

How do cities and regions adapt to socio-economic crisis? Towards an institutionalist approach to urban and regional resilience

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Abstract This paper depicts resilience as a systemic ‘adaptive capacity’ to cope with social and economic crisis situations at the urban and regional level. It argues that the notion of resilience has to be conceptualised in such a way that processes of and (institutional) frameworks for decision making are recognized. Such an understanding suggests a new institutionalist approach to governance may be useful, one highlighting dominant norms, perceptions and paradigms leading to particular forms of action. Under the axiom of a socially constructed world the benefit of the notion of resilience as an analytical tool in urban and regional studies lies in a better understanding of change in complex systems of socio-spatial interdependencies. It thus has the potential to fill a gap in new institutional theory and contemporary governance research.

Keywords Resilience · Urban and regional development · Economic crisis · Governance · New institutional theory

Wie reagieren Städte und Regionen auf sozio-ökonomische Krisen? Überlegungen zu einem von der neuen Institutionentheorie beeinflussten Verständnis von Resilienz

Zusammenfassung Der Beitrag begreift Resilienz als eine Art systemische Anpassungskapazität an sozioökonomische Krisensituationen auf städtischer und regionaler Ebene. Der Begriff der Resilienz sollte auf eine Art und Weise konzeptionalisiert werden, dass er Prozesse und

(institutionelle) Rahmenbedingungen der Entscheidungsfindung berücksichtigt. Dieses Verständnis impliziert einen von der neuen Institutionentheorie beeinflussten Zugang zu Fragen der Governance, der dominante Normen, Sichtweisen und Paradigmen in ihrer Wirkung hinsichtlich bestimmter Handlungsweisen berücksichtigt. Der Beitrag der Resilienzforschung zu einer Stadt- und Raumforschung, die dem Grundverständnis einer sozial konstruierten Welt folgt, liegt in einem besseren Verständnis von Wandlungsprozessen in komplexen Systemen mit sozialräumlichen Wechselwirkungen. Ein solcher Zugang hat damit das Potenzial, eine Lücke in der neuen Institutionentheorie und der aktuellen Governanceforschung zu schließen.

Schlüsselwörter Resilienz · Stadt- und Regionalentwicklung · ökonomische Krisen · Governance · neue Institutionentheorie

1 Introduction

The current public, political and academic interest in concepts of vulnerability and resilience can at least partly be seen in the light of the financial and economic crisis of the late 2000s and continuing forms of perceived social, political, economic and financial crises in a number of European countries.¹ This has brought a new dimension to these concepts which have their roots in socio-ecological research. The contribution of the resilience debate to urban and regional studies lies in the focus on the response to perceived forms of economic and social crisis. The notion of resilience is thus helpful as it shifts attention to questions of

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how systems—here urban and regional economies within their institutional contexts—adapt to changing economic conditions in their most challenging forms: crises, shocks or disasters. It is indeed more a question of *adapting* than of responding to new conditions. It is, further, a question of governance, highlighting the diffuse and multi-actor character of decision making beyond state-centered hierarchical forms of government.

This paper does not address urban and regional development in response to crises in the form of natural disasters and hazards. Rather, the concern is perceived forms of vulnerability and crisis related to normative perceptions and considerations of desirable and undesirable social and economic conditions. If we conceptualise resilience as a systemic ‘adaptive capacity’ to cope with crisis situations, we have to link this to processes of and (institutional) frameworks for decision making instead of only focusing on structural determinants. Although places are specific and unique in their institutional environments, it is not ‘the city’ or ‘the region’ that acts but individual or collective actors. It is their actions that constitute change. Such an understanding suggests a new institutionalist approach to governance may be of merit, one highlighting dominant norms, perceptions and paradigms leading to particular forms of action.

The goal of this paper is thus to investigate the benefit of the notion of resilience for urban and regional studies under the axiom of a socially constructed world. To do so, the discussion centres first on the grounds for an application of the resilience debate to regional development. Following this the concepts of urban governance and new institutionalism are linked. The paper concludes with a brief judgment on the benefits and problems linked to the application of the resilience debate to studies on socio-economic urban and regional change.

