**Policy Regime Framework: Towards better Theories of the Policy Process**

Iftikhar Lodhi (ialodhi@gmail.com)

Lee Kuan Yew School of Public Policy, National University of Singapore

Considering for Policy Sciences or Policy Studies

**Abstract:**

This paper critically evaluates the contemporary frameworks and theories of the policy process, particularly in light of the challenges posed by globalisation to Policy Studies (PS). It contends that the existing PS frameworks and theories do not provide adequate explanation of the policy process. The scholars working in any one particular tradition rarely engage other frameworks within PS or theories across disciplines like International Relations (IR), Comparative Political Economy (CPE), and more importantly recent developments in New Institutional Economics (NIE), all of which are concerned with the similar issues. If the third generation of policy theories were to produce cumulative knowledge and a better understanding of the complex policy process in an increasingly globalised setting, a synthesis is imperative. The author offers such a synthesis, Policy Regime Framework (PRF) to explain the multilevel complex process of policy change in a globalising world that incorporates domestic and international interactions, within which various epistemological dispositions can co-exist. The PRF is elaborated with reference to energy and climate policy of a country. The author invites policy scholars to evaluate merits and demerits of the PRF vis-à-vis other frameworks and theories and apply PRF in diverse policy settings.

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## Introduction

For decades public policy scholars have been trying to come to grips with the elusive task of explaining the policy process and change. There have been at least three distinct waves of theorizing about the policy process. First generation simple theoretical frameworks of the policy process like Lasswell's (1956) stages heuristic, Lindblom's (1959) incremental 'science of muddling through', and the chaos embracing garbage can model (March, Olsen, and Cohen 1972). Second generation theories that brought in more sophistication and empirical evidence like Multiple Streams (Kingdon 1995), Punctuated Equilibrium (Baumgartner and Jones 2009), and Advocacy Coalition Framework (ACF) (Sabatier and Weible 2007). A third generation of frameworks and theories of the policy process is under way and may include the Institutional Analysis and Development (IAD) framework (Ostrom 2007) and a still evolving policy regimes "lens" (Wilson 2000; May and Jochim 2013). Nevertheless, despite providing a heuristic approach to conceptualise and analyse the policy process, these approaches carry little explanatory power, leave many critical questions unanswered, and difficult to test empirically (Baumgartner and Jones 2009: 307). Policy studies still lack a coherent all-encompassing theory of policy change and stability that is empirically testable and carry some predictive power.

The subject matter of traditional PS' concerns is further complicated by the reinvent of globalisation, that is, more intense, more frequent, and ever expanding international interactions. Therefore, even after half a century, policy scholars acknowledge that the policy studies literature is 'still at an early stage' of theorizing about the national and international interactions (Howlett,

Ramesh and Perl 2009, 77; Real-Dato 2009). The literature in policy sciences on the influence of globalisation and/or external forces is vague and scattered to say the least. The literature in this domain comes under many shades, for example policy convergence, policy regimes, policy diffusion, policy assimilation, policy learning (lesson drawing), policy emulation, policy transfer (voluntary or coercive), isomorphism, epistemic communities, and policy subsystems. Consequently policy change literature shows:

> a remarkable variety of unnecessary theories and frameworks. Such unwarranted theoretical diversity often encourages the compartmentalization of perspectives which fail to enrich each other, and too often results in the production of isolated, incompatible, and non-cumulative research results (Capano and Howlett 2009).

Furthermore, given the complexity of the policymaking process on the state level, these theories have rarely ventured into explaining the policymaking process on the international/global level and largely have left this field to IR/IPE (now increasingly being called Global Political Economy GPE) scholars. These GPE scholars in turn seem less familiar with the research in the field of public policy (Walt 2011) with few exceptions (Gummett 1996; Keohane and Milner 1996; Krasner 2009). There are also calls from PS scholars to incorporate the cumulative knowledge from IR and CPE into the policy dynamics frameworks (Jochim and May 2010; John 2013). Such a synthesis is also required across the supposedly incommensurate epistemological divides (positivist v. constructivist) within these disciplines if we are to accumulate knowledge in a progressive way (Checkel 1997; Shapiro and Wendt 2005; Walker 2010)

Since globalisation requires an increasing degree of international cooperation; defined as mutual policy *adjustments* (Axelrod and Keohane 1985; Grieco 1993; Milner 1997), an inquiry into the

problem of international cooperation is also an inquiry into the dynamics of the policy process and vice versa. This implies that IR/CPE and public policy scholars need a greater interdisciplinary dialogue. This paper is an attempt to open such a dialogue within PS and across disciplines like IR/GPE, CPE, and NIE. If the third generation of policy theories were to produce cumulative knowledge and a better understanding of the complex policy process, a synthesis is imperative. This paper offers such a synthesis; the PRF explains the multilevel complex process of policy change in a globalising world, within which various epistemological dispositions can co-exist. The PRF is elaborated with reference to energy policy of a country. The author invites policy scholars to evaluate merits and demerits of the PRF vis-à-vis other frameworks and theories and apply PRF in diverse policy settings.

In the next section, I discuss some epistemological and ontological issues and bridge the gap between the two main approaches: positivism and constructivism. The third section brings in the broader consensus approaches in IR and CPE to weigh in the policy process. In the fourth section, I critically evaluate the existing PS frameworks followed by the introduction of the PRF and its merits vis-à-vis others. The PRF is further elaborated with reference to energy and climate change policy process in a country.

**The Epistemological and Ontological Foundations**

Theories are situated within a broader approach to philosophy of knowledge or 'truth claims'. Our propositions are based on different understandings of the world (ontology) and how can we know about it (epistemology). Only few scholars explicitly subscribe to a certain epistemological and ontological position. Nevertheless, many scholars make implicit assumptions. That is precisely why

we have all the theoretical diversity, often unnecessary, because our different assumptions lead us to substantively different conclusions (Capano and Howlett 2009; Ostrom 1990, 50).

The often-called "incommensurate" approaches can be reconciled, like the positivist/rationalist and constructivist/historical/social approaches. I contend that the actual divide between positivists and constructivists is not an epistemological one (or even an ontological for that matter). In their soft versions both schools tend to agree more than they disagree on these philosophical issues. The real divide between the two camps is on the relative salience of their causal variables, and particularly their influence on actors' actions, ideas, interests, or institutions.

Since the notion of science implies *explaining* observed regularities (*causal relations*) in a way that is reliable, generalizable, *replicable* and *falsifiable*, the science of anything is by definition positivist (Hollis and Smith 1990, 50; Popper [1934] 2002). A positivist ontology and epistemology means the world exists without our knowledge of it and we know causal relations through a combination of observation and deduction.[1] Leaving aside more radical hermeneutics, most mainstream interpretivists/constructivists[2] agree with the thin definition of scientific inquiry.

A thin definition of science describes scientific inquiry as 'a systematic activity of organizing patterned observations' (Marsh and Stoker 2010, 11). By this definition, the mere assertions that 'ideas matter' or 'all research is theory laden' (Quine 1980; Stone 1997) do not make constructivists

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1 A *combination of both deduction and observation* allows us to avoid rationalism vs empiricism debate. This position is also closer to the scientific realism of Roy Bhaskar (Bhaskar and Callinicos 2007) and Shapiro (Shapiro and Wendt 2005) upon which I build my framework.

2 I use the term interpretivism and constructivism interchangeably, others may call these paradigms reflectivism post-positivism and a host of other post-'isms'. Whatever their disparate self-proclaimed adherents claim, my understanding of the paradigm is closer to that of Wendt (1999) and Bevir and Rhodes (2010); this in simple words mean two things, (a) ideas and discourse shape interests, power relations, and institutions; and (b) *objective* science is nothing but privileging one particular idea of truth claim over another.

unscientific or anti-positivists for that matter; nor does it necessarily make the constructivist paradigm incommensurate with positivism (Beyer 2009; Checkel 1997; Moravcsik 1997; Shapiro and Wendt 2005). The mere fact that interpretivists offer knowledge propositions ("ideas have causal influence") means that they agree with positivists on a possibility to agree on the criteria to judge truth claims. The differences between these schools are not necessarily due to their epistemological positions but their differences on the main source of actors' action and relative salience of causal variables in explaining outcomes; whether institutions, interests, or ideas; where do they come from; and how do they influence action.

