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The Nature of Policy Change and Implementation: A Review of Different Theoretical Approaches

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1. INTRODUCTION

Change is a major part of our lives, whether it is change in industries, technologies or various sectors such as transportation, education, health care or social policies. But we still know little about when and how change occurs. Rahm Emanuel, former White House chief of staff, once said you never want a serious crisis to go to waste. Since 2008 policy-makers in the Organisation for Economic Cooperation and Development (OECD) countries have faced a serious economic crisis – but it remains to be seen whether this was an opportunity taken advantage of or missed completely. Do we need a major shock to the system to initiate change? Or can there be incremental change?

The topic of policy change is a widely researched area in public policy and political science. In fields such as education policy, however, there is often an untheoretical approach on ‘what works’. This paper seeks to fill this gap and provides a review of the main theoretical approaches to policy change. But policy change may not lead to desired results if the process of implementation is omitted from consideration. Thus the main question is: how can we explain policy change and implementation? While there is a growing body of literature on policy change and implementation, this review can only engage with a few selected theories which were deemed the most applicable to education policy.

The review proceeds in the following way: Section 2 presents a selection of the main theories and models of change, their strengths and weaknesses and their applicability to different policy areas. In particular, the following theories are discussed: path dependence, advocacy coalition framework, policy learning, policy diffusion, punctuated equilibrium, institutional change, multi-level governance, policy networks, disruptive innovation as well as the politics of change and reform. Next, several key theories (such as top-down and bottom up approaches and rational choice including game theory) and lessons of policy implementation are presented in Section 3. Finally, Section 4 finishes with some conclusions and ideas for further research and discussion. The review provides examples from country experiences to illustrate key points but it remains mostly theoretical and would benefit from additional empirical research.

2. THEORIES OF POLICY CHANGE

Definitions

First of all, it is important to distinguish ‘policy change’ from ‘policy reform’ as the terms are often used interchangeably in the literature. Policy change refers to incremental shifts in existing structures, or new and innovative policies (Bennett and Howlett 1992). Reform usually refers to a major policy change. To take the example of health care, reform is ‘the process of improving the performance of existing systems and of assuring their efficient and equitable response to future changes’ (Berman 1995: 27). Nonetheless, Fullan (2000) rightly notes that reform as an intentional intervention through policy may or may not generate change.

2.1 Path dependence

When analysing the question of policy change (or lack thereof), one can draw on the literature on path dependence (Pierson 2000). This model argues that it is generally difficult to change policies because institutions are sticky, and actors protect the existing model (even if it is suboptimal) (Greener 2002). Path dependence means that ‘once a country or region has started down a track, the costs of reversal are very high’ (Levi 1997: 27). As Pierson (2000) notes, public policies and formal institutions are usually designed to be difficult to change so past decisions encourage policy continuity. Applying path dependence to immigration policy, Hansen (2002: 271) argues that ‘path dependence is established only when it can be shown that policy change was considered and rejected for reasons that cannot be explained without reference to the structure of costs and incentives created by the original policy choice’. In addition, to introduce a major change, policy-makers have to wait for a critical juncture (Capoccia and Kelemen 2007) or a window of exceptional opportunity called conjuncture (Wilsford 1994).

Taking the example of health care reform in the United Kingdom, Wilsford (1994) and Greener (2002) examine conditions that have enabled reform. Wilsford (1994), drawing on the conjuncture of events, explains health care reforms through a combination of the Prime Minister’s (at that time Margaret Thatcher) increased political authority, the higher heterogeneity of the medical profession, the existence of earlier managerial reforms, and the lack of threat to both patients and the general public (Greener 2002: 170).

Strengths and weaknesses

The main strength of the theory is that it is able to explain why policy continuity is more likely than policy change. Once a country has set on a certain policy path, it remains difficult to change this path because actors and policies have become institutionalized which necessitates great efforts and costs by actors who desire change. However, among the theory’s weaknesses is that it is difficult to show the costs and incentives created by the original policy choice and how it affects decisions about future policy choices. In addition, depicting critical junctures (or conjunctures) methodologically is a challenging task. Capoccia and Kelemen (2007: 348) define critical junctures as ‘relatively short periods of time during which there is a substantially heightened probability that agents’ choices will affect the outcome of interest’. This means that actors face a broader range of feasible options during a brief period of time, and their choices will likely have a significant impact on subsequent outcomes. The role of political actors and