2 Crises, resilience and regional development

2.1 Motivations to conceptualise resilience in a crisis situation

At a regional level, the question as to why some cities’ and regions’ economic performance is better than others’ is an enduring one. It has been addressed by many scholars in the last decades, with interpretations linked, *inter alia*, to industrial districts (Marshall 1920; Pyke et al. 1990), innovative milieus (GREMI 1986), clusters (Porter 1998), the creative class (Florida 2002), performance within the information age (Castells 1996) or cities’ and regions’ networking function within global flows (Beaverstock et al. 1999). The motivation to adapt the notion of resilience to economic geography lies in an attempt to analyse the ways cities and regions recover after extraordinary events, internal or

external shocks and disasters or any other form of stress. In the context of urban and regional economic development such events can range from global crisis to periodic national recessions as well as from general economic transformations to unexpected plant closures. For example, in recent years many scholars have been concerned with how regions performed differently during and after the late 2000s crisis (e.g. Jones et al. 2010; Gorzelak and Goh 2010). In this context, the notion of resilience could be relevant to better understand urban and regional change as well as the formation of social and economic disparities.

The first question to clarify, however, is what we should understand as regional resilience in economic terms. This is a very difficult task, as a comprehensive understanding of the term has yet to be developed in the social sciences, economics or urban and regional studies (cf. Bürkner 2010; Hudson 2010). The only basic agreement across most writings on resilience is system thinking. Another common position, but one difficult to operationalise in regional development studies, is to apply a kind of equilibrium model linking resilience to the ‘ability’ of a system—in this context an urban or regional economy after a shock—to return to its earlier, pre-crisis equilibrium state or transform to a new stable version of the system. Here, however, the interest is in the strand of the academic debate which examines the ways a system can adapt to changing conditions from an institutional or evolutionary economics perspective (e.g. Simmie and Martin 2010). As with an eco-system, urban and regional socio-economic systems cannot be seen as working in given boundaries and their multi-scale interdependencies have to be acknowledged along with their complex specific institutional environments (cf. Lang 2009).

2.2 The notion of resilience in socio-ecological research

In recent years debates on adaptation to climate change have introduced the idea of resilience to urban and regional studies on a broader basis (e.g. Ernstson et al. 2010). Discussions about vulnerability and resilience were also triggered in the context of some major urban threats and disasters in recent years such as the terrorist attacks in New York (Savitch 2008), the Asian tsunami 2004 and Hurricane Katrina in the New Orleans area in 2005. A German example is the Elbe flood in 2002, which had devastating effects on the city of Dresden in particular. From an urban planning perspective, a number of scholars have written about resilience as the capacity to avoid and manage such natural and human-induced hazards (e.g. Boshier and Coaffee 2008; Hutter 2011).

Across different disciplines resilience sometimes refers to contradictory characteristics (see also Medd and Marvin 2005). Most resilience research is rooted in post-positivistic epistemology (cf. Walker et al. 2006) and applies sys-

tem thinking, i.e. an understanding of the field of study as a complex multidimensional or hybrid system. Concepts of resilience are used to describe the relationship between the system under observation and externally induced disruption, stress, disturbance, or crisis. In a more general sense, resilience is about the stability of a system to resist interference. It is, however, more than a response to or the means of coping with particular challenges. Resilience can be seen as a kind of systemic property. In social psychology, for instance, some scholars see resilience as being more than the ability to cope with critical events; it is a unique personal strength of children coping with physical or social challenges (Welter-Enderlin 2006), it is the capacity, motivation, will or desire of people that allows them to cope with critical events.

It is only in the last ten years or so that a growing interest in the concept of resilience as a means to better understand, manage and govern complex social-ecological systems has become apparent (Walker et al. 2006; Kirchoff et al. 2010). Of great influence has been the research network “Building Resilient Regions”, which builds to a large extent on Crawford Stanley Holling’s earlier work on resilience (1973). Looking to develop an understanding of resilience and link it to questions of adaptation, Holling describes complex adaptive systems of people and nature as being self-organised with a few critical processes creating and maintaining this self-organisation. Such systems of nature, humans, combined human-nature systems, or social-ecological systems can be perceived as being “interlinked in never-ending adaptive cycles of growth, accumulation, restructuring, and renewal” (Holling 2001: 392). Accumulation and transformation of resources alternates with phases creating opportunities for innovation. Understanding these cycles, their temporal and spatial scales, as well as the relevant frames of reference would help to “identify the points at which a system is capable of accepting positive change and the points where it is vulnerable” (Holling 2001: 392). In this context, (a) resilience as “a measure of its vulnerability to unexpected or unpredictable shocks” (Holling 2001: 392), (b) internal controllability, and (c) the wealth of the system determining the range of possible future options are seen as the main properties shaping such adaptive cycles and the future state of the system (Holling 2001: 393).