*Agency*

This brings us to the structure-agency problem that all social science students need to tackle (McAnnula 2010; Wendt 2005). From an ontological point of view, agency means human individuals shape their environments either through egoist action (logic of consequence) or by giving meanings to action (logic of appropriateness). From a methodological point of view it merely means that the appropriate unit of analysis is an individual (Popper [1934] 2002)[3] since we cannot ascribe agency to social entities like family, organisation, classes, nations, and states.[4] A less stringent view of this tradition, however, concedes that agency can be attributed to any *explicitly purposive* group of people (Lars 2002). From this point of view, the agency in question, be it family, firm, organisation, interest

[3] Positivist scholars of particularly rational choice tradition, since at least the 1950s under the influence of behavioural revolution, have tried to explain everything in terms of individual actions or revealed preferences. Some scholars have gone so far as to demand from political scientists to abandon the state or institutions as unit of analysis because all decisions are, in the final analysis, made by individuals (Buchanan and Tullock 1962).

[4] This reductionist view, mainly from liberal philosophers like Lock and Rousseau and economists like Hayek, was popularised by the British Prime Minister Margaret Thatcher, who once announced that 'there is no such thing as society'.

group, class, nation, or the state may be treated 'as if they were individuals' (Wendt 1999).[5] This line of reasoning can be extended to identify "policy actors" in a given policy area, that is explicitly purposive groups, organizations, individuals, and states.

Within the positivist tradition, rationalists ascribe self-interest maximization to the primary motive for all action. Interests in this approach are exogenously defined. The rationalist research programme is not concerned with the question as to how these interests or preferences are shaped or influenced by the historical and sociological variables. Constraints on actors' actions are endogenous to the cost-benefit calculus of agents in the rationalist approach. The action taken or revealed preference is primarily the most preferred alternative that maximises welfare, security, or any other given goal. From this instrumental rationality point of view, agency means actors are autonomous to choose what they prefer given all the constraints. Applying this view on the policy process or collective action would imply that the socio-political world is highly unstable since actors would change their choice with changing interests. However, a cursory observation of the policy process reveals that the socio-political world is relatively stable.

Scholars from various disciplines have ascribed this stability to the presence of formal and informal institutions. These scholars also question the instrumental rationality and offer alternative cognitive, historical, and social explanations on the question of the sources of action. For example, Lindblom (1959, 1977) and Simon (1978, 1991, [1947] 1997) argue against a clear means-ends differentiation in decision making within complex settings. Means and ends are not always obvious and often contradict each other in complex systems that involve many individuals, interest groups,

[5] It will be in order to mention that both ontological and methodological individualisms are not uncontested themes even in the legal, cognitive, and neuroscience literature (see for example Chopra and White 2004; Dennett 2010; Epstein 2009; Everett 2007).

organisations, and collection of organisations. Lindblom particularly emphasise the path dependent nature of policy decisions. Simon has shown that the rationality assumption is systematically violated because of the cognitive limits of human agency. The information searching and processing costs can be extremely prohibitive. Instead humans use socially and historically determined heuristic methods to arrive on an approximate rational decision. Kahneman and Tversky (1979, 2000) bear out these claims. They demonstrate that systematic anomalies in human rationality exist due to framing, uncertainty, and endowment effect. Overall implications of these findings are that social construction of issues what they call 'framing' plays an important role in affecting decisions. Similarly, perceptions that are embedded in historical experiences or normative value systems guide agent's decisions.

Furthermore, experiments about the attitudes towards fairness have also demonstrated that individuals would sometimes let go their own benefits if they perceive a division unfair (Fehr and Schmidt 1999; López-Pérez 2012; Rabin 1993; Rübbelke 2011). This is not because the strangers in these experiments cared about the consequences of relative gains; instead it is due to the fact that these individuals have developed the notions of fairness from their social contexts. Since the notions of fairness are highly context and culture dependent, they are not always captured by deductive utility models. In short humans, and the organisations they occupy, are embedded in their social environment and are path dependent with a bounded rationality seeking satisficing solutions instead of context independent maximization.

*The Structure and the Context*

It was this understanding of the role of the socio-historical context that gave rise to new institutionalism in political science. According to new institutionalism, underlying structures not only constrain agency but also *determine* interests, identities, and preferences of actors and consequently

outcomes of social dilemmas. Thus rational choice institutionalism attempts to modify its crude behaviourism of neoclassical economics and their strong assumptions of rationality by incorporating cognitive, social, and structural dimensions in collective action situations (Me´nard and Shirley 2005; North 1990; Ostrom 1990, 2009). The research in historical institutionalism (Hall and Taylor 1996; Steinmo, Thelen and Longstreth 1992) shows that political institutions structure collective action behaviour by empowering some and disempowering other interest groups within a state. Furthermore, political institutions are sticky. By locking in vested interests, national political institutions continue on their own trajectories and resist reform. Similarly sociological institutionalism and organisational theories (Campbell 1998; Nee and Ingram 1998) emphasise the cultural sources of action through role internalization or socially acceptable behaviour what March and Olsen (1998, 2008) call the logic of appropriateness. The increasing recognition of the above issues in politico-economic research has brought back the importance of culture, perceptions, ideas, and institutions. This means domestic institutional environment takes a more prominent explanatory role in determining policy outputs than would be accorded by a rationalist approach.

Furthermore, constructivists emphasise the role of ideas in defining interests (Acharya 2004; Blyth 1997; Checkel 1997, 1998; Checkel and Katzenstein 2009; Finnemore and Sikkink 1998; Kratochwil and Ruggie 1986; Ruggie 1998a; Wendt 1992, 1999). Constructivists offer the 'distribution of knowledge' as a supplementary (and even alternative) explanation to policy adjustments (Haas 1997). Goldstein and Keohane (1993) identify three kinds of beliefs that may shape identities and interests of actors, namely worldviews, principled beliefs, and causal beliefs. Worldviews refer to broader cultural understanding of values and reality. Principled beliefs, on the other hand, shape actors' normative approach to policies. The most important of all with immediate consequences for the policy process are the causal beliefs that actors uphold about an issue area and

its solutions. The distribution of knowledge as an explanation for action implies that actors 'learn' from their past and their peers' experiences. This also implies that uncertainties about the future consequences of action create a demand for scientific knowledge about the issue area.

Thus, institutions and ideas explain the relative stability of the policy process. However, historical and sociological institutionalisms along with constructivism have difficulty in explaining change. The question as to why and how do institutions and ideas change themselves or allow policy change poses a serious challenge for these approaches.

*Reconciling the Divide*

I concur with moderate constructivists that 'ideas matter' and 'all research is theory laden'. However the two assertions neither justify intellectual anarchism nor the abandonment of the scientific approach to social inquiry. The point of departure from the constructivist research programme is their relative disregard for material power structures influencing inter-subjective/communicative discourses. The question is not *if* ideas matter. The actual question is *whose* ideas matter and *how*. We can overcome the divide between positivist and constructivist research programmes using a critical realist approach (Brown 2007; Checkel 1997; Jackson 2011; Joseph 2012; Shapiro and Wendt 2005). A critical realist approach agrees with positivists that the physical world exists without anybody interpreting it and causal relations can be ascertained by a combination of both observation and deduction. None of this, however, implies an orthodox adherence to methodological individualism and rationalist approach. For scientific realists, both explicitly purposive and non-purposive groups exist and have their own identities. These agents can be treated as units of analysis. It also takes ideas more seriously than traditional positivist approaches. But unlike modern constructivists, it does not ignore the underlying structural power relations and methodological problems.

According to Critical Realism, underlying structures, including those constituted by resource/power asymmetries and those by intersubjective understandings of social reality, provide explanations of action. These structures do not merely influence the means-ends calculations of rational agents but determine what ends actors pursue and how, henceforth termed *paradigms*. Paradigms remain open to discourse. But the discourse does not occur in vacuum. As Marx put it, 'men make their own history, but they do not make it in self-selected circumstances, but under circumstances existing already, given and transmitted from the past. The tradition of all dead generations weighs like a nightmare on the brains of the living' (Marx [1852] 2005).

