

New Institutional Economics

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Part 1:

NIE explanations of institutions and institutional change

- Approach and assumptions of NIE
- Core concepts and variants
- Institutional persistence and change
- Criticisms of NIE
- Conclusion

New institutional economics

- Explains economic performance (e.g. growth, profits) through the design of institutions
- “Old” vs “new” institutional economics - Williamson (1975): first use of NIE term
- Very large literature, recent reviews in Chavance (2009), Ménard & Shirley (2008), Alston (2008), Brousseau & Glachant (2008)
- What’s “new”?
 - Methodological individualism
 - Some form of rational choice assumption, with focus on interests and incentives
 - Concern not only with explaining institutions but also with assessing whether they are economically efficient

Transactions cost approaches

- Coase (1937): institutions matter when it is costly to transact; transactions costs include acquiring information about prices or quality; negotiating, monitoring and enforcing exchange
- Institutions (= “rules of the game”) are ways of reducing transactions costs (North 1990, Williamson 1985) and solving collective action or coordination problems (Ostrom 1990) when rationality is “bounded” (people follow routines/rules of thumb)
- Institutions constrain choices and outcomes. Contracts, organizational forms etc. are responses within these constraints. Includes markets as constructed institutions
- Williamson (focus on companies): institutions are efficient solutions to transactions cost problem
- North: because of increasing returns and path dependence institutions can be inefficient
- Two key areas in which institutions are key for capitalism are property rights (loosely defined) and contracts (Acemoglu and Johnson 2005)
 - Property rights are fundamentally about relationships between the state and economic actors (protection from appropriation);
 - Contracts are about relationships between actors.

Persistence and change in transactions cost approaches

- Transactions cost economics (Williamson 1985): competition as selection mechanism, i.e. those institutions (company types) that reduce transactions costs the most will realise greater profits and therefore will persist and grow, whereas those that do not will be squeezed out of the market. Not so good at explaining (successful) institutional diversity, or why inefficient institutions persist
- Institutions tend to be stable for long periods and change only marginally, but with episodes of rapid change as basic rules renegotiated
- Sources of change are external/exogenous, (North 1990) including changes in relative prices, in technologies, or possibly better institutional models from another country, sector etc. (Brousseau et al 2011)
- Nested hierarchies (Williamson 2000, Ostrom 2005, Ostrom and Basurto 2011) with different kinds and speeds of change at different levels. The process of change at lower levels of rules is limited by the rules at higher levels.
- North (1992): actors have “mental models” by which they evaluate the desirability of institutions. Over time, they learn and revise their mental models, which may make them seek institutional change

Evolutionary view

- Institutions-as-rules approach doesn't explain why people are motivated to follow rules
- Alternative view that institutions evolve as stable arrangements out of repeated interactions, in which people and organisations don't know the intentions of others, but do hold a common perception of how the game is played ("shared beliefs") (Aoki 2001, Greif 1997, Dixit 2004)
- Emphasis on institutions as self-enforcing arrangements rather than rules. Only where everyone's expectations of each other's behaviour are consistent will you get institutions forming. The Highway code might be an example. Also rules of thumb that are self-enforcing – i.e. the more other people use a rule of thumb, the more likely I am to also use it.
- There can be multiple possible consistent arrangements.

