

Studying the Resilience of Farming Systems. Economic Theory Point of View

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Resilience in Economic theory

Pigou, A. 1920. *The Economics of Welfare*. London: Macmillan.

Baumol, W. 1972. On Taxation and the Control of Externalities, *American Economic Review*, 62 (3): 307–322

Polluter Pays Principle (PPP)

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Coase, R. 1960. The Problem of Social Cost, *Journal of Law and Economics*, The University of Chicago Press, Vol. 3: 1–44

Provider Gets Principle (PGP)

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Provider Gets Principle (PGP)

Keynes: *Ideas shape the course of history*

From scientific theory to political practice

Resilience in Economic theory

Seneca, Pliny, Ovid - *resilire, resilio*

Sir Francis Bacon, 1625 - first used the term *resilience*

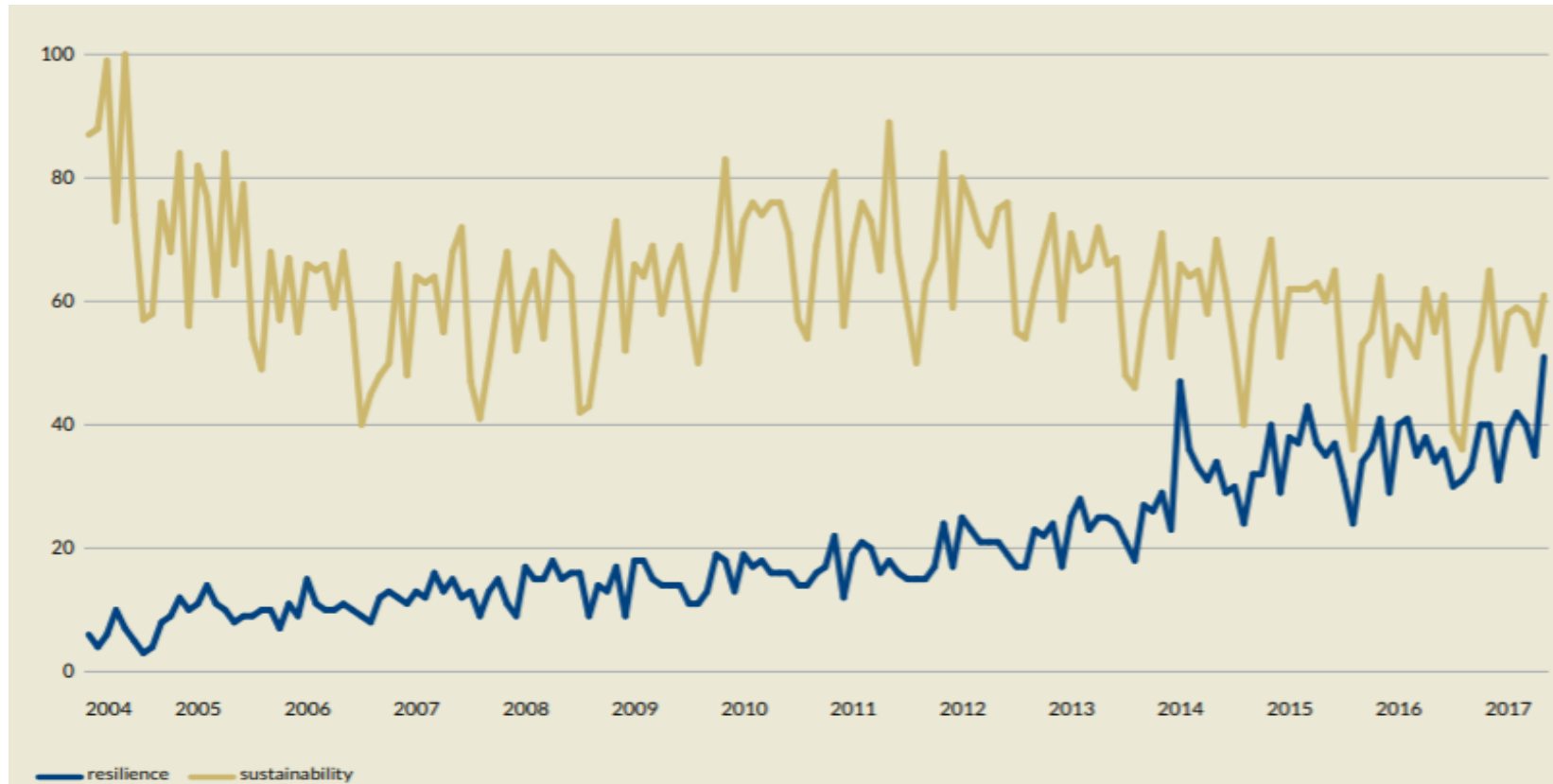
Holling, C. and M. Goldberg. 1971. Ecology and Planning. *Journal of the American Institute of Planners*. 37, 4: 221-230