The dialectical relationship between socio-historical structures and agents is elaborated by Giddens (1984) structuration theory. Giddens accepts the constitutive role of agents in reproduction of their social structures. The process of reproduction of structures depends on modalities (institutions and resources) and interactions. It is these interactions where 'frames' (paradigms) and resources are critical in defining or redefining institutions. Note that how closely this understanding of the relationship between actors and institutions resembles with North's (1990) framework of institutional change. North defines institutions as 'the rules of the game' that shape human interaction and incentive structure. He continues, 'institutions are not necessarily or even usually created to be socially efficient; rather they, or at least the formal rules, are created to serve the interests of those with the bargaining power to create new rules' (North 1993). This view of the polity is seconded by a number of scholars (Acemoglu 2002; Acemoğlu and Robinson 2012; Crouch 1983; Lindblom 1977; Schmitter 1982). The institutional change then occurs when group of people (organisations) find the status-quo institutional arrangements in their disadvantage. The change is

more likely to occur when organisations have accumulated new information and bargaining power due to the changes in information, technology, or relative prices.

It follows from the foregoing discussion that a multitude of domestic and international factors interactively determine policies particularly those that require international coordination. Domestic structures are as important as international systemic factors in constraining some and enabling other policy choices. In fact they determine the available choice set. At any point in time, structural and institutional factors impinge on policy decisions and outcomes. Over time, however, political decisions, along with other exogenous variables, shape structural and institutional factors. This stock-and-flow account of policy change mechanism is broadly congruent with the theories of institutional change (North 1990, 73-91; Ostrom 2007, 31-43; Rodrik, Subramanian and Trebbi 2004; Scharpf 1997, 44), comparative political economy (Steinmo, Thelen and Longstreth 1992; Streeck and Thelen 2005; Tsebelis 2002), international politics (Drezner 2003; Gourevitch 1978; Keohane and Milner 1996; Krasner 2009; Modelski 1987; Olson 1982), policy process (Baumgartner and Jones 2009; Harris and Milkis 1989; Hofferbert 1974; Sabatier and Weible 2007; Sharkansky 1970), and sociological accounts of structure-agency interaction (Archer 1995; Giddens 1984; Sewell 2009).

**Divorced Domestic Politics in Neo-IR**

How can we explain variances in policy outcomes across countries including in traditional security areas? Why did Iran choose a reconciliatory approach while North Korea continued to be disengaged? Why did European powers show a softer stance against Russia after the Ukrainian crisis compared to the United States and United Kingdom? Why do countries cooperate and create international institutions on certain issues and go to conflict on others? Why does the level of international cooperation on climate vary across countries? The mainstream rationalist – neorealist

and neoliberal institutionalist – schools of IR offer international system level explanations to these questions. The two rationalist schools argue that domestic structures and politics can be ignored in order to develop a parsimonious theory of international politics (Keohane 2002; Waltz 2008).

The two neo- rationalist schools have produced an impressive body of literature that deals with the questions and prospects of international cooperation and conflict and hence determinants of states' policy adjustments. These rationalist theories of international cooperation (or its lack thereof) are termed the neo-neo synthesis because of the similarities in their substantive assumptions and ontological and epistemological dispositions (Andreatta and Koenig-Archibugi 2010; Waever 1996). According to the neo-neo synthesis, states are the primary and rational unitary actors in the international system striving for self-interest (security and prosperity) maximization[6] under anarchy – the absence of a central authority with a legitimate monopoly over the use of force. Anarchy means there is no superior legitimate authority over sovereign states that may define property rights and enforce rules. The neo-neo synthesis acknowledges the relative power of non-state and trans-national actors, corporations as well as civil society. However, scholars in this tradition continue to conceive the state as the primary actor.

From these simple and plausible assumptions, the two schools arrive at the supposedly dissimilar conclusions about the causes of conflict and cooperation in international politics. Neorealists claim that because of anarchy the pursuit of national interests (security and prosperity) remains unchecked and leads to conflict (Waltz 1979). That means one state's defensive military apparatus to ensure its own security makes others feel threatened and gives rise to an arms race or

[6] Neoliberals and defensive neorealists are generally biased in favour of merely 'securing' instead of 'maximising' but to be consistent with the overall rational choice framework, I use the term maximising, see the literature review (chapter 2) and theoretical framework (chapter 3) for a detailed discussion.

what scholars call a security dilemma (Herz 1951; Jervis 1978). Therefore, the distribution of military and fungible non-military power in the international system becomes the main preoccupation of states. Since the distribution of power determines the outcomes of international politics, therefore, states care about the relative distribution of power in the system. International cooperation is difficult to achieve because states care about the *relative gains* (distributional conflict) from cooperation and its consequences for the distribution of power (Grieco 1993; Mearsheimer 1995; Waltz 2008).

Neoliberal institutionalists, however, contend that despite realist assumptions, mutually cooperative policy adjustments can nevertheless emerge due to the presence of mutual interests. Keohane and Nye ([1989] 2012, 9-37) argue that interdependence[7] not only creates common interests but also restricts states' policy autonomy and available policy choices. Internationalisation renders the use or threat of force ineffective as a policy instrument, because internationalisation erodes clear hierarchy of issues in a dense web of linkages. Furthermore, internationalisation of national economies exposes them to international price trends, competition and shocks. The state policies not only lose their efficacy but the available policy choice set shrinks (Keohane and Milner 1996). The 'loss of control' over policy choices means states cannot pursue their security and welfare goals independently, rendering power resources irrelevant. Therefore states can, and do, cooperate in a wide array of issue areas to achieve their common interests.

According to neoliberals what impedes mutually cooperative policy adjustments is not primarily conflict of interests or distributional concerns but *fear of opportunistic behaviour by others*.

[7] I use the terms *interdependence*, *internationalisation*, *integration*, and *globalisation* interchangeably. Besides all the different uses in the literature, what remains common in these terms is the connectivity across political borders. Nevertheless, I use *interdependence* when it simply refers to the fact that actions of one actor have consequences for others. I use *internationalisation/integration* when referring to greater cross-border goods and capital mobility coupled with some regulatory coordination. I use *globalisation* when it means all of the above and influence of non-state actors and ideas.

Because there is no authority to monitor and enforce agreements, states fear that others may renege on their commitments leading to the problem of assurance (Axelrod and Keohane 1985; Keohane 1984, 2002; Martin and Simmons 1998; Oye 1986; Stein 2008). Borrowing insights from the developments in non-cooperative game theory and new institutional economics, these scholars argue that the problem of international cooperation is a typical *collective action problem* or political *market failure*.[8] This means a situation where states would have been better-off by cooperating but the lack of an enforcement authority, complete information, and certainty gives rise to high transaction costs. Consequently, a rational course of action leads to non-cooperation that is collectively sub-optimal.

Therefore, states demand and voluntarily create international institutions in order to reduce transaction costs and overcome collective action problem, argue neoliberal institutionalists (Keohane 2002). Institutions by definition are intentionally devised rules that rein in unconstrained action in interdependent relations. International institutions thus facilitate cooperation by providing information, revealing states' preferences, monitoring their actions and providing bargaining forums. As such international institutions bring predictability. They constrain states' behaviour through formal rules, but more importantly, by establishing norms of *reciprocity* and *reputation* that facilitate credible commitments. Therefore, ingenious international institutions can be rationally designed to

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[8] *Collective action problem* in the neo-neo debate mainly refers to the fear of cheating or opportunism. In general it is a situation, like market failure, where there is a disparity between individual and collective rationality. Self-interest maximising behaviour leads to outcomes that are least preferred by each actor. *Market failure* refers to a situation when free market activity results in Pareto suboptimal allocation of resources from a collective perspective, that is, a different allocation is possible to make at least one actor better off without making anyone worse off. A typical example is the famous *Prisoner's dilemma* where two rational egoist prisoners are placed in separate isolation cells and have been made the following offer: If one confesses (D) and the other remains silent (C), the former goes free and the latter serves a substantial sentence of say three years. If both confess, both serve a sentence of say two years. If both remain silent, they are handed over a minor sentence of say a year. For each player, the preference ordering DC > CC > DD > CD means there is an incentive for each to confess leading to a collectively suboptimal outcome (DD). See the literature on collective action problems (Hardin 1982; Holzinger 2003; Olson 1971; Ostrom 1990) and market failures (Weimer and Vining 2010).

deal with the issues of distributional conflicts and fear of cheating (Koremenos, Lipson and Snidal 2003).