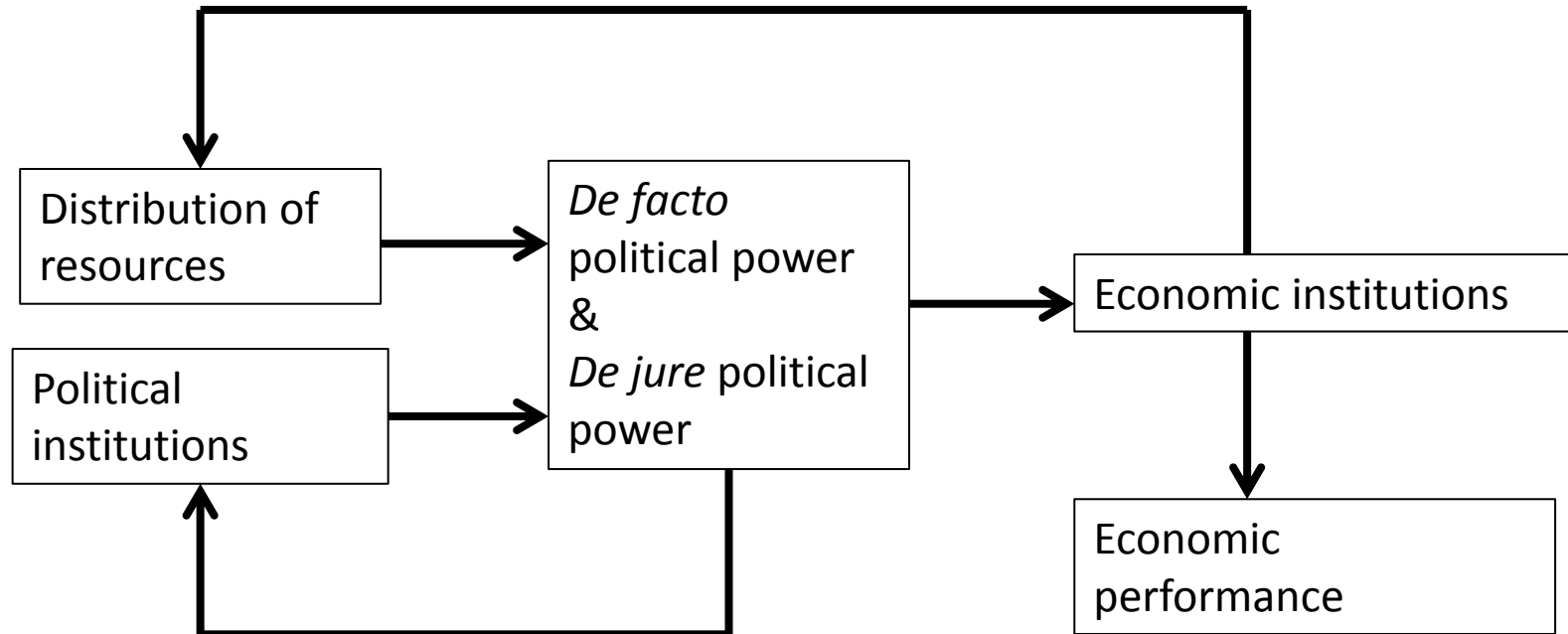
Persistence and change in evolutionary view

- Institutional complementarities means that institutions tend to hang together in systems, which makes changing one institution harder and is more stable (link to policy paradigms and VoC literatures) (Aoki 2001)
- Institutional change is not about changing rules but about changing *expectations* (Aoki 2001, Brousseau et al 2011). When shared beliefs no longer work as a guide to behaviour of others then the institution breaks down. Institutions are reinforced or undermined according to whether the *range of situations* in which the behaviour associated with an institution is self-enforcing *increases or decreases*.
- Destabilisation of beliefs can be caused by external factors, including technological change, changes in prices, new information, etc. although a change in external environment that doesn't change expectations will not lead to institutional change (Kingston and Caballero 2008)
- But change can also come through endogenous evolutionary processes: Idea of “quasi-parameters” of institutions, which in the short run can be regarded as fixed (or only changing marginally) but which in the long run are changed by the operation of the institution itself. Examples might include the size of an institution, or the distribution of wealth within it. Similar ideas from Roland 2004
- At moments of change, preferences may themselves be uncertain (adaptive preferences). However, previous institutions may be taken as the starting point for new ones (Sugden 1989).

Social conflict view

- Institutions are not chosen by the whole of society as ways of solving transactions/collective action problems; rather they are chosen by groups that control political power at a given time (Acemoglu, Johnson and Robinson 2005, North 1981).
- Institutions will not be those that maximise the size of the pie, but the slice of the pie taken by powerful groups – the efficiency of institutions cannot be separated from their distributional effects
- Political and economic institutions and outcomes are inextricably linked (Acemoglu et al 2005)
- Mainly applied to understanding persistent differences in prosperity in different countries, or different economic growth paths

Political and economic power and institutions



Persistence and change in social conflict approach

- Institutions constructed by those with political and economic power to reinforce and maintain that power, so again tendency to persistence
- Commitment problem as a barrier to endogenous change – those with power may promise to reform the economy, but in many cases, while society as a whole may be better off, reforms would mean that those in power would be politically worse off, so their promise or stated commitment is not credible, and investment is not forthcoming (Acemoglu and Robinson 2006, North 1993)
- Change can happen because of exogenous shocks. However, it can also happen because of the feedback between economic and political change. Some groups over time find it easier to solve their collective action problem, gain *de facto* power and alter institutions (e.g. in Britain as industrialisation proceeded in the 19th C, workers became more organised and started a series of protests, which led in turn to the Reform Act and ultimately universal suffrage).

