban austerity regimes
227 of Detroit-like cities. To be sure, the engagement of ‘financial resilience’ within an
228 urban context ought to incorporate all aspects of the monetary-financial system (the-
229 oretical and empirical) much more so than is currently the case. For example, because
230 the hierarchy of money matters for the hierarchy of cities in important ways, money
231 and finance are never ‘neutral’ (in the [neo]classical sense) with regard to space.¹⁶
232 Consequently, the relational importance of money and finance in an urbanized so-
233 ciety – from crowdfunded real estate to securitized mortgages – pins down central
234 aspects of real-financial linkages ([Bieri, 2015](#)).

235 In this sense, [Batty’s \(2014\)](#) recent editorial on “Money and the City” and [Peck’s](#)
236 [\(2012\)](#) “Austerity Urbanism” fall short of much needed theoretical and empirical en-
237 gagement with core aspects of money, credit and banking. In fact, much of what
238 Batty and Peck outline – while very timely – is a case of “Hamlet without the Prince”:
239 Monetary theory plays no more than a superficial role in their argument. Successful
240 theorizing in this regard must move beyond [Harvey’s \(1985\)](#) dominant reading of
241 Marx on the urbanization of capital. We need a spatialized interpretation of mod-
242 ern credit theories of money and their implications for financial resilience in an ur-
243 ban setting. My own work on this subject suggests that we must treat the trajec-
244 tory of spatial development and the advancement of the monetary-financial system
245 as a joint historical process [Bieri \(2009, 2013, 2016\)](#). Specifically, this work develops
246 an ‘institutional-evolutionary’ perspective in documenting how different regulatory
247 regimes shape the international and interregional flow of funds across space. This
248 research also engages with the fact that the modern monetary system is not only in-
249 herently hierarchical in finance, but it is also hierarchical in power. Revisiting August
250 Lösch’s analysis of the spatial consequences of monetary-financial arrangements, I ar-
251 gue that these lesser-known aspects of Lösch work are consistent with a spatialized
252 version of central tenets of Post Keynesian monetary theory ([Bieri, 2014b, forthcom-](#)
253 [ing](#)).

254 Financial resilience thus conceived must also not be a conceptual Robinson Cru-
255 soe; it has to relate to existing discourses on ‘financial stability’ and ‘financial fragility’
256 within a theoretical setting that emphasizes the systemic importance of the monetary-
257 financial system for all sectors of the urban economy. Across different historical
258 regimes, the intrinsic instability of the financial system has governed a dialectical re-

¹⁶In a related sense, [Taylor, Hoyler, and Verbruggen \(2010\)](#) underline the increasing importance of global (finan-
cial) flows within urban networks as opposed to hierarchies, proposing ‘central flow theory’ as a complement to
conventional location choice models anchored by Central Place Theory.

259 relationship between financial regulation and government intervention, in turn leading
260 to financial innovation, which opens up new frontiers across financial space. As part
261 of this dynamic in the wake of financial crisis, politicians and members of the pub-
262 lic have attributed much of the blame for a lack of economic resilience to a general
263 breakdown in the (financial) regulatory system, both in the U.S. and elsewhere (Bieri,
264 forthcoming). In this regard, our engagement with financial resilience as part of ur-
265 ban theory offers the opportunity to add to the growing discourse on the social con-
266 sequences of finance. Given the complex nature of the modern monetary-financial
267 system, much of this discourse exposes researchers to broad variety of seemingly in-
268 tractable phenomena, ranging from the technical intricacies of financial engineering
269 to the institutional architecture of money and the political economy of its regulatory
270 governance.

271 A good example of the challenge of theorizing complex monetary phenomena is
272 the continued wide acceptance – particularly among non-economists – of the ‘loan-
273 able funds doctrine’ which maintains that the arrow of causation flows from savings
274 to investments, i.e. bank deposits create loans. Yet, a central insight in the mod-
275 ern monetary thought of Keynes is the observation that the reversal of causality be-
276 tween savings and investments is a historical process whereby the banks in a mature
277 banking system create credit ‘at the stroke of a pen’ (Chick, 1997). In other words,
278 the historical evolution and resilience of the monetary-financial system determine its
279 operational realities!