Despite their dissimilar conclusions about the prospects for internationally cooperative mutual policy adjustments, both the neorealist and neoliberal schools have similar assumptions and systemic understanding of the causes of conflict. Both emphasise the unitary rational actor model of international politics while ignoring domestic politics. For both 'national interests' remain exogenously given and constant across countries over time. Both these schools construe the problem of international cooperation as rational choice collective action problem since distributional conflicts can be treated as a subset of collective action problems (Fearon 1998; Holzinger 2003). Nevertheless, an increasing number of international institutions and ensuing cooperation, even if limited, remain a puzzling phenomenon that begs explanations from neorealists. On the other hand, continued discord despite growing globalisation and number of international institutions is something that neoliberals fail to explain.

By treating the state as undifferentiated unitary actor, the neo-neo rationalist theories obscure the domestic structural and political constraints faced by governments. The neo-neo synthesis assumes state preferences or national interests are exogenously given. However, Robert Jervis (1988, 322) cautions us against such an approach to international politics: 'by taking preferences as given we beg what may be the most important question of how they were formed [and draw] attention away from areas that may contain much of the explanatory "action" in which we are interested'. These rationalist approaches do not factor in the differing perceptions of national interests, leave aside value conflicts, across countries. In a similar vein, Milner (1997, 234) contends that 'cooperation

among nations is less plagued by fears of other countries' relative gains or likelihood of cheating than it is by the *domestic distributional consequences* of cooperative endeavours' (emphasis in original).

Furthermore, the contractarian approach of these theories continues to give analytical privilege to the politics of legislative bargaining among states over states' capacity to implement policies within their jurisdictions. Consequently the inability of states to reach agreements is viewed as a matter of 'unwillingness' motivated by assumed relative gains concerns or fear of cheating. There does not seem to be a place for perceptions of fairness and value conflicts in their rational choice framework.[9] For example, the principle of 'common but differentiated responsibilities and respective capabilities' towards climate change, that is so vehemently emphasised by all the developing countries in the climate change negotiations, finds no analytical significance in the neo-neo dialogue. Similarly, an act of noncompliance is viewed as simple 'cheating' in these frameworks disregarding the issues of state capacity to implement policies. Again this goes against the empirical observations. Virtually all international institutions acknowledge and take into account the implementation capacity problems faced by their members.

In short, the neo-neo synthesis offers an ahistorical billiard ball model of the international state system that does not take into account domestic political struggles and capacity problems. If domestic structural and political factors systematically explain the variances in energy and climate policy outcomes across countries over time and by extension the level of international cooperation, then, ignoring domestic factors may lead to incorrect inferences.[10] As Keohane (2002, 6) puts it,

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[9] Although Goldstein and Keohane (1993) elaborate on the role of ideas in policy formulations and Keohane (2002) acknowledges the role of ideas but does not extend treatment of ideas as perceptions and a source of conflict. Perceptions as heuristic device do not fit well within the core of the neoliberal institutionalist theory.

[10] In differentiating *structural* and *political*, I follow Ostrom's (2007, 27-45) and Williamson's (2000, 597) lead. By structural I mean all the long-term physical and socio-economic variables that make an agent a price/rule taker at any

neorealism may be useful as 'first cut' but it leaves out too much, particularly domestic politics and the role of ideas/perceptions, to be a comprehensive doctrine of international relations. But neoliberal institutionalism makes the same mistake. Some realists acknowledge that domestic variables need to be incorporated into realist perspectives (Grieco 1988b; Krasner 1993). Waltz (1996) also acknowledges that neorealism is not a theory of foreign policy but of international politics and is applicable only to security issues among great powers. For both Keoahne and Waltz, a progressive research program needs to incorporate domestic politics and the role of ideas/perceptions.

**Bringing Domestic Politics Back In**

Realising the inadequacies of rationalist systemic theories in explaining diverse state actions, scholars have offered three alternative approaches to understand the interactions between national and international politics. The first is what Waltz (1959) calls 'the second image' analysis. In the second image analysis of international politics, scholars explain state action with reference to domestic politics and institutions. Most classical liberal and realist studies of international politics fall into this category (Doyle 1983, 1997; Moravcsik 1997, 2003; Morgenthau 1951, [1948] 1960). In this line of analysis state preferences or national interests originate within domestic politics and are projected into international politics by governments. Consequently, international political outcomes can be explained by domestic political and institutional variables. The most famous theory from this perspective is the democratic or commercial peace theory (Russett and Oneal 2001).

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given point in time; in that sense *institutions* can also be considered as structures (Pontusson 1995; Steinmo, Thelen and Longstreth 1992). By political I mean relatively fluid political processes including perceptions and preferences where interest groups are fighting within the structural boundaries to change the rules of the game.

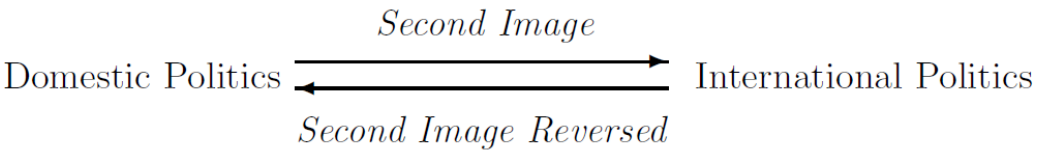
A more nuanced analysis within this camp, what Putnam (1988) calls 'two-level games' or what Moravcsik and Legro (1999) call 'two step approach', concedes that the structure of international system influences the outcomes of international bargaining. However, these scholars continue to emphasise that state preferences or national interests originate within political borders of the nation-state (Drezner 2007; Evans, Jacobson and Putnam 1993; Milner 1997; Moravcsik 2003). In the two-level or two-step approach, scholars first attempt to identify domestic forces that shape national policies and then explain outcomes of international bargaining through the distribution of power in the international system. Although this approach has significantly advanced the research agenda in the analysis of international politics, it has been criticised for ignoring the reverse influence, that is, the influence of international actors and norms on shaping domestic interests and preferences.

The second approach is termed the 'second image reversed' by Gourevitch (1978). In the second image reversed analysis, domestic politics becomes a dependent variable. Scholars explain domestic politico-economic and institutional outcomes with reference to the international environment in which states operate (Cerny 1997, 2000; Cox 1987; Drezner 2007; Elkins and Simmons 2005; Gill 2008; Strange 1996). From historical analysis of impacts of war and colonisation on domestic politics to the modern era globalisation, scholars in this tradition argue that domestic political and economic institutions are a function of their external environment. Particularly the literature on the consequences of globalisation for the nation state observes diffusion of neoliberal policies and paradigms across the world (Simmons, Dobbin and Garrett 2006). Similarly, there is a plethora of literature that observes the diffusion of norms and practices across states that originate from outside the state (Acharya 2004; Finnemore and Sikkink 1998). The main channels of these

influences are identified as direct coercion, competition, learning, and socialisation (Bernstein and Cashore 2012; Holzinger, Knill and Sommerer 2008).

A third approach has emerged in recent years as an attempt to bridge the second image and second image reversed traditions. It is a direct result of deliberate attempts to synthesise knowledge from IR and CPE (Caporaso 1997; Milner 1998). Cao, Milner *et al.* (2014) particularly appreciate this emerging trend in the literature on environmental politics by stating that 'the traditional divisions between international relations and domestic politics have begun to erode in the environmental field'. Scholars identifying with this approach attempt to avoid the futile debates as to what, domestic or international factors, exclusively determine state actions. Instead, these scholars model international and domestic factors simultaneously (Bernauer, Kalbhenn *et al.* 2010; Cao and Prakash 2012; Holzinger, Knill and Sommerer 2008). The dialectical relationship (Figure Error**! No text of specified style in document.**.1) between domestic and international forces becomes an empirical question instead of an exercise in deduction.

**Figure** Error! No text of specified style in document.**.1: Dialectics of the Second Image and Second Image Reversed**




Scholars have increasingly taken a middle path and argued that the state and its institutions are not passive victims of international forces nor are they all powerful (Howlett and Ramesh 2006;

Ramesh 2006). Instead, pressures from international forces are mediated by domestic political and economic institutions, which in turn adapt to the new international environment as well as project changing national interests into the international arena (Hall and Soskice 2001; Hall and Thelen 2009; Swank 2002, 2006).