Sudden vs. gradual change

- Generally, NIE theories are better at explaining institutional persistence than institutional change
- Most have a “punctuated equilibrium” model of change and do not explain gradual change well
- Streeck and Thelen (2005) distinguish the *process* of change (incremental vs. abrupt) and the *result* of change (institutional continuity vs. discontinuity).
- This gives the possibility of incremental change with transformative results. 5 variants:
 - *Displacement* of dominant institutional arrangement by an alternative or subsidiary set of interests or ideas
 - *Layering* of co-existing institutional arrangements (e.g. private medical insurance alongside the NHS). New ones do not directly attack the old ones, but can take over if they grow faster
 - *Drift* of dominant institutions if they are not constantly updated to reflect changes in the environment. “Drift” can also be a deliberative strategy to undermine existing institutions.
 - *Conversion* of dominant institutions through being redirected to new goals or functions
 - *Exhaustion* (similar to undermining in evolutionary approach) where behaviours allowed under existing rules operate to undermine the rules.

Criticisms and limitations of NIE

- No agreed definition of “institutions”, informal/informal distinction etc.
- Better at explaining institutional persistence than change
- Has an under-developed theory of ideas/ideologies/discursive power
- Focus on efficiency rather than innovation
- Focuses primarily on:
 - nature of politics/state and economic growth in developing countries
 - theories of the firm

Conclusions: What is useful?

- Focus on how governance institutions shape incentives by determining the distribution of resources = how and where the money flows
- Link between political and economic institutions and power (especially in social conflict approach)
- Recognition that political actors (including governments and regulators) have interests and incentives and are not neutral
- Provides important analysis of regulation and regulatory capture
- Key concepts such as asymmetries of information, credible commitment and self-enforcing institutions
- Recognition of the distinction between formal and informal rules or institutions
- Recognition of path dependence in institutions, not just technologies
- Ideas that existing institutions can become ineffective or dysfunctional over time, can lose relevance as new problems arise, can be replaced or worked around by new institutions
- Ideas that institutional change requires coalitions seeking change that have (or can capture) sufficient formal political power under the current system, or sufficient informal political power to change the system
- Explores the relationships between basic institutional forms (e.g. vertical integration, CME vs. LME, vulnerability to regulatory capture) and issues of interest to us (i.e. market entry, innovation)
- Provides quite a lot of ideas to test out in empirical research

Part 2:

Applications to energy governance

- Regulatory capture
- Policy credibility and reputation
- Vertical integration
- Varieties of capitalism
- Path dependence and lock-in

Persistence in utilities regulation: regulatory capture

- Regulation as an institution that allocates property rights and resources
 - Preventing monopoly profits or cartels, allocating network constraint costs
 - Ensuring universal coverage in time and space (Peltzman 1989) (form of redistribution)
 - But doesn't fully solve problems because asymmetry in cost information between regulator and utilities remains (Baron and Myerson 1982)
- Regulatory capture (Dal Bo 2006, Wren Lewis 2011)
 - regulation creates opportunities for rent-seeking by (incumbent) companies. A range of groups beyond regulated companies (e.g. trade unions) may also attempt to capture the regulatory process
 - Industry with a few large companies (energy!) finds it easier to organise lobbying without free-riding (Olson 1965, Ostrom 1990)
 - Stigler (1971), Peltzman (1976): politicians and regulators also have interests and incentives to provide rents via regulation (in US special interest groups provide financial contributions to politicians to fund election campaigning. More applicable in the UK is threat of making political trouble for regulators ("squawking") (Leaver 2009), exchange of information, favours or lucrative employment (revolving doors)
 - Hard evidence of capture hard to come by (although some from US)

Inertia in regulation and barriers to innovation

- Theories of regulatory capture focus on companies trying to capture surplus via higher prices/subsidies/lower quality, rather than on the effects of capture on innovation
- Commitment or “hold-up” problem in regulated utilities: Companies withhold investment because they fear they will not be allowed a sufficient return *ex post*, while regulators withhold revenue *ex ante* because they fear companies will not invest (Gilbert and Newbery 1994, Crew and Kleindorfer 2002, Levine et al 2005). Applies to innovation in networks as much as general investment; basis for longer price control periods.
- In non-monopolistic markets, incumbent companies tend to lobby for regulation that creates barriers to entry rather than subsidies, because latter will be dissipated away new entrants (Stigler 1971). Would include licensing, BSC, CUSC, NETA, absence of retail pricing transparency regulation...
- Independence of regulators from government produces inertia (Faure-Grimaud and Martimort 2003): Independence was intended to increase the credibility of commitment in regulation by insulating from capture via politicians. However, independence also constrains future governments and makes it more difficult for them to pursue their policies.
- Can be seen in UK: energy regulation established in 1990s focused on cost minimization, but by late 2000s, policy requires innovation. DECC had to “clarify” Ofgem’s remit in 2010 Energy Bill