Holling, C. 1973. Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*. Vol 4 :1-23

Journal of Environmental Economics and Management, 1974

Association of Environmental and Resource Economists, 1979

Resilience in Economic theory



Brinkmann, H., C. Harendt, F. Heinemann, J. Nover. 2017. Economic Resilience A new concept for policy making? *Bertelsmann Stiftung Inclusive Growth for Germany*. Archive of European Integration, University of Pittsburgh

Resilience in Economic theory

...resilience is more than a metaphor but less than a theory.

Swanstrom, T. 2008. Regional resilience: a critical examination of the ecological framework. University of California, Berkeley, *IURD Working Paper Series*. No. 2008-07

2008

The UN

The World Bank

OECD

EU

Resilience in Economic theory

Term resilience in leading economic journals.

Search by titles, keywords and abstracts, all archives

Indicators	General economics			Agricultural economics	
	number	%		number	%
Journals	5			5	
Articles dealing with resilience	80			180	
in US journals	1	1.25		4	2.22
in European or international journals	79	98.75		176	97.78
in Journals, specialized in Policy	38	47.75		120	66.77

Source: Author's study

for General economics

Econometrica

American Economic Review

The Quarterly Journal of Economics

Journal of Economic Literature

Journal of Political Economy

for Agricultural economics

American Journal of Agricultural Economics

Food Policy

Journal of Agricultural Economics

Agricultural Economics

European Review of Agricultural Economics.

Resilience in Economic theory

Resilience in research projects and publications of the last 19 Nobel prize in economic sciences laureates

Number of laureates	Explanation
5	Analyzing resilience in connection to: a) poverty, and b) climate change. The conclusions in both cases are oriented to policy instead of economics.
2	Technical usage of the term: a) in statistics – resilience of the k-core structure of a network; b) in monetary policy (policy again)
3	Resilience as a word of the everyday language
9	No use of term Resilience

Source: Author's study

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Research on resilience has proliferated in recent years. Numerous definitions, tactics, metrics, and indices have been proposed. However, most of them are formulations with little or no formalized theoretical underpinnings.

Dormady, N., A. Roa-Henriquez and A. Rose. 2019. Economic resilience of the firm: A production theory approach. *International Journal of Production Economics*. vol. 208: 446-460

Economics of resilience

Risk and shock are not synonymous, but closely linked in the present-day analyses of resilience. (Ardebili, A. and E. Padoano. 2020. A Literature Review of the Concepts of Resilience and Sustainability in Group Decision-Making. *Sustainability* 2020, 12(7), 2602)

Early ideas - spreading the risk through the market

Distinction between risk and uncertainty

Knight, F. 1921. *Risk, Uncertainty, and Profit*. Boston MA, Houghton Mifflin

Related economic ideas

- uncertainty (Arrow and Debreu) and risk (Arrow) were incorporated into general equilibrium – risk-bearing instruments could improve functioning of the economy;
- rethinking the motives of human behavior (Simon, Tversky, Kahneman), in real economy (bounded vs. unbounded rationality, satisfaction vs. maximization, Prospect theory – lowering risk by judging based on current wealth rather than on absolute outcomes);
- Asymmetric Information theory (Mirrlees, Vickrey, Akerlof, Spence) – risks and special human behavior – moral hazard and adverse selection exist because of unequal distribution of information among the economic agents;
- potential risks overcoming by transaction modes adjustment (Coase), institutional modernization (North), governance innovations (Williamson and Ostrom), and contracts development (Hart);

Our approach

- to build it upon a **proven economic knowledge**;
- to look only for **pure economic tools** for resilience achieving;
- to exclude the **biggest farms**;
- to study **mainly private mechanisms** for resilience;
- to think on the problem as a **dynamic issue**, not a static state.

Economics of resilience

Market transactions for resilience

modern barter exchange

personal recommendations

Economics of resilience

Market transactions for resilience

Institutions for resilience

re-building thrust and confidence

Economics of resilience

Market transactions for resilience

Institutions for resilience

Resilience through governance innovations

the initiative Mother Earth

Economics of resilience

Market transactions for resilience

Institutions for resilience

Resilience through governance innovations

Contracting for resilience

eco-system services

Thank you for your attention