**Bridging the Two Divides**

The framework that I develop in this paper attempts to bridge the two divides in the literature, that are, domestic-foreign and high-low politics. IR scholars often distinguish between domestic and foreign policy using terms like 'foreign policy' or 'foreign economic policy'. The implicit assumption seems to be that there are few issue areas where only domestic political economy plays a role and international actors have no role. But there are other areas where only systemic level interactions play a role in outcomes and domestic politics have no role. Such a conception is a logical consequence of the Westphalian system founded on the concept of sovereignty. However, what such conception obscures is the fact that often one country's purely domestic policies have spill over effects that hurt or benefit other countries. Good examples of such spill over effects can be subsidies to export industries or capital tax rates. At what point a policy is a domestic policy and at what point it is a foreign policy is clear neither analytically nor empirically (see Figure 1.4 below).

Similarly, the traditional divide between realists' 'high politics' and liberals' 'low politics' is also misleading. The distinction was a way to differentiate between pure security (high politics) related issues such as nuclear disarmament from pure economic issues (low politics) such as trade and investment. The scholars on both sides of the debate acknowledged that the two are interlinked in the sense that economic gains translate into military power and military power can be used to gain more material benefits. However, high politics and low politics are not two opposite ends of a

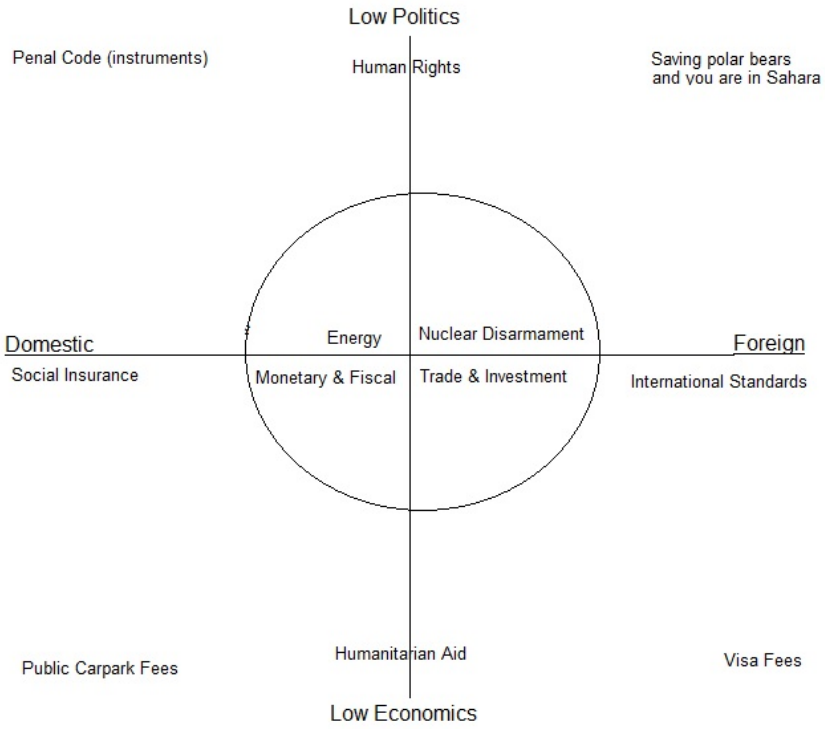
spectrum. If an issue has high economic stakes, it is going to be highly political (see Figure 1.4 below). The issues with low economic/political stakes would be easier to bargain about and would be used as side payments for bargaining in more crucial issues.

In the two dimensional graph of the two spectrums in Figure 1.4 below, the horizontal axis stretches from pure domestic issues to pure foreign issues. The vertical axis has low economic stake issues at the bottom and soft political issues at the top. The circle at the intersection represents the core of international political economy. By choosing different dependent variables from the four distant corners of

Figure Error**! No text of specified style in document.**.2, one can prove every conceivable theoretical argument in IPE. For example, regime theorists and global society schools tend to point out the widespread cooperation and shared norms in the top right corner. Historical institutionalist literature tend to choose their dependent variable from the lower or upper left corners and point out the continued relevance of domestic institutions. The Universalists and globalists of various shades tend to choose their dependent variables from the lower right corner and observe a convergence.

My choice of policy issue – energy and climate change – is appropriate because it presents the most pressing international collective action challenge of our day. It also lies at the crossroads of security and economy, containing both domestic and foreign policy dimensions.

**Figure** Error! No text of specified style in document.**.2: International Political Economy: A Conceptual Map**


Low Politics
Penal Code (instruments)
Human Rights
Saving polar bears
and you are in Sahara
Domestic
Energy
Nuclear Disarmament
Foreign
Social Insurance
Monetary & Fiscal
Trade & Investment
International Standards
Humanitarian Aid
Public Carpark Fees
Visa Fees
Low Economics

**National Policy Regimes and Policy Change**

After elaborating on the international strategic environment and how it relates to the domestic economic structures and political institutions, now I briefly highlight the domestic policy environment and how it interlinks with the international environment. The policy studies literature is 'still at an early stage' of theorizing about the national and international interactions (Howlett, Ramesh and Perl 2009, 77; Real-Dato 2009). From the beginning, public policy scholars were attentive to the fact that small interest groups wield disproportionate influence on policy outputs even in democratic societies (Schattschneider 1935). The close knitted policy networks between businesses, bureaucracies, and politicians were often termed as 'iron triangle' (Cater 1964), 'issue-networks' (Heclo 1978, 1994), policy communities (Richardson and Jordan 1979; Wilks and Wright 1987), epistemic communities (Haas 1989) and advocacy coalitions (Sabatier 2007; Sabatier and Jenkins-Smith 1993).

However, later studies demonstrated that these policy networks or iron triangles might not be as all powerful as many scholars had come to believe. Dissatisfied by a pure liberal pluralist conception of the state, on the one hand, and a pure Marxist instrumental view of the state, on the other, policy scholars began to focus on the policy process and how various actors, ideas, and institutions influenced policy outputs. The concept of policy subsystem emerged as a result of nuanced analysis of the policy process (Freeman and Stevens 1987). Freeman defined policy subsystems as political relations among people in special policy areas coming from different institutions and organisations in the larger system. The notion of policy subsystem implies that the policy process is characterized by a confluence of interests and patterned relationships among legislators, administrators, and interest groups. Sabatier and Jenkins-Smith (1993) define subsystems

as the core element of policy process 'as established coalitions of interests who interact regularly over long periods to influence policy'.

Sabatier (2007) expands on the concept of policy subsystems and offers an 'advocacy coalition framework' (ACF) putting more emphasis on actors and their shared beliefs. He argues that policy actors (private, public, and experts) in a particular sector or issue area have relatively stable and structured patterns of interaction over long periods of time (usually a decade or more) transcending various levels of government and civil society. These actors have expert knowledge and resources. Scope or boundary of policy subsystems can overlap with and be nested within other subsystems. In that defining the boundaries of a subsystem is left to the researcher. The framework attempts to explain both policy stability and change. Policy stability results from the presence of a dominant coalition that translates its normative and causal belief systems into government programmes. Policy change occurs from both within and outside the subsystem. From within the subsystem, changing nature of the problem, socio-economic conditions, or lesson drawing all were identified as sources of policy change. From outside the subsystem, policy decision from other subsystems, availability of new information, and crisis were the sources of change from outside. The process of change is often led by dissatisfied coalitions or 'policy brokers'.

Sabatier's policy broker is like Kingdon's 'policy entrepreneur' (Kingdon 1995). While Kingdon left too much on the contingent nature of the policy windows, Sabatier leaves too much on the change in the belief system of individuals and their convincing power without explaining the underlying reasons for changes in the belief systems. The ACF is also very similar to the 'punctuated equilibrium framework' (PEF) by Baumgartner and Jones (2009). Baumgartner and Jones (2009) also argue that a relatively stable and more structured pattern of interaction between subsystem actors

make it possible to bring something onto agenda or to deny agenda to others. This conception combines the institutional and ideational elements with actors. The actors are part of institutional settings. They share beliefs and have repetitive structured interaction leading to monopoly over interpretation of issues and their solutions till it is challenged by another set of actors. The new set of actors changes policy image and venue. Both the PEF and ACF attempt to explain observed stability of the policy process and sudden changes. The former however is least concerned with the actual process of change and is largely descriptive. The ACF, however, attempts to 'explain' the change and stability in the policy process but the concept of subsystem and change in belief system as core driver of change remains problematic. The ACF does not explain as to what kind of constraints these coalitions face and what causes change in their belief systems.