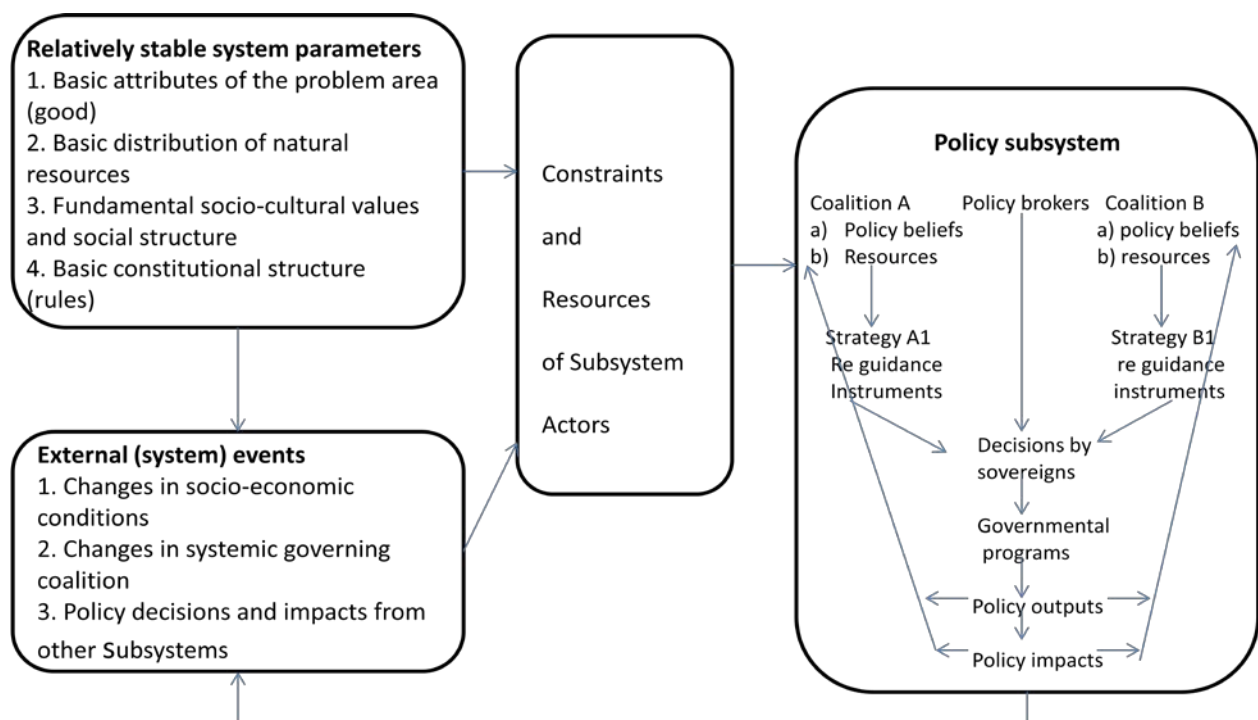
their decisions during critical junctures is thus important (Capoccia and Kelemen 2007). In the aforementioned health care example, Greener (2002: 177) notes that Wilsford’s use of conjuncture is more useful in explaining the timing of reform than analysing conditions of existence necessary for reform. As a result, considerable challenges remain to identify specific conditions facilitating reform and to pinpoint windows of opportunity.

2.2 Advocacy coalition framework

A different theory of change, based on Sabatier (1988) and Sabatier and Jenkins-Smith (1991), is the advocacy coalition framework (ACF). It specifies that there are sets of core ideas about causation and value in public policy; these coalitions form because certain interests are linked to them. It is possible to map these networks of actors within a policy sector. ‘Change comes from the ability of these ideas to adapt, ranging around a whole series of operational questions and what works in any one time or place’ (John 2003: 490). Policy change occurs through interactions between wide external changes or shocks to the political system and the success of the ideas in the coalitions, which may cause actors in the advocacy coalition to shift coalitions.

The model is composed of several parts. The relatively stable system parameters (these can be within and outside the sub-system) influence the external system events. Both of these impact the constraints and resources of sub-system actors. The policy sub-system is composed of different advocacy coalitions with their own beliefs and resources, and their own strategies. Policy brokers are concerned with keeping the level of political conflict within acceptable limits and reaching some reasonable solution to the problem (Sabatier 1988: 141). The decisions by policy-makers influence governmental programmes and thus affect policy outputs as well as policy impacts. Feedback effects are strongly present in the policy sub-system. The model can be depicted in the following way:

Figure 1: General model of policy change



Source: Sabatier 1988: 132.

Advocacy coalitions within policy sub-systems - these are actors from a variety of public and private organisations who are actively concerned with a policy problem or issue - are a critical vehicle for understanding the role of policy analysis in policy-oriented learning and the effect of such learning on changes in governmental programmes (Sabatier 1988: 129). These people from a variety of positions (elected and agency officials, interest group leaders, researchers) shape the particular belief system – a set of basic values, causal assumptions and problem perceptions - and exemplify a significant degree of coordinated activity over time (Sabatier 1988: 139). ACF uses belief systems rather than interests because beliefs are more inclusive and verifiable (Sabatier 1988: 142); beliefs can be indicated through questionnaires and content analysis. In each sub-system there will be about two to four important coalitions but twenty to thirty organisations active at one time.