High resilience would allow for tests of novel combinations that trigger innovation and adaptation. Holling sees this as particularly true if controllability is low and high resilience allows for the recombination of elements in the system because the costs of failure are low. In contrast, with low resilience or vulnerability at multiple scales, revolutionary transformations would be quite rare due to the nested character of sets of adaptive cycles. A combination of separate developments would have to coincide, i.e. there would be a need for recombinations and inventions to occur simul-

taneously in order to open windows for fundamental new opportunities (Holling 2001: 404).

2.3 Developing an understanding of regional socio-economic resilience

There is little research applying the notion of resilience to questions of urban and regional socio-economic development. However, ideas of regional socio-economic resilience can be linked to concepts such as learning regions, self-organisation, innovative milieus, industrial districts, and some related strands of the literature tackling questions of adaptation to social and economic problems (see also Hudson 2010: 12). Socio-economic resilience can be seen as the systemic capacity to address problems in a way that generates long-term stable development paths. Resilient regions might be seen as regions which recover after external shocks within a relatively short time span and return to their previous level of employment, economic output or population. Other cities or regions might either be shock resistant (the external event does not influence their development path at all) or non-resilient, vulnerable (the city or region enters a persistent phase of decline or stagnation). Only a few scholars explicitly use the term resilience to investigate adaptation to urban and regional development problems (e.g. Hill et al. 2008; Gerst et al. 2009; Hassink 2010). In these sources, a central question is the way decision takers (governance) and firms deal with external economic and social disturbances. Here, the idea of resilience suggests a system and long term perspective acknowledging the role of economic, political and cultural institutions in shaping adaptive capacities of a city or region.

Empirical studies applying the notion of resilience to cities or regions which have recovered quickly after external economic shocks are rare. Gerst et al. (2009) explore the different paths of development taken by urban IT centres in the US after the Dot-com bubble burst in 2000. Impacts of decline and paths of recovery varied considerably, demonstrating differences in regional economic resilience. Using quantitative methods, research revealed that IT centres specialized in IT services performed better than those in manufacturing because of their highly educated labor force. Some centres even maintained growth due to their adjustment to changes in demand. The research, however, does not go into detail concerning the way these centres managed to adjust. Simmie and Martin (2010) tested their model of economic resilience using economic development data in two British case studies (Cambridge and Swansea travel to work areas), reviewing how they came out of the recessions of the early 1980s and early 1990s. They suggest that endogenous sources of new knowledge and market related entrepreneurial decisions combined with supportive institutional environments could be key factors for economic resilience. Further,

they see a reliance on external factors (such as foreign direct investment) as a short term solution only (Simmie and Martin 2010: 42). After analysing governance and firm responses over a number of decades following an evolutionary logic of adaptive cycles, their theoretical conclusion is that the adaptive cycle model is a useful approach to analyse and better understand regional economic resilience.

Linked to questions of economic development, a system perspective helps to shift the focus to the long-term structure of macroeconomic relationships and the relevant social, economic, and political institutions conditioning these structures (Hill et al. 2008: 2). Translated into economic development, studying resilience would involve studying the rise, stability, and decay of institutions conditioning long-term economic growth within a governance and industry/firm dimension. Regional economic resilience would, then, be the short term “ability of a region ... to recover successfully from shocks to its economy that either throw it off its growth path or have the potential” to do so (Hill et al. 2008: 2).