To overcome these challenges and combine insights from various frameworks, the most advanced literature in policy studies employ the concept of 'policy regime' in order to explain the relatively stable constellations of institutions, interests, and ideas in a polity (Eisner 1994; Esping-Andersen 1985; Hall 1993; May and Jochim 2013; Wilson 2000). Although distinct from international regimes, the policy regimes literature heavily borrows from the IR and CPE literature. The concept of national policy regimes emerged from an earlier generation of comparative studies. These studies identified three distinct state-society arrangements that could explain welfare or foreign economic policies of the developed countries. The three governing arrangements were termed liberal, corporatist, and social democratic regimes (Esping-Andersen 1985, 1990; Katzenstein 1978). Nevertheless, these studies dealt with macro political institutions or as Hall and Soskice (2001) call it 'social systems of production'. At the same time scholars in IR were observing that in certain issue areas states coordinate their policies through 'international policy regimes'. As discussed in the previous chapter, scholars observed an increasing harmonisation of policy regimes across countries

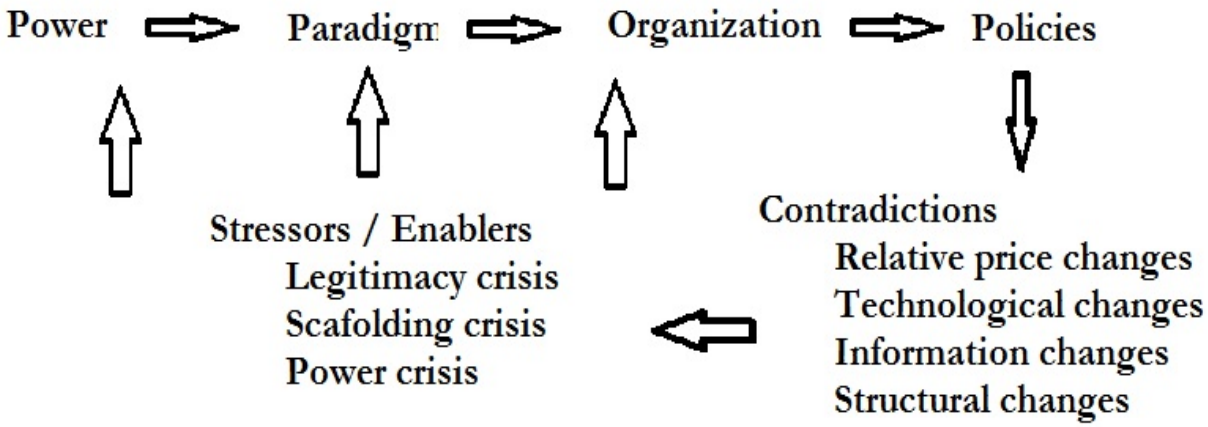
often under the auspices of an international policy regime, like civil aviation, communications, trade, and monetary regimes. Nevertheless, there remain differences between various national policy regimes across countries.

Going beyond broader state-society and international arrangements, policy scholars identified regimes that were specific to issue areas within states. These policy regimes are often termed 'boundary spanning subsystems' and defined as 'governing arrangements that foster integrative actions across elements of multiple subsystems' (May and Jochim 2013). Wilson (2000) defines a policy regime as combination of four dimensions, (a) power arrangement, (b) policy paradigm, (c) organisation, and (d) policy itself (see figure below). Power arrangement means any policy regime needs to be supported by powerful interests. These powerful interests could be advocacy coalitions, businesses, classes, or the state itself given enough resource endowment or least opposition. Secondly, the power arrangements are sustained with an attendant paradigm; the ideological or normative aspects as well as causal beliefs. Policy paradigms are often constructed by intellectuals and academics supported by the powerful actors. Thirdly, power arrangements and their attendant paradigms create their own organisational setup. Organisation of policy regimes can be conceived as institutional settings that are created to formulate and implement policies. Finally, policies mean a policy regime produces a multitude of policies across subsystems in order to achieve the goals of the regime. Policy instruments employed by a particular regime are directly dependent on the regime paradigm and organisational apparatus. According to Wilson, 'every aspect of the policy regime contributes to the long-term stability… this tendency is encouraged by the brokerage role of the state'. However, regimes do not change spontaneously. He suggests five stages of a regime change (stressors/enablers, paradigm shifts, legitimacy crisis, power shifts, organisational and policy change).

These stages influence each of the above four dimensions and may or may not occur in sequence. However, his framework does not answer as to why these five stages would occur in the first place.

I slightly modify Wilson's policy regime change framework in order to show, (a) how do contradictions between domestic policy regimes and the international political economy or regimes give rise to the pressures for change, and (b) how do national policy regimes persist or change. Figure 3.2 depicts the schema for this conceptualisation. Stressors or enablers arise through three ways to change the existing policy regime. Firstly, exogenous technological changes or internationalisation of the economy, change relative prices of final goods and factor inputs. These changes in relative prices are either passed-through by the existing regime or absorbed. In the former case, these may empower new interest groups bringing about power crisis. In the latter case, it may enable the existing regime to assert its legitimacy but eventually organisational crisis would follow due to a strain on the government resources. Secondly, changes in the availability of information tend to delegitimise the existing paradigm. Like in the case of ACF, if availability of new information is enough to empower the competing paradigm, we can expect a new paradigm emerging but until there is a shift in power the competing paradigm may not succeed. International institutions play the most critical role in dissemination and consequently delegitimising the existing paradigm. Finally, structural changes like demography and discovery or depletion of resources also bring about changes in paradigms and power arrangements.

**Figure** Error! No text of specified style in document.**.3: Conceptualising Policy Regimes: Change and Stability**



**Challenges in Conceptualizing Policy Change: aka the Dependent Variable Problem**

Howllet and Cashore (2009) elaborate on the perverse nature of the dependent variable problem in policy sciences. Scholars and students alike talk about policy change without operationalizing it and when they do; they tend to convolute various aspects without fully appreciating the consequences of their research methodology choices. First among such issues is the identification of the issue boundary.

Since 'policy change' is our dependent variable, it is imperative to first define public policy and differentiate between *policy ends* (objectives), *policy means* (instruments), *policy types* (distributive, redistributive, regulation), *policy domains* (issue area), and *policy level* (organizational, local or federal government). It is acknowledged, however, at the outset that the policy process is interconnected and lines between the above various aspects of public policy are rather blurred. Nonetheless, a lot of confusion can be avoided by explicitly stating the aspects of policy being studied.

A cursory survey of the policy change literature reveals that more often than not scholars are writing about policy change (or convergence, diffusion, transfer, etc) without even attempting to define what they mean by "policy" or "change" (Capano and Howlett 2009).

Public Policy is often defined as 'anything a government chooses to do or not to do' (Howlett, Ramesh, and Perl 2009 qouted Dye 1972, p.4). While for a broader understanding of public policy the emphasis on 'government' and 'chooses' is important, the definition assumes the government as a monolithic single dimensional static entity. Neither this definition differentiates means-ends (instruments and objectives) nor does it take into account various levels and dimensions of public policy, which are important for our analytical purpose.

Birkland (2001: 21) compares various definitions of the public policy which generally state that "public policy is the outcome of the struggle in government over who gets what". Jenkins (1978) defines public policy as "a set of interrelated decisions taken up by [government authorities] concerning the selection of goals and the means of achieving them" (Howlett, Ramesh et al. 2009: 6).[11] In other words, public policy is "interrelated decisions" to set "societal goals" and "means" to achieve them. Similarly, public policy is expressed in government (various levels) legislation, or it may be a statement of intent and yet in other cases there may not be any black and white document (Birkland 2001). While all of these definitions emphasize three aspects of public policies – instrumentality, hierarchy, and coherence (Colebatch 2004: 22-37) – none leaves us with a definition through which we can identify policy change as dependent variable.

Baumgartner and Jones (2009) have circumvented this difficulty by using budgetary changes as the sole indicator of policy change. Their theory of punctuated equilibrium explains the dynamics of policy change largely through agenda setting assuming that the shifting government attention would be reflected in government budgets for various programs. Sabatier (2009: 189-220), on the other hand, does not define as to what constitutes a policy change. Since the MS and Garbage can models are mainly about agenda setting and decision-making respectively, therefore, they are understandably less concerned with defining policy change as dependent variable.