280 Summing up, my central thesis here again is that the long-term survival of re-
281 siliance as a meaningful term for urban theory must be more closely linked to a
282 rigorous discussion about social science methodology and epistemology. Indeed, a
283 more careful reading and examination of both the intellectual histories of ‘equilib-
284 rium’ and that of ‘governance’ are indispensable to the future fruitful existence of
285 the term resilience as both an analytical and synthetic concept in the Kantian sense.
286 Additionally, as already discussed before, any attempt to develop a political economy
287 of regional resilience along the lines traced out above would be incomplete without
288 the element of ‘regulation’, both in the boarder sense of a specific regime of capi-
289 talist production and social accumulation and in the narrow sense of the actual (i.e.
290 financial and commercial) rules of the game.

291 Above all, the study of financial resilience ought to be part of Walker’s (2015)
292 project of ‘building a better theory of the urban’ by relating explicitly to how scale
293 and space are moderating the relationship between markets, institutions and the state.
294 There is no theory of financial resilience without the clear internal coherence of a the-
295 ory of the state and a theory of capitalist regulation (classical, Marxian, institutional
296 or post-Keynesian). More generally, discourses on resilience, then, can only break
297 the current ontological deadlock if they manage to relate resilience to theoretically
298 anchored notions of governance, (dis)equilibrium and complexity. In this regard, the
299 ultimate validation of a theory of resilience lies in the extent to which it can address,
300 theoretically or empirically, questions regarding the *spatio-temporal distribution of in-*
301 *come from the factors of production*, i.e. the distribution of wages and of rents from
302 land and capital. Such a theory of resilience will be broadly consistent with the scope
303 and limits of contemporary urban theory identified by Scott and Storper (2015).

304 Barring that, resilience is not an analytic (nor a synthetic) concept with a produc-
305 tive future in urban and regional research. Anything short of a political economy of
306 financial resilience in the full meaning of the term will reduce treatises on the topic to
307 a set of tautological theoretical speculations that are built on the quicksand of meta-
308 physical abstraction. In more concrete terms, the challenge that we should accept
309 is to develop a theoretical framework of resilience that can be expressed in terms of
310 ideas of social science thought, institutional behavior and evolution, specific histori-
311 cal events, and *space*.

312 4 More challenges for urban theory

313 In light of the above challenges associated with the development of a coherent concep-
314 tualization of financial resilience, I wish to return to broader question of the extent
315 to which conceptual ambiguity and definitional fuzziness present a latent hazard to
316 engage resilience as part of a discourse on the scope and limits of urban theory – a
317 topic that remains as hotly contested as ever, despite – or perhaps because of – separate
318 recent efforts to examine the possibility of a ‘unified theoretical urban framework’
319 (cf. [Marcuse and Imbroscio, 2014](#); [Mould, 2015](#); [Roy, 2015](#); [Schafran, 2014](#); [Scott and](#)
320 [Storper, 2015](#)). Whatever the nuanced differences of individual positions in this re-
321 gard might be, even the most fervent advocates of ‘particularism and polycentrism’
322 in urban studies increasingly acknowledge the risks of their own position, especially
323 if this impedes constructive dialogue across theoretical traditions (e.g. [Peck, 2015](#)).

324 While theorizing resilience might indeed be an inherently pluralistic endeavor,
325 such a project must resist the temptation of academic eclecticism without bounds,
326 a feature that is still all too deeply embedded in the ostensibly post-modern, post-
327 structural character of much of contemporary urban theory. The interdisciplinary
328 promise of the literature on resilience plays an instrumental role in this regard in
329 so far as it ought to place more, and not less, emphasis on the need for conceptual
330 grand narrative – in particular, a grand narrative that is faithful to the intellectual
331 tradition of comparative political economy, including a growing ‘(regional) varieties
332 of capitalism’ literature and the (re)discovery of traditional business cycle analysis
333 among urban and regional scholars.¹⁷

