

# On institutional persistence

Citation for published version (APA):

Innocenti, S. (2018). *On institutional persistence*. [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Pers Maastricht. <https://doi.org/10.26481/dis.20180328si>

**Document status and date:**

Published: 01/01/2018

**DOI:**

[10.26481/dis.20180328si](https://doi.org/10.26481/dis.20180328si)

**Document Version:**

Publisher's PDF, also known as Version of record

**Please check the document version of this publication:**

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

[www.umlib.nl/taverne-license](http://www.umlib.nl/taverne-license)

**Take down policy**

If you believe that this document breaches copyright please contact us at:

[repository@maastrichtuniversity.nl](mailto:repository@maastrichtuniversity.nl)

providing details and we will investigate your claim.

---

## Summary

---

The word *institutions* originates from the Latin verb *instituere* which means to establish, to erect, to be firm and unswerving. The etymology of the word hence testifies one of the main purposes of institutions: they are made to be solid and long lasting. It is their solidity that supports and possibly creates behavioural regularities transforming specific conducts into customary routines which facilitate social interactions.

By now a consensus has been reached on the fact that socio-economic institutions matter for economic development. Well-organised societies often prosper, whereas badly organised ones might go astray. Nonetheless, numerous empirical studies have shown that inefficient institutions have a strong tendency to persist. These instances require us to understand which factors hinder institutional change, leading to inertia and lowering the systemic development potential.

Whereas multiple studies have examined the phenomenon of change, few have focused their attention on institutional persistence. And more importantly, although most theories acknowledge that institutions are the results of individual decision-making processes, the link between human cognition, bounded rationality and institutional change remains understudied.

This thesis aimed to fill this gap and clarify the role of bounded rationality, learning, and beliefs as possible drivers of, or impediments to, institutional change. More specifically, there are two central questions which motivated this work: Do agents' cognitive structures affect whether or not institutional change occurs and how it unfolds? Can individuals' (in)abilities to enact change be responsible for institutional change (or the absence thereof)? The ultimate goal is to uncover the potential of self-efficacy perceptions as an explanation of institutional inertia.

To this end, I drew my analysis on three interpretative perspectives namely (i) the institutional economics principles on the importance of the rules of the game, (ii) quantitative evolutionary theories of change and learning dynamics, and (iii) the psychological investigation on self-views and their consequences on individual behaviour. I consider self-views and institutional structures as parts of causal circularity along which each element descends from the above but also, in turn, determines it. Perceptions about ourselves, as well as about the broader environment, affect our desirability of rules' change. The rise

of behavioural economics and its emphasis on the fact that agents are not highly sophisticated information processors, represents a good timing to deepen our understanding of institutional evolution.

Given its complex nature in order to be able to shed light on different aspect of the phenomenon under scrutiny, I rely in each chapter on a different method. After a review of the fundamental literature that concerns this study in Chapter 1, Chapter 2 describes the results of a laboratory experiment whose aim is to investigate whether a relation between self-efficacy beliefs and imitation exists. I designed a lab experiment which is a modified version of the common two-armed bandit with finite time horizon. Using data from one treatment, I study individual learning patterns using reinforcement learning models. In a second treatment, subjects are grouped in groups of 4 or 5 people. I investigate how individuals learn when given the possibility to observe the actions and rewards obtained by a randomly selected group “leader” who plays before everybody else. This allowed me to study the extent to which agents rely on observational rather than individual learning and how their propensity to imitate others is mediated by self-efficacy beliefs, which I measured using a standard psychometric scale. I find that, in stable environments, higher individual self-efficacy reduces the propensity to imitate the actions taken by the leaders. This implies that if people have little faith in their capabilities, they will follow the behavioural path set by somebody else. Consequently, imitating others might stabilise institutions and delay their change.

In Chapter 2, individual self-efficacy beliefs are assumed to be static. Although this is plausible in the context of a short lab-experiment, it might be a too simplistic approximation of reality. Therefore, in Chapter 3 I report the results of a simple binary choice model with social interactions and self-reinforcing dynamics. I frame institutional change as a binary choice between an old and a new behavioural rule. Agents can choose between option B, the *status quo* behaviour, and option A, the innovative one. The utility each agent obtains from the options depends on the intrinsic value of each alternative as well as on the choices made by others. In each period one agent is given the opportunity to revise his choice, and he does so based on a standard discrete choice model. The probability he will best respond depends on a stochastic exogenous parameter. The probability instead that any particular agent revises his decision depends positively on how much faith he has in his abilities, i.e. on his self-confidence or self-efficacy perception. Self-efficacy is endogenous, and changes depending on the success of one’s past revision attempts. The reinforcement in self-efficacy and its effect on the probability that agents revise their state, represents the main methodological innovation of this chapter. The results show that a high heterogeneous distribution of self-efficacy beliefs within a population is likely to trig-

ger institutional inertia. Low self-efficacious people prevent high self-efficacious ones from achieving a complete behavioural shift.

Despite the more realistic assumption concerning the dynamics of self-efficacy, Chapter 3 treats the evolution of institutions in quite an abstract manner. Chapter 4 takes a step further and uses the available secondary data to empirically investigate the relation between perceptions, institutions and ultimately economic growth. In the first part of the chapter, I focus on the nexus between mental models and institutional quality. The idea that mental models affect the institutional quality is not new. Yet, few scholars have carried out an empirical estimation. I use two different proxies for mental models' stickiness and panel data techniques to estimate their effects on institutional quality. I find that a ten percentage point decrease in mental model stickiness is associated with an improve a country's rule of law by 0.32, possibly allowing it to move from the rule of Tunisia to the rule of law of Italy (in 2015). When controlling for country specific characteristics, this effect reduces by one order of magnitude. In the second part of the chapter, I test whether an independent effect of mental models and institutions on growth exists. Using a pooling model, I show that mental models considerably affect growth. Additionally, given the possible endogeneity problems, I use cross-sectional instrumental variables regressions and provide some weak evidence which suggests that in some cases mental models condition economic growth.

These three analyses use very different techniques, and approach the general issue from different levels, micro, meso and macro. They all, however, rest on the view that institutional change is connected to individual behaviour, and an important aspect of this connection runs through peoples' self-efficacy, or belief that they can improve their situations through their own actions. The variety of approaches and *loci* of analysis have generated results that are consistent with each other, and show that a coherent, multi-level view of how institutional change operates is possible. This thesis provides one example of this, and so lays the foundation for further research into an issue that is central to economic development and prosperity for many nations today.