However, budgets reflect only partially the priorities of governments. Most of the budgetary analysis would not reveal changes in objectives and means. For the lines between ends and means are often blurred (Lindblom 1959). Moreover, budget allocations are not classified to the last degree of

[11] I have replaced 'a political actor or group of actors' with 'government authorities', because these are the government authorities at any level of government (within organizations, in local or federal elective bodies, and courts)

detail. Similarly, the degree of change in budget allocations may not necessarily reflect change in policy means or ends but a normal expansion or contraction. To illustrate this point, take for example Brikland (2001) considers a change worth analysing only if it is more than 20 per cent. Lastly, not all public policy changes require a corresponding change in budget. Most of the penal code and regulatory legislation would only require an executive order from the respective government authority.[12] This draws our attention to policy types.

Peter Hall's (1989; 1993b) work on policy paradigms criticizes the approach of treating "policy" as a single dependent variable. Hall defines three orders/levels of policy change which could have different paces and sequences. According to Hall, first order changes are the changes in degree/magnitude in $Y_t$ from $Y_{t-1}$, within the given organizational and instrumental limits. Second order changes involve alterations in the instruments of policies without a change in policy objectives. Third order changes occur when there is a change in overall goals of the policy. For example, a country has a "policy" of "protection of the domestic industry" (objective), carried out through high (degree) import tariffs (instrument). A change in level of tariff or a change in the list of products subject to a certain level of tariffs may be classified as a first order change. If a country achieves the same objective by using non-tariff barriers or subsidizing the domestic industry subjected to the international competition then the change in policy is of a second order. However, if the policy is to "abandon" the idea of the protection of the domestic industry (perhaps led by a change in the belief that "protection of domestic industry" has deadweight losses for the society as a whole) then such a change is a third order change which Hall calls a paradigm shift. While Hall associates first and

[12] In earlier rationalist positivist theories of the policy process, scholars generally focused on the changes in legislation. However, in response to criticism of those theories, the more sophisticated models have gradually shifted away from mere legislative analysis.

second order changes largely with endogenous actors and mostly incremental within a "policy subsystem", third order changes, he argues are results of shocks exogenous to the policy subsystem, such as societal learning from failure to achieve desired results and contestation between two groups, however they are rare and most policy change remains incremental at the first two orders. I argue that a fourth level need to be added as societies often change the rules about rule making. This fourth order change is important because of its overall influence on the rest of the policy making process. This framework has been bedrock of most policy change theories employing an evolutionary-revolutionary or more precisely "punctuated equilibrium" framework.

Nevertheless, Hall's paradigmatic framework and studies using this framework (including policy subsystems, ACF and PEF have been criticised on various accounts. Capano (2009) points out the epistemological and theoretical problems that these studies fail to address such as the direction of change (linear/circular/dialectical/harmonic), which is an important aspect to assess reversibility/irreversibility. Also most of these studies, he argues, are weak when it comes to explaining the scope and speed of change. Howlett (2009) augments Hall's framework by introducing an "interplay" between Hall's three orders with motors of change (endogenous or exogenous) and speed of change (incremental or paradigmatic). Furthermore, he makes a case that the theories of policy change need to explicitly determine the direction of change whether it is cumulative in one direction or just harmonic or cyclical. Therefore, the job of policy researcher is to clearly identify and operationalize the various types of policies and with those policies the order of change that need to be observed. The magnitude of change in each order can be classified in nominal terms.

**Energy and Environment Regime**

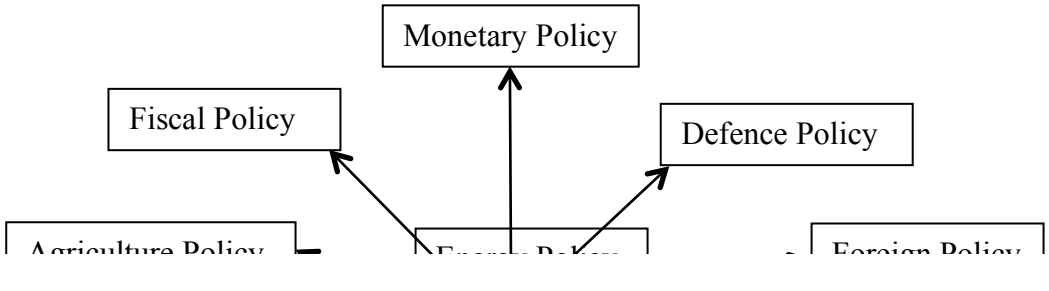
Energy policy regime (including environmental objectives), like any other issue area, is a highly complex web of interrelated policies generally formed around few particular broad objectives. The exact goals of energy policy may differ from country to country in details and may never be available in a coherent and concrete way. Furthermore, a wide array of policy instruments is used to achieve those goals. Further complications arise in drawing boundary around an energy regime because of its linkages with other issue areas. As figure 3.3 depicts, energy policy, first of all, is directly linked with a country's defence posture. Since military hardware requires secure supplies in times of peace and war, ensuring those supplies takes precedence in almost every country over everything else. The technological innovations in military hardware need to take into account available energy resources and certainty of their supplies. Once particular equipment becomes the core of military strategy, it cannot be easily shifted. The military of a country also incorporates in its strategy defence of transport routes and major energy installations as one of the top priorities. Energy policy is also closely linked with a country's foreign policy. Countries need friendly relations with net energy exporters and transit countries. They also seek energy technologies and investments from countries that have such resources. Even when the whole of this activity is being carried out through market mechanisms, the major corporations involve in these transactions closely work with their governments and often need government backings and approvals to do business. Similarly, climate change negotiations and other demand and supply related international negotiations become part of foreign policy where domestic energy related issues are compared with other foreign policy goals and appropriate strategies are devised.

While energy's linkage with defence and foreign policy has a clear 'foreign' dimension, its links with other policies have dubious distinctions. The next in line is the link with monetary policy. Since most energy transactions involve foreign currency, the exchange rate plays an important role in

determining not only the energy import bill but also determining the total demand through a complex web of linkages. Inflation, the primary subject of monetary policy, is also directly linked with energy. Rises in energy product prices tend to have spillovers across the economy making inflation targeting difficult for the central bank. Many banks across the world have begun to account energy inflation separate from normal inflation. Fiscal policy becomes entangled with energy policy for obvious reasons of taxes and subsidies. Both these instruments directly affect production and consumption of energy resources and have the most vocal political dimensions. Since this is one of our central issues, we will revisit links with fiscal policy again.

The less obvious but, nonetheless, close links of energy policy are with trade and investment, industrial, agriculture, and social welfare policies. Countries have special investment policies in the energy sector and often trade in energy is highly regulated. Similarly, a country with an active industrial policy would be concerned to meet energy needs of particular industries. Energy industries themselves tend to develop their own clusters of industries with forward and backward linkages. Even if a country does not have an active industrial policy, government decisions to make shifts in the energy basket, imposing taxes and providing subsidies (or revoking) all have significant adjustment costs for industries. Consequently we would expect a highly politicized struggle in these decisions. The agriculture sector is often at the receiving end of huge subsidies for energies that not only keep farm prices low, ensure food security, mitigate rural poverty and provide large constituencies to politicians. Similarly, countries provide universal or selective energy related subsidies under their social welfare programmes.

**Figure** Error! No text of specified style in document..**4: Energy Policy Linkages**



Secondly, I choose policy outcomes as my dependent variable because researchers need to choose between policy outputs and policy outcomes. Policy outputs are explicit government decisions taken to achieve a certain policy goal. Policy outcomes, on the other hand, are impact of those decisions on the relevant population. Choosing policy output and explaining its determinants has several advantages and drawbacks. The advantage is that its direct link with the related issue at hand can be traced. Take for example, capital account policy change. Many scholars measuring shifts in capital account policy can exactly link a decision (submitted to IMF) with capital account and decisions' direction (liberalise or protectionist). The problem arises when governments take dozens of such decisions in a year. Simple counting is of no help, as one particular decision may have exponential impact and the other may not. Some scholars have tried quantitative studies by differentiating de jure and de facto capital account policies (Simmons and Elkins 2004a). This suggests that the policies on the ground may not be the same as on paper. Governments often make policies to satisfy domestic or foreign constituencies. Such policies either are not implemented or the government in question knows that they don't have capacity to implement such policies. The literature on the politics of implementation also indicates that not all policy outputs seamlessly translate into policy outcomes. The comparative environmental policy literature, like the policy convergence literature, is rife with such problems because most studies choose policy outputs as

their dependent variable (Busch and Jorgens 2005; Heichel, Pape and Sommerer 2005; Knill, Schulze and Tosun 2012; Konisky and Woods 2012).