334 Moreover, the resilient city-region is both a process and an object; not just an all-
335 encompassing totalizing concept that is everything and nothing in particular. With-
336 out the prospect for some modicum of dialectical tension between different aspects
337 and categories of the process-object entanglements of resilience, there is not much
338 worth saving. And grand theorizing is also not sufficient – there needs to be some
339 empirical content, not matter how difficult. Much like [Brenner and Schmid \(2015\)](#)
340 flawed theses in their recent postulate for a ‘new epistemology of the urban’, reflex-

¹⁷As one of the consequences of the neoclassical orthodoxy’s firm grip on much of regional science, the recent literature has generally paid little attention to regional applications to ‘business cycle analysis’ in the traditional sense of Spiethoff or Schumpeter – except for, perhaps, in the case of the latter, countless references to a superficial understanding of the concept, often relating economic resilience to the cyclicity of activity that is fuelled by ‘creative destruction’.

341 ively theorizing resilience without empirical verification is an intellectual dead-end.
342 To be sure, the particular challenges that arise in this regard are formidable; for exam-
343 ple, in dealing with the correlational complexities of inherently interwoven historical
344 and spatial processes. In the age of cheap computational power and 'big data', sound
345 urban empirics are not a foregone conclusion. Instead, empirical work must heed the
346 'caveat computer!' that has long been standard in the natural sciences – just because
347 we can compute something, does not mean that we should.

348 4.1 Of untested hypotheses and untestable slogans

349 An alternative way of framing the challenge of conceptualizing (financial) resilience
350 as a useful analytical lens in urban and regional theory is by 'taking Joan Robinson
351 seriously'. While mainstream economists barely remember the relevance of Joan
352 [Robinson's \(1933\) *Economics of Imperfect Competition*](#) other than for what its title
353 implies, the famously provocative, chain-smoking Cambridge economist is perhaps
354 familiar to some urban scholars by the occasional, perfunctory reference in David
355 [Harvey's \(2006, 2011\)](#) writing; mostly to *The Accumulation of Capital (1969)*, or
356 the seemingly more accessible – at least to urban scholars – *Essay on Marxian Eco-*
357 *nomics (1966)*. My position here is guided by the belief that a discussion of the topic
358 of resilience in urban and regional theory ought to be subjected to the same scrutiny
359 that Robinson exposed the meandering discourse on the philosophy of thought and
360 methodology in economics almost half a century ago. In her own words,

361 “Economics has always been partly a vehicle for the ruling ideology of each
362 period as well as partly a method of scientific investigation. It limps along with
363 one foot in untested hypotheses and the other in untestable slogans. Here our task
364 is to sort out as best we may this mixture of ideology and science.” – [Robinson](#)
365 [\(1962, p.23\)](#)

366 “In economics, arguments are largely devoted, as in theology, to supporting
367 doctrines rather than testing hypotheses.” – [Robinson \(1977, p.1318\)](#)

368 In the setting of our discussion here, our task is then defined by seeking to de-
369 termine how much of the theoretical discourse on resilience is 'untested hypothe-
370 ses' as opposed to simply 'untestable slogans' that propagate further 'sloppy habits
371 of thought' ([Robinson, 1955, 1972](#)) in urban theory in line with a ruling ideology.
372 In order to provide an informative lens that is brought to bear on the analysis of
373 capitalism, resilience thinking must be guarded against what [Colander \(2014\)](#) has re-
374 cently criticized as the 'wrong type of pluralism' in the social sciences – performative
375 efforts of scholastic introspection that are preoccupied with the gerrymandering of
376 intellectual boundaries, instead of advancing our understanding of the subject matter
377 at hand.

378 Indeed, one of the biggest intellectual fallacies in this regard emanates from the ap-
379 peal of translational thinking whereby a loose concept like resilience – by the simple
380 powers of abstraction and naïve hopes of unifying theorizing – is rendered applica-
381 ble to a broad host of settings. The resulting theoretical fuzziness must not just be

382 viewed as an inevitable cost of this exercise of intellectual cross-fertilization that can
383 be chalked-up against the seemingly endless benefits of hybrid varieties of new ur-
384 ban theory. On the contrary, the common-sense process of simple abstraction and
385 re-application of hard-to-define concepts runs the risk of turning resilience into a
386 ‘powerful instrument of miseducation’, in staying with Robinsonian (1955) termi-
387 nology. Both untested hypotheses and untestable slogans at once, such abstractions
388 then propagate ‘sloppy habits of thought’ as they are handed on from one generation
389 of academics to the next. In this regard, contemporary theories of resilience are silent
390 about definitional aspects that would render the concept more analytically precise.
391 Yet at the same time, empirical quantifiability and measurability are necessary but
392 not sufficient conditions for analytical precision.