Policy credibility problem as barrier to sustainable energy

- Time inconsistency and credible commitment problems developed first in the political economy of monetary policy (Kydland and Prescott 1977, Blackburn and Christiansen 1989)
- Essential problem is that agents make an irreversible (investment) decision before the policy maker acts, but the policy maker has different incentives before and after the decision (“time-inconsistency”). This leads to a lack of credibility of policy.
- Application to carbon tax (Helm et al 2003): if the government (or another government) in the future cares about the impacts of the tax on the public and/or competitiveness as much as or more than about carbon emissions, this provides an incentive for it to reduce the carbon tax in the future. Potential investors in low-carbon technologies anticipate this possibility and withhold investment as they fear assets will be stranded.
- Could be applied at the moment to gas and CCS: the policy now may be to require CCS for CCGT investments made today by the 2020s, but if companies expect that governments in future will care about interruptions in supply and cost more than emissions reduction, then they will make investments today in gas but not in CCS in the interim: there is a time inconsistency and policy credibility problem.
- Could also be applied to renewables policy if investors fear future reversal of policy (Spanish solar PV example)

Delegation as a solution to the credibility problem?

- Common approach to solving problem is to “bind the hands” of politicians by delegation to an agency tasked with reaching the policy goal but insulated from political pressure (Rogoff 1985).
- In monetary policy, this means independent central bank sets interest rate according to inflation target (MPC in UK)
- Helm et al (2003) propose similar delegation of policy to energy agency with a carbon target.
- The Climate Change Committee was based on this idea, but crucially lacks any policy making power and can only recommend budgets (struggle over 4th budget shows that politics is not at all removed from the process)

Vertical integration 1:

Transactions cost theory

- Coase (1937): Firms exist as organisations because the transactions costs of internal exchanges are lower than exchanges through the market, e.g. working out the right price to pay for something, having to negotiate, monitor and enforce contracts etc. Boundaries of the firm (make-or-buy) set by where internal and external transactions costs are equal
- Williamson (1975) “asset specificity” theory of the firm. Some assets are developed for a specific transaction, and have little worth in any other transaction (e.g. specialised equipment). Buyers or sellers are thus tied-in to a particular set of relationships, competition is lower and there is extending bargaining over gains from trade, and transactions costs are higher than if handled within a firm.
- Vertical integration addresses the asset specificity problem (Williamson 1985) and reduces uncertainty and costs of monitoring information (Arrow 1975, Riordan and Sappington 1987)

Vertical integration 2: Property rights theory

- Grossman and Hart (1986), Holmstrom and Roberts (1998): firms in a producer-supplier relationship cannot make contracts to cover all uncertainties, and so have to bear risks that may prevent them from making investments that would make both forms better off = the “hold-up” or coordination problem
- Vertical integration solves this problem where it allocates property rights to the firm which makes the most important investments
- Acemoglu et al (2010): forward vertical integration is particularly likely where the upstream firm has a high technological intensity (and so its investment costs will be larger), and where the upstream firm accounts for a large proportion of the input costs of the producer
- Would apply to forward integration in electricity industry where generators buy supply arms to hedge risk, including UK post-privatisation (e.g. Rocques et al 2005: 117-18, Chao et al 2008)

Vertical integration, market foreclosure and barriers to innovation

- Transactions cost theory suggests that there are efficiency gains from vertical integration and therefore lower prices (some evidence in electricity (Bushnell et al 2008), cement etc.)
- Some theorists think that VI will not affect competition, and may increase innovation because positive externalities from such innovation can be captured within the firm
- However, others argue that VI can reduce competition through “market foreclosure” – un-integrated rivals (and potential new entrants) are foreclosed from obtaining supply from wholesale markets, or are foreclosed from selling to the retail division of the integrated firm
 - Vertical integration may reduce the size of the remaining wholesale market and limit the possibility of entry into retail markets (Salinger 1988)
 - Vertical integration may raise wholesale prices for un-integrated rivals and so reduce their retail market share (Ordoover et al 1990)
 - Vertical integration by one pair of firms may produce an incentive for rivals to vertically integrate as well (“bandwaggoning”) (Hart and Tirole 1990) leading to whole market being vertically integrated