3 Linking governance, new institutional theory and resilience

3.1 Governance and new institutionalism

There is a large body of literature chronicling the changing conditions of local and regional decision making. Studies searching for the ‘better’ in governance have, however, mainly produced results highlighting problems and ‘failures’ instead of good practice and ‘success’ (Lang 2009: 37 ff.). If governance is grounded in the empirical notion of a widening sphere of decision making, it cannot be limited to a heterarchical understanding nor to being automatically self-reflexive, self-organizing, innovative, or creative (as promoted by, e.g. Rhodes 1997: 53; Jessop 1998: 29; Kearns and Paddison 2000: 847; Healey 2004: 88). Moving beyond the conflation of analytical claims and normative assumptions leads to an understanding of governance as an analytical dimension, one implying a view of organisations as much as processes, formal rules as much as informal practices, and the power of individual actors as much as the relevance of overall structures and specific local cultures.

A new institutional research perspective could help to identify relevant adaptation processes within an urban or regional system under investigation. New institutionalism helps to understand relationships and processes in development policy (Lowndes 2001) and opens up particular viewpoints on the formation of short and long term policy responses to socio-economic challenges.

Place and time-specific institutional environments function as a strong frame of reference and serve to structure local

decision making. In particular (collective or shared) norms, routines and practices constitute institutionalized forms of behaviour, which tend to make local policy and responses to change path-dependent (Lang 2009: 58 ff.). Processes of governance must be seen as social processes that are shaped in a tense atmosphere of structure and agency. As decision makers are embedded in differing social and cultural structures (including different sets of institutions or multiple institutional environments) they “may have to choose among competing institutional loyalties as they act” (Peters 1999: 26). Such selection processes depend on individual, collective, or organisational capacities based on the ability to learn from applied strategies and tactics in other contexts and at previous times.

3.2 Resilience and new institutionalism

Understanding urban resilience only in terms of structural properties is inadequate when one assumes that the world is socially constructed. If we perceive socio-economic resilience as being linked to those properties of the system that maintain the success and continuous existence of the system, new institutionalism could possibly help to focus research agendas in urban and regional studies. We could see resilience as a long term systemic ‘capacity’, closely related to an institutional environment being supportive of the constant advancement of the system—one which also includes mobility that introduces positive feedback from the outside, circumventing lock-ins in negative development paths (and vice versa). Resilience could then be seen as being linked to a particular culture that constantly advances the key properties of the system and facilitates institutional learning in the long run. Elements of such institutional environments would favour experimentation, risk, and innovation in response to anticipated or experienced external challenges and threats. Hence, the particular institutional environment would be supportive of foresight, developing advanced products, processes, or fields of economic activity in due time. They would also allow for alternative futures in case particular paths of development came to an end.

Such institutional environments will always be specific to place and time although they do contain multi-level elements, i.e. in the form of specific ‘translations’ of super-ordinated frameworks. Acknowledging the central ideas of new institutionalism regarding a dynamic rather than static as well as a non-deterministic understanding of institutions, while still structuring social processes (Peters 1999: 25 ff.; Lowndes 2002: 95 ff.; Lang 2009: 54 ff.), the idea of adaptive cycles should not be taken as necessary sequences of clearly identifiable phases in a mechanistic process. An institutionalist understanding of resilience does not sustain ideas of a static set of properties. Further, there might be phases which are more open and others which are more

confined to adaptation and change. Hence, resilience should not be seen as a permanent feature of particular regions but as dependent on time-specific contexts. Resilience rather describes more or less elusive circumstances in the form of particular institutional practices and orientations. These are supportive of an adaptation of the system without it becoming locked into unsuccessful development paths.

A discussion of ideas of complex adaptive systems and adaptive cycles within which resilience plays an important part (see above) reveals prominent overlaps with the concepts of path dependence (North 1990; Pierson 2000) and institutional thickness (Amin and Thrift 1994), whereby functional, cognitive, or political lock-in (Grabher 1993) sometimes hinder new forms of development. In such cases, the relevant system becomes maladaptive. Path dependence and lock-in can thus be either an enabling or constraining factor in regional economic adaptation following a crisis situation (see also Simmie and Martin 2010: 32). North (1990: 80 f.) discussed the capacity to avoid lock-ins under the term “adaptive efficiency”, while remaining open about what such a capacity would actually mean and how it could be researched. In this respect, Holling (2001: 391 f.) goes a little further by suggesting the study of complex adaptive systems by looking at their inherent controlling processes, which are limited in number and enable cycles of growth, accumulation, restructuring and renewal.