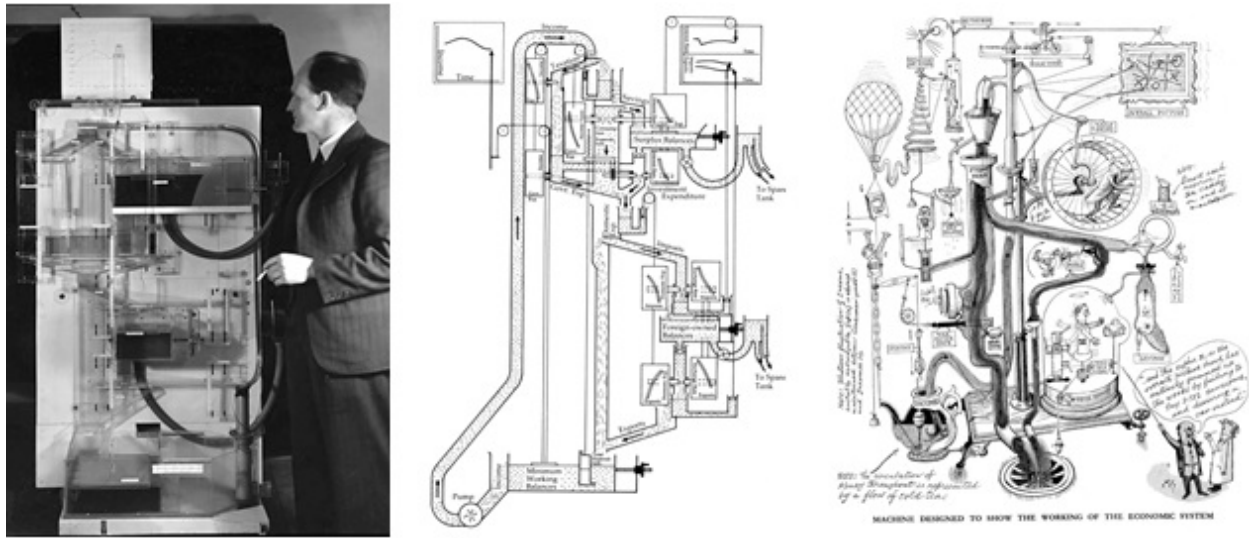
393 In much of the very practice-oriented discussions on disaster risk management,
394 for example, ‘methodological cityism’ seems alive and well (Angelo and Wachsmuth,
395 2015), fuelled by a desire to pin down resilience as the ‘innate properties’ of a city
396 or region that – if modeled with sufficient accuracy – could advise policy makers
397 by linking cost-benefit ranked outcomes to the optimal distribution of policy deci-
398 sions (Hansen, 2012; Folke, Carpenter, Walker, Scheffer, Chapin, and Rockström,
399 2010). Even in work that assumes an outwardly critical attitude towards the concept
400 of resilience (e.g. Weichselgartner and Kelman, 2015), the fuzziness of post-modern
401 splinter narratives continues to undermine the emergence of the resilience discourse
402 from a perennial state of self-incurred intellectual minority.

403 4.2 Against disciplinary amnesia

404 As Robinson (1962, p.21) reminds us in *Economic Philosophy*, “it is the business of
405 economists, not to tell us what to do, but show why what we are doing anyway is in
406 accord with proper principles”. In establishing such proper principles for ‘financial
407 resilience’ in light of the conceptual complexities outlined above, we are then com-
408 pelled to overcome a certain sloppiness of thought in precisely how we intellectually
409 engage with both the idea of resilience and the institutions of money and finance in
410 urban and regional theory. Only a combination of theoretical rigor, epistemological
411 clarity and methodological discipline will do. As urban scholars (and social scien-
412 tists), we must both abandon the well-established pursuit of ‘machine dreams’ – a
413 tradition that is particularly engrained among mainstream economists (see Figure 3)
414 – and resist the impulse of ‘Gaian speculation’ that all too readily invokes biologism.