Path dependency and lock-in of institutions

- North (1990) draws on idea of path dependence and increasing returns in technologies in David (1985) and Arthur (1988) and applies it to institutions
- Four kinds of increasing returns also apply to institutions:
 - Large set-up costs mean that the costs of maintaining existing institutions is often lower than setting up new ones
 - Organisations and people acting within in institutions learn by doing and acquire skills (rules of thumb) in getting the most out of institutions
 - Coordination or network effects, where organizations reinforce institutional rules (formal and informal) through complementary activities
 - Adaptive expectations, where the more that organisations follow an institutional rule, the more certain others will be that the rule will last
- Pierson (2000) argues that increasing returns and path dependence arguments apply to political institutions even more strongly than economic institutions
 - Politics requires coordination
 - There is positive feedback in the formation of successful coalitions
 - Particular political institutions encourage individuals and organisations to invest in specialised skills and relationships
 - As power becomes more concentrated and unequal, the costs of maintaining power can decline, because the means of doing this move from coercion to maintaining ideological consent (i.e. moving from Lukes' first face of power to wards the third face)
 - Economic institutions can be compared on grounds of economic performance, but politics is a "murkier" environment and it is harder to define and measure "political performance"
- Path dependence in institutions means that:
 - there are many possible institutional arrangements,
 - the ones we have aren't necessarily the best,
 - small initial differences in institutions can lead to big differences later ("non-ergodicity")
 - and there tends to be lock-in, where institutional change is difficult

Carbon lock-in and how to escape it

- Unruh (2000): Path dependence in both technologies and institutions in an energy “techno-institutional complex” means carbon lock-in
 - at the level of the firm, with investments in specialised skills, rules of thumb, core competencies and investment in incremental improvements not radical innovation
 - at industry level, through technical standards, specialised complementary assets, and risk-aversion in finance
 - at social level through professional societies, industry associations, user groups and clubs, unions
 - at level of government institutions, including policies and laws that protect incumbents that lobby for such protection, regulatory capture etc.
- Escaping carbon lock-in (Unruh 2002)
 - Organisations and even individuals are not uniformly in favour of the dominant TIC
 - Change is therefore a collective action challenge for those who want change
 - Two possible sources of change:
 - Technological: i.e. development of new technologies with non-marginal superiority in performance. Will come from new entrants not incumbents, and will require niche/specialised markets. But may take too long.
 - Institutional: social movements, especially triggered by particular events

Varieties of capitalism

- Hall and Soskice (2000): institutional roots of national “political economies”, with implications for types of innovation
- Firms must solve coordination/collective action problems in a number of areas: industrial relations; ensuring vocational education and training; obtaining finance; obtaining supplies and customers, and supervising workers
- Two types of political economies, reflecting two different solutions:
 - Liberal market economies (US, UK...), where relationships are arms-length, involving market competition and formal contracting
 - Coordinated market economies (Germany...), where non-market modes of coordination are important, including more extensive collaborative relationships, between firms, sharing of information
 - These are two institutional *systems*, with sets of complementary institutions that fit together
- German CME:
 - “Patient” finance available as banks and firms have close long-standing relationships and share private information
 - Management of firms depends partly on supervisory boards which involve other stakeholders including employees
 - Industrial relations that delivers wage equality at each skill level, handled through consensus building
 - Vocational training organised through industry-wide employer associations and unions
 - Pervasive inter-company relations for facilitating technology transfer...tends to encourage complementarity through product differentiation and niche production rather than direct competition
- US/UK LME:
 - Firms access to finance heavily dependent on valuation in equity markets and other publicly available information; management open to mergers and take-overs
 - Industrial relations rely on liberalised labour markets and hire-and-fire; trade unions are weaker
 - Because of fluid labour markets firms are reluctant to train, so training mostly in formal education system
 - Relationships between firms are mostly competitive and formally contracted

VoC – implications and critiques

- Path dependence and institutional complementarity means that individual policies (e.g. vocational training, regional development banks) that work well in Germany do not travel well to the UK
- CMEs better at incremental innovation; LMEs better at radical innovation
- Mikler and Harrison (2012) argue that CMEs will be better than LMEs at innovation aimed at sustainability (e.g. EVs) because industry and government able to reach consensus on goals through deliberation, while LMEs have to rely on arms-length regulation that industry will seek to game and erode.
- Critiques: Akkermas et al 2007 and Taylor 2004 both find that the incremental/radical innovation distinction is not as clear-cut as Hall and Soskice suggest especially for UK; also argue that radical innovation in US is led by government as much as by firms

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