4 Urban and regional economies as complex adaptive systems

Adopting a view of urban areas as complex adaptive systems seems to have the potential to develop research perspectives that better allow for an understanding of differences concerning adaptability to socio-economic problems. Particularly when it comes to vulnerabilities at multiple scales, adaptation of the (urban) system to changing conditions is extremely challenging. Thus far institutional theory and evolutionary economics have mainly offered suggestions as to how to understand the problems of persisting structures with reference to notions of institutional thickness or path dependency. However, questions about how cities and regions adapt to altered framework conditions and substantially change to maintain or re-achieve long term success remain unanswered.

Many scholars have concentrated their research on governance, seeing it as a solution to urban and regional problems. However, common understandings of governance are underpinned with normative notions about how governance should be rather than empirical findings. Comparative governance research indicates that regeneration strategies emphasising the creation of new forms of governance are likely to fall short in terms of producing policy outcomes.

Instead of assuming governance to be inherently innovative, self-organized, and inclusive, it should rather be seen as a predominantly incoherent amalgam of different networks and forms of collaboration of public, semi-public and private actors, overlapping and spreading out simultaneously (Lang 2009: 192 f.). Hence, a solely governance perspective also fails to provide a means of better understanding change and adaptation.

New institutionalism also fails to offer a useful conceptualisation of change. In this context, the proposal to understand adaptation (which requires institutional change) as being related to nested adaptive cycles opens up opportunities for advanced research and theory building in urban and regional studies. Related to old industrial regions, the idea of nested adaptive cycles potentially helps address both the particularly serious problems of adaptation and slow recovery, and why adaptation and recovery can nevertheless occur when a number of developments coincide to instigate fundamental system change. Differences in adaptation could be linked to differences in urban or regional resilience at different points of time.

For future research approaches concerning urban and regional change, a synthesis of the approach to cities and regions as complex adaptive systems and some of the key principles of new institutional theory would have much merit. In particular, it might help resolve some of the weaknesses of social science-based urban resilience research. Complex adaptive systems are seen as being self-organized, with a few critical processes creating and maintaining this self-organisation. In particular, adaptive cycles of growth, accumulation, restructuring and renewal linked to these controlling processes should be concerns of urban and regional socio-economic resilience research. The crucial question is: how can we identify the processes that control the overall system? Literature concerning social-ecological systems has little to say on this topic. In the context of urban, social, and economic development, however, new institutional theory can help to understand the institutional context in which such processes occur. Indeed, Holling's (2001: 404) discussion of factors that facilitate constructive change in a region under crisis conditions makes the point of linking them closely to locally specific institutional environments.

When linking the notion of resilience to urban and regional studies, we have to be aware of a number of problems inherent to the debate: in normative political contexts in particular, some scholars tend to seek specific local properties that make urban areas less vulnerable to perceived forms of crisis, sometimes raising expectations about self-contained urban systems functioning like a perpetual motion machine. This ignores the crucial question of national regulation and the necessity to investigate the role of national frameworks and forms of intervention (cf. Lang 2009: 171). Hudson astutely discusses options for more resilient regions in rela-

tion to the resilience of capitalism and dominant neoliberal models of regional development which trigger national state interventions, and which have at best been partially and temporally successful in the past (Hudson 2010). Indeed, neoliberal thought as a dominant feature of current capitalism can be seen as having become maladaptive and a major threat to urban and regional resilience. Hence, there is a risk in limiting research on urban and regional change and adaptation to internal regional properties which would be misleading.

With its roots in research on coping with extreme events, the concept of resilience also has limitations when it comes to assessing urban responses to social and economic challenges: questions as to why and how external events are perceived as disturbance or crisis and about the achievable state when this crisis is to be over tend to be overlooked in resilience research. Here, questions of power concerning the classification of what constitutes crisis and objectives for achievable adaptations are crucial and should be kept in mind (cf. Hudson 2010: 13), as should issues regarding the social construction of vulnerabilities and resilience in general (Bürkner 2010: 34 ff.). In this context, it should not be forgotten that resilience also risks being burdened with normative expectations. However, the adaptation of a system does not have to correspond to widely accepted 'positive' development trajectories.