415 Our engagement with resilience thus has to transcend the conventional dichotomy
416 of resilience as a trait of adaptive complex systems that is rooted in ecosystem think-
417 ing or resilience as adjustment to a system’s static position prevalent in engineering
418 methodology. Such theorizing smorgasbord-style does not strengthen the case of
419 resilience as a useful concept. In fact, much of the current discourse on resilience
420 is cast in the urgent rhetoric of pragmatist eclecticism that rejects large-scale mod-
421 els in order to argue for complexity and indeterminacy. Denying an explicit role to
422 hypothetico-deductive or dialectical arguments, such thinking obfuscates important
423 distributional aspects resulting from specific policy choices that are justified in the
424 name of resilience (Fainstein, 2015).

Figure 3: ‘Machine dreams’: Resilience, complexity and equilibrium



Notes: William Phillips’ (1914-1975) pioneering efforts to demonstrate the role of circuits of flows and their corresponding economic stocks culminated in the construction of a fully-working, mechanical model of the macroeconomy, the MONIAC (Monetary National Income Analogue Computer), assembled from the spare parts of WWII fighter airplanes (left and middle). Cartoon of the “Phillips Machine” (right). Sources: Punch Magazine (1953); Barr (1988).

425 As we have seen, one core set of questions in this regard is how the discourse on re-
426 siliance relates to the traditional foci of political economy – the relationships between
427 markets, institutions and the state – and how these relationships are challenged by the
428 scale and complexity of contemporary socio-economic processes that are inherently
429 spatially uneven. From cumulative urbanization to regional imbalances in the flow
430 of capital, the path-dependent trajectories of regional development are inextricably
431 linked to an increasingly financialized character of the global economy. In such a
432 conceptualization of resilience, institutional, network, and political dimensions of
433 resilience are brought to bear on a diverse set of problems such as the organizational
434 transformation of industrial clusters or the adaptation of governance in the context
435 of instability that might emanate from financial markets, political change, or socioe-
436 conomic inequality.

437 Epistemologically, then, it is simply not enough to point out that the narrow ori-
438 gins of the concept of resilience might begin with [Holling’s \(1973\)](#) systems approach
439 to ecology. Nor does it suffice, without deeper reflection, to invoke [Hayek’s \(1937\)](#)
440 seminal *Economics and Knowledge* as the origin of all neoliberal evil of resilience-
441 based governance. At a minimum, a deeper engagement with the history of thought
442 would reveal just how much of the existing literature on resilience that readily in-
443 vokes concepts like ‘complex adaptive systems’, ‘dispersed knowledge’, and ‘emer-
444 gent properties of self-organization’, incidentally draws on the intellectual tradition
445 of Hayek’s, von Mises’ and Schumpeter’s ‘Austrian School’ – the very tradition that
446 many urban scholars would give a wide berth for its perceived synonymy with ‘method-

447 logical individualism’.

448 Such theorizing smorgasbord-style does not strengthen the case of financial re-
449 siliance as a useful concept. It simply reflects the disciplinary amnesia that permeates
450 much of contemporary urban theory. But for meaningful insights to emerge, we
451 must more readily resist the temptation of simply propagating novel theorizing for
452 its own sake, almost always at the cost of rendering visible and engaging with the
453 longer historical arc of the intellectual development of our own disciplines (cf. Cox,
454 2014). All too often – and this is simply another aspect of the dangers for the contin-
455 ued relevance of the notion of resilience outlined above – are new theoretical insights
456 in urban theory much less the product of innovative thinking on the proverbial shoul-
457 ders of giants, but merely an artifact of the trans-disciplinary amnesia induced by the
458 haze of post-modern speculation.