Furthermore, choosing outputs leads us to another challenge that is analysing policy 'change' becomes an elusive task. In the policy studies literature, the definition, operationalization, and measurement of policy change has been a contested issue. Any endeavour in analysing 'energy policy change' would have to make hard choices. Hall's (1993) widely acknowledged identification of three orders of policy change are not always easy or even possible to distinguish. Long before Hall, Lindblom (1959) and (Simon [1947] 1997) highlighted the problems with conventional ends-means divide in the policy process models. While it is relatively easy to identify a paradigm shift (third order), it's not easy to identify change in first (degree) and second order (instruments). For example diversification of type and sources of energy may be a goal for security and foreign policy and this goal can be coordinated with industrial and energy policy departments. These departments in turn then would use various instruments to achieve this goal. Reducing subsidies is a policy goal as well as means to achieve the overall goal of reducing carbon emissions. Goals come in a nested fashion. Moreover means to achieve a particular goal may be conflicting with the goal of another policy. Finally, from an international cooperation perspective, international negotiations only yield policy outputs, for these agreements to be effective the implementation phase remains. Only when compliance/ implementation has been done we can say cooperation has occurred and not before. Hence policy outcomes are a better candidate.

The key purpose of any energy regime is to provide energy security for a country (Kruyt, van Vuuren *et al.* 2009; Sovacool and Mukherjee 2011; Winzer 2012). Consequently, from an international cooperation perspective the purpose of a global energy regime is to provide global

energy security. Energy security, as noted in the first chapter, is defined as 'uninterrupted availability of energy resources at affordable prices' (IEA). This definition, however, is more explicit on the supply side issues while underplaying the demand side. It also overemphasises oil as compared to other energy resources (Alhajji 2007). Furthermore, since prices are largely determined by demand, in addition to other geopolitical factors, an increase in demand elsewhere in the world may adversely affect prices for all. This is a primary reason behind a renewed and heightened interest in energy security. The rise of China, India, and other emerging economies has resulted in an unprecedented demand growth for energy resources. The rising concerns about the climate change have further shifted the focus towards demand side, carbon emissions, and sustainability issues. The use of fossil fuels – the largest source of energy and also the largest source of carbon emissions – needs to be efficient and where possible countries need to move away from fossil fuels towards renewable, hydro, and nuclear power.

From the above discussion we identify two goals of a comprehensive contemporary energy regime of a country. One concerns the supply side, more important for net importers and countries with no refining capacities, and has a more prominent foreign dimension. Second, concerns the demand side, equally important for net importers as well as exporters. The demand management has three goals, improving energy efficiency, reducing dependence on fossil fuels, and curbing carbon emissions. Similarly, the supply side has two goals, enabling local production and securing energy from abroad. To achieve these goals, governments use all kind of policy instruments mixing authority and market mechanisms such as; (a) direct organisation of *production and distribution*, (b) *redistribution* across resources, sectors and income groups through loans/subsidies/taxes to guide

markets, (c) *regulation* of demand and supply to guide consumers and suppliers, and (d) *information* collection and dissemination (Hood and Margetts 2007).[13]

Countries achieve energy security, when they secure supplies, consume less, emit fewer pollutants, and diversify energy resources and import sources.[14] To secure supplies, they acquire energy assets abroad, sign long-term contracts with energy providers, stock supplies, and safeguard onshore and offshore transport routes. To consume less and reduce carbon emissions, countries promote energy efficient technologies and lifestyles. To diversify energy sources, they reduce overall energy imports, often termed 'energy independence', and encourage domestic exploration of existing and new resources. More importantly, however, they import from diverse sources instead of relying on few high risk suppliers. To diversify energy resources and reduce imports, countries shift away from expensive and/or environmentally harmful fossil fuels to relatively cheaper and/or more environment friendly resources like renewable, hydro, and nuclear energy.[15]

The four dependent variables in the next chapter (subsidies/taxes, energy mix, energy efficiency, carbon emissions) measure the outcomes for two goals; namely (a) reducing consumption and emissions, and (b) diversification of energy resources. The other two goals of securing supplies and supply routes and diversifying import sources do not lend themselves to be measured

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13 For a detailed discussion of policy instruments and designs used by governments see (Howlett, Ramesh and Perl 2009, 114-34) and (Howlett 2010).

14 This applies to both net energy importers as well as exporters. Although demand shocks are less frequent and disruptive than supply shocks in the energy markets, there is no difference between net importers and exporters in terms of sensitivity and vulnerability. Net exporters need to diversify their export destinations as well as to a lesser extent their energy resources. However, what is more important than the latter for net exporters is to diversify their sources of revenues so that their sensitivity to international demand shocks does not amplify their vulnerability.

15 This presents a real dilemma for governments facing trade-offs between cheap but environmentally harmful resources like coal and environment friendly but expensive resources like gas and renewables. Same can be said about large hydro damns and nuclear power, both cheaper and environment friendly resources of energy but with substantial life and livelihood risks for the surrounding population.

quantitatively that befits a large-N comparative statistical model.[16][17] To achieve these goals, besides regulations and government investments in large projects (e.g. hydro and nuclear), the key policy instruments available to governments is subsidies and taxes to guide markets in the desired direction. Similarly, supply side has two goals, enabling local production and securing energy from abroad. In all four goals, governments use a mix of market and authority based instruments to achieve these goals.

Together these dependent variables represent outcomes of energy policy regime of a country irrespective of the fact whether countries have an integrated *de jure* energy policy statement or not. Nonetheless, all major energy consumers and producers have stated policy goals for all dependent variables that I use. Together all these goals can be observed in four policy outcomes:

1. Balanced energy mix
2. Harmonisation of prices with the international market
3. Efficient use of energy resources
4. Reduction in carbon emissions

*Explanatory Variables*

From the discussion in the literature, I identified power, interests, institutions, and ideas, in both domestic and international spheres, as the determinants of policy change. The operationalization of

[16] Few exceptions that attempt to build political risk index for importing countries include (Gupta 2008; Lesbirel 2004; Neff 1997; Wu, Liu and Wei 2009). However, all of these studies suffer sparse availability of country level time series data. The assembling of such a dataset is beyond the scope of this work and also in the end boils down to nothing as many studies have found that there is little countries can and have done in terms of source diversification since 1990 (Cohen, Joutz and Loungani 2011).

[17] However, since reduction in consumption and diversification of resources are also touted as ways to achieve energy independence, a word would be in order. Luring as it may be, energy independence remains a utopia. After many decades of pursuing the elusive quest, the US and all other major energy consumers are advised by experts to abandon 'the chimera of [energy] independence' (Deutch, Schlesinger and Victor 2006; Vivoda 2009). Instead, they argue, countries should focus on developing a foreign policy that ensures energy dependence would not undermine security and economy. That is more reason for international cooperation and coordination.

these concepts tends to generate controversies. These variables may belong to either domestic or international sphere if traditional conceptualisation is followed. They may also belong to either the category of economics or politics. Nevertheless, following my argument against the strict conceptual divides between domestic-foreign and economics-politics, I treat all these explanatory variables equally. The table below (Table 1.1) summarises the main explanatory variables of the empirical model; namely (a) globalisation, (b) international institutions, (c) domestic institutions, (d) relative market power, (e) sensitivity and vulnerability, and (f) the structure of national economy.[18]

Although by definition institutional variables can also be considered as structural, I differentiate in the table below more rigid physical structural attributes like endowments or the relative power in the international system from relatively fluid institutional attributes like the political system and process and the membership in the international institutions. Nevertheless, the stock and flow conceptualisation of change in policy regimes elaborated in the third chapter means that both structural and institutional attributes work as constraints on change in policy regimes and their outcomes. The political process of joining international institutions and changing domestic institutions works on the margins to bring about long term changes in policy outcomes.

**Explanations of Policy Change and Energy Policy**

| | **Structural** | **Institutional** |
|---|---|---|
| **International** | relative capabilities, market power, and globalisation | UNFCCC (Kyoto Protocol), IMF, WB, etc. |

[18] It would have been ideal to include ideational/perception variables here. However, the only cross national time series dataset that asks environmental questions is World Value Survey. Some of the waves of these surveys asked questions that could be relevant in the context of climate policy and international cooperation. Unfortunately, it does not provide enough consistent data points to include them in our regressions.

| | | |
|---|---|---|
| **Domestic** | endowments and economic structure | political institutions / veto players, and administrative capacity |

**Conclusion**