5 Conclusions

A new institutional understanding of urban resilience opens up promising perspectives for social science research on urban change. Conceptualising cities and regions as complex multidimensional or hybrid systems encourages us to look at the interaction of different dynamics and hybrid processes; the ways in which they shape and produce vulnerability, crisis and change. Such a system perspective has the potential to advance governance research, which is often overloaded with normative expectations of how governance should be. From a resilience perspective, governance can be seen as purposeful collective action to sustain a stable state of the system or to transform the system into a 'better' state. Governance cannot, however, be seen as a tool to steer the system (cf. Walker et al. 2006).

Utilisation of the resilience notion may help researchers address key questions relevant to urban and regional development: In what way is adaptation to socio-economic crisis linked to processes of growth, accumulation, restructuring and renewal at different scales and in different social, political and economic contexts? Which social or discursive processes constitute a crisis situation, perceived vulnerabilities and necessities to adapt? Who are the main drivers behind these processes? To what extent is the debate on resilience

steered by political interest groups and power structures? What differences can be identified between cities and regions in their systemic capacities to adapt to crisis situations across space and time?

The conceptual and theoretical work on resilience could provide a basis for a better understanding of change in complex systems of spatial interdependencies, and thus fill a gap in institutional theory and governance research. By suggesting analytical categories, new institutionalist notions could help to identify the properties that make the urban or regional system resilient. Understanding development as being composed of nested adaptive cycles of growth, accumulation, restructuring and renewal (Holling 2001: 392) thereby helps to conceptualize change and persistence. These cycles should not, however, be seen as mechanistic or deterministic processes. Appreciating their nested character allows for a complex research perspective on issues of change, one that recognizes adaptation as occurring at different scales and in various social, political and economic contexts.

Social scientific attempts to conceptualise urban and regional resilience require further development, in particular on issues of power, institutional constraint and national regulation. It appears promising, however, to combine concepts of resilience and system thinking with new institutionalist ideas that can address these oversights. The question as to if and how change can be successfully managed remains open. In the context of urban and regional development, this question is largely linked to spatial and social justice and thus deserves more attention. The ideas presented in this paper may help to advance research concepts dealing with these issues.

References

- Amin, A.; Thrift, N. (1994): Living in the global. In: Amin, A.; Thrift, N. (eds.): *Globalization, Institutions and Regional Development in Europe*. Oxford, 1–22.
- Beaverstock, J. V.; Smith, R. G.; Taylor, P. J. (1999): A Roster of World Cities. In: *Cities* 16, 6, 445–458.
- Bosher, L.; Coaffee, N. (2008): Editorial: International perspectives on urban resilience. In: *Urban Design and Planning* 161, 4, 145–146.
- Bürkner, H.-J. (2010): *Vulnerabilität und Resilienz—Forschungsstand und sozialwissenschaftliche Untersuchungsperspektiven*. Erkner. = IRS Working Papers, Nr. 43.
- Castells, M. (1996): *The Information Age: Economy, Society, and Culture*. Cambridge, Chichester.
- Ernstson, H.; Van Der Leeuw, S.; Redman, C.; Meffert, D.; Davis, G.; Alfsen, C.; Elmqvist, T. (2010): Urban Transitions: On Urban Resilience and Human-Dominated Ecosystems. In: *Ambio. A Journal of the Human Environment* 39, 8, 531–545.
- Florida, R. (2002): *The Rise of the Creative Class. And how it's Transforming Work, Leisure, Community and Everyday Life*. New York.
- Gerst, J.; Doms, M.; Daly, M. C. (2009). Regional Growth and Resilience: Evidence from Urban IT Centers. In: Federal Reserve Bank of San Francisco (FRBSF). *Economic Review* 2009, 1–11.