459 5 Concluding thoughts

460 Every discipline has a set of stories that it tells itself about its own coming into be-
461 ing, about its own intellectual history. It is not unusual that these internal narratives
462 often deviate quite significantly from the observations that a commentator external
463 to the discipline might make. In many ways, comparing the perceived discrepancies
464 and incongruities of the internal versus the external histories might bring to light the
465 greatest insights about the pressing issues in a given discipline.¹⁸ All too often, unfor-
466 tunately, the well-worn grooves of our own disciplinary association prevent us from
467 making such productive insights. In addition to introducing the notion of financial
468 stability as lens for our understanding of the process of globalized urbanization in an
469 era of financialized capitalism, it has been the immodest ambition of this chapter to
470 offer an alternative set of external observations on the resilience discourse and urban
471 theory. In doing so, I have attempted to outline, however cursorily, a theory of a
472 political economy of resilience as conceptual alternative to what I perceive to be an
473 impasse of resilience thinking in contemporary urban theory – a condition that, and
474 this is an alternative reading of the main argument put forward in this chapter, has
475 hitherto permitted too much sloppy thinking around the concept of resilience.

476 The relationship of markets and government – a topic of utmost relevance for
477 any theory of resilience (or so one would think) – provides a final case in point in
478 support of this claim. While it would be surprising to find many among the readers
479 of this book who would subscribe to the view that markets have been in decline over
480 the last two centuries or so, this is, however, precisely the view that a notable group
481 of economists espouse, particularly in organizational theory and economic sociol-
482 ogy. For example, Herbert Simon (1955), the 1978 Nobel Laureate in economics,
483 famously argued that markets have been in decline since the time of Adam Smith
484 as in the modern economy the bulk of activities take place *inside* of corporations.
485 That is the boundary between two of the central social institutions for solving prob-
486 lems of economic coordination, i.e. organizations and markets, has continually been

¹⁸A great case in point of such divergent accounts of disciplinary evolution is Scott’s (2000) formidable intellectual chronicle of economic geography’s rise as a field after WWII.

487 shifting away from markets, to the extent that the invisible hand is now largely very
488 visible. While this interpretation of the evolution of markets might give some of
489 us pause, it might at the same time simply be the opposite side of the argument of
490 marketization under neoliberalism, whereby an increasing entanglement of markets
491 and the state leads to ways to provide public goods by involving the private sector
492 in the planning, financing, building and operating of a range of services, facilities,
493 infrastructure (Birch and Siemiatycki, 2015).

494 Contributing to a grand narrative on the nature of finance-led capitalist devel-
495 opment, a theory of financial resilience as sketched out in this chapter thus aims to
496 provide an inductive counterbalance to the proliferation of language games, scholas-
497 ticism, and deconstructive manoeuvres that dominates much of contemporary urban
498 theory on the one hand, and to the excessive rationalism of deductive abstraction of
499 some of the dominant contemporary thinking in (regional) economics, on the other
500 hand. In this sense, such an endeavor shares much intellectual common grounds with
501 McCloskey's (1994) 'interpretive economics' where the social construction of the
502 subject at hand is viewed as a process that is institutionally anchored and constantly
503 reconstituted by the forces of power and knowledge.

504 Financial resilience theorized thus does not reject rationality outright – it keeps a
505 rational core that explains the functioning of a particular system while relying on de-
506 scriptive components to explain the totality of economic activities. With a historical
507 focus similar to that of the work of Weber and Schumpeter, a political economy of
508 financial resilience – in the true sense of the term – depends on context and aims to
509 marry economic analysis with political, sociological or cultural insights. Beyond the
510 'partial cognition' of much of the dominant discourse on resilience, our project aims
511 high to visualize the urbanized *Gestalt* of financialized capitalism, in all its spatio-
512 temporal guises. In this sense, financial resilience can contribute to the study of capi-
513 talism as a totality that neither resulted from a concentration of experience nor from
514 hypothetical abstractions of some logical principle alone – neither empirical phenom-
515 ena nor constructed ideal types are capable of exhausting the term 'capitalism'. They
516 just constitute a limited understanding, whereas resilience thinking relies on a syn-
517 thesis of these elements to achieve 'total cognition' (*Gesamterkenntnis*). Synthesiz-
518 ing urban and regional context with value-rationality allows a well-developed theory
519 of financial resilience to be strong where natural science is weak, equally grounded
520 in the original traditions of Marx and Ricardo or Schumpeter and Keynes, with the
521 political economy as *the* focal point of social science inquiry.

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