- Gorzalak, G.; Goh, C.-C. (eds.) (2010): *Financial Crisis in Central and Eastern Europe: From Similarity to Diversity*. Warsaw.
- Grabher, G. (1993): The weakness of strong ties: the lock-in of regional development in the Ruhr area. In: Grabher, G. (ed.): *The embedded firm: on the socioeconomics of industrial networks*. London, 255–277.
- GREMI (Groupe de recherche européen sur les milieux innovateurs) (1986): *Milieux innovateurs en Europe*. Paris.
- Hassink, R. (2010): Regional resilience: a promising concept to explain differences in regional economic adaptability? In: *Cambridge Journal of Regions. Economy and Society* 3, 1, 45–58.
- Healey, P. (2004): Creativity and Urban Governance. In: *Policy Studies* 25, 2, 87–102.
- Hill, E.; Wial, H.; Wolman H. (2008): *Exploring Regional Economic Resilience*. Berkeley. =BRR Working Paper, 2008–04.
- Holling, C. S. (1973): Resilience and stability of ecological systems. In: *Annual Review of Ecology and Systematics* 4, 1–23.
- Holling, C. S. (2001). Understanding the Complexity of Economic, Ecological, and Social Systems. In: *Ecosystems* 4, 5, 390–405.
- Hudson, R. (2010): Resilient regions in an uncertain world: wishful thinking or a practical reality? In: *Cambridge Journal of Regions. Economy and Society* 3, 1, 11–25.
- Hutter, G. (2011): Planning for Risk Reduction and Organizing for Resilience in the Context of Natural Hazards. In: Müller, B. (ed.): *Urban Regional Resilience: How Do Cities and Regions Deal with Change?* Berlin, Heidelberg, 101–111. =German Annual of Spatial Research and Policy 2010.
- Jessop, B. (1998): The rise of governance and the risks of failure: the case of economic development. In: *International Social Science Journal* 50, 155, 29–45.
- Jones, A.; Clark, J.; Cameron, A. (2010): The Global Economic Crisis and the Cohesion of Europe. In: *Eurasian Geography and Economics* 51, 1, 35–51.
- Kearns, A.; Paddison, R. (2000): New Challenges for Urban Governance. In: *Urban Studies* 37, 5–6, 845–850.
- Kirchhoff, T.; Brand, F.; Hoheisel, D.; Grimm, V. (2010): The One-Sidedness and Cultural Bias of the Resilience Approach. In: *Gaia* 19, 1, 25–32.
- Lang, T. (2009): Institutional perspectives of local development in Germany and England: a comparative study about regeneration in old industrial towns experiencing decline. Online: <http://opus.kobv.de/ubp/volltexte/2009/3734/> (accessed 22.02.2012).
- Lowndes, V. (2001): Rescuing Aunt Sally: Taking Institutional Theory Seriously in Urban Politics. In: *Urban Studies* 38, 11, 1953–1971.
- Lowndes, V. (2002): Institutionalism. In: Marsh, D.; Stoker, G. (eds.): *Theory and Methods in Political Science*. Houndmills, 90–108.
- Marshall, A. (1920). *Principles of Economics*. London.
- Medd, W.; Marvin, S. (2005): From the Politics of Urgency to the Governance of Preparedness: A Research Agenda on Urban Vulnerability. In: *Journal of Contingencies and Crisis Management* 13, 2, 44–49.
- North, D. C. (1990): *Institutions, Institutional Change and Economic Performance*. Cambridge.
- Peters, G. (1999): *Institutional Theory in Political Science: The 'New Institutionalism'*. London, New York.
- Pierson, P. (2000): Increasing Returns, Path Dependence, and the Study of Politics. In: *American Political Science Review* 94, 2, 251–267.
- Porter, M. (1998): *The Competitive Advantage of Nations*. New York.
- Pyke, F.; Becattini, G.; Sengenberger, W. (1990): *Industrial districts and inter-firm cooperation in Italy*. Geneva.
- Rhodes, R. A. W. (1997): *Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability*. Buckingham.
- Savitch, H. V. (2008): *Cities in a Time of Terror. Space, Territory, and Local Resilience*. Armonk.
- Simmie, J.; Martin, R. (2010): The economic resilience of regions: towards an evolutionary approach. In: *Cambridge Journal of Regions. Economy and Society* 3, 1, 27–43.
- Walker, B. H.; Anderies, J. M.; Kinzig, A. P.; Ryan, P. (2006): Exploring Resilience in Social-Ecological Systems Through Comparative Studies and Theory Development: Introduction to the Special Issue. In: *Ecology and Society* 11, 1, 12.
- Welter-Enderlin, R. (2006): Einleitung: Resilienz aus der Sicht von Beratung und Therapie. In: Welter-Enderlin, R.; Hildebrand, B. (eds.): *Resilienz. Gedeihen trotz widriger Umstände*. Heidelberg, 7–19.