To take the example of higher education, Gornitzka, Kogan and Amaral (2005) argue that the ACF can be applied to this policy as it is affected by very stable factors such as overall income and educational levels in a society, as well as cultural norms about elitist and egalitarian strategies governing access to higher education. But more dynamic factors are also present, including socio-economic conditions and system-wide governing coalitions, which provide some of the principal sources of policy change. Then advocacy coalitions involving politicians, interest group leaders and researchers emerge around higher education reform.

Strengths and weaknesses

The contribution of this model is that the concept of policy sub-system is used as a basis for developing a theory of policy change by relating it to the larger political system and viewing advocacy coalitions (rather than formal organisations or free floating actors) as key units of internal structure (Sabatier 1988: 158). It brings together the literatures on top-down and bottom-up approaches (more on this later) in order to understand policy change over a longer period of time, and draws on other literatures from social psychology and policy sub-systems (Sabatier 2005). In addition, the model does not presuppose that all actors try to maximise their self-interest (some collective welfare is thus possible), but assumes that actors have only limited capacity to process information. The framework expects actors to perceive the world through a set of beliefs; hence the concept of ideas and their origins plays an important role (Sabatier 2005). The ACF has been designed especially for policy areas characterised by high goal conflict, high technical uncertainty about the nature and causes of the problem, and a large number of actors from multiple levels of government (Hoppe and Peterse 1993). The framework has been applied to a considerable amount of cases, in particular energy, environmental or social policy disputes, but also education.

But the ACF also has a number of challenges. In particular, it is difficult to determine the beliefs of the main actors, map the advocacy coalitions and establish all the external and internal factors which can affect the policy sub-system. In the aforementioned example, Sabatier (2005) proposes that the ACF's application to higher education has been limited because most reforms do not involve high goal conflict and competing belief systems. In addition, if researchers and agency officials in a policy sub-system were members of advocacy coalitions and actively promoted reform, this would go against their neutral position in the civil service (Sabatier 2005).

2.3 Policy learning

Another theory of change - policy learning - has a strong connection to other theories, such as the advocacy coalition framework. Policy learning refers to 'relatively enduring alterations of thought or behavioural intentions which result from experience and which are concerned with the attainment (or revision) of policy objectives' (Hecl 1974: 306). Policy learning is an important aspect of policy change and can alter secondary aspects of a coalition's belief system; changes in the main aspects of a policy

usually result from shifts in external factors such as macro-economic conditions or the rise of a new systemic governing coalition (Sabatier 1988: 134).

Nonetheless, policy learning is a heterogeneous category. As a result, the literature discusses different types of learning, such as social learning (Hall 1993), political learning (Hecló 1973), policy-oriented learning (Sabatier and Jenkins-Smith 1993), lesson drawing (Rose 1991), instrumental learning (May 1992) and causal and diagnostic learning (Levy 1994) (for more information, see Meseguer 2005). However, questions about who learns, what is learned and what effects on resulting policies emerge as a result of learning differ considerably across these types of learning (Bennett and Howlett 1992: 278). For instance, in policy-oriented learning, the agent of learning is the policy network, while learning is less about organisations than about ideas (i.e. members' beliefs in the advocacy coalitions). In addition, learning is considered a process by which networks learn from past experiences, and thus is mostly about techniques and processes in order to improve policy (Bennett and Howlett 1992: 286).

As mentioned before, the innovative aspect of the advocacy coalition framework is to focus on policy-oriented learning: actors' desires to realise core values in a world of limited resources provides strong incentives to learn more about the saliency of problems, the factors affecting them and consequences for policy alternatives (Sabatier 1988: 158). But understanding the process of policy change and the role of policy-oriented learning requires a time perspective of a decade or more.

For instance, Greener (2002) and Klein (1995) analyse the role of social learning in health care reform in the United Kingdom. Drawing on Hall's (1993: 78) work, social learning explores how policy-makers try to 'adjust goals or techniques of policy in response to past experience or new information. Learning is indicated when policy changes as the result of such a process'. Internal reforms began after the 1987 general election, when the government was criticised by the opposition and the media for failures in the National Health Service (NHS) funding, which prompted reforms of the NHS. The government also learned from its own market-based reforms in education, which acted as a testing ground of ideas later incorporated into reforms in health care (Greener 2002). Introducing the internal market was a new policy instrument which met the same policy goals that were initiated with the introduction of the NHS in 1948. Therefore, policy-makers learned from previous experiences and included new information obtained when considering reforms.

Strengths and weaknesses

Policy learning is an important concept in the theory of change literature – it is part of several theories and highlights that countries, regions and systems can change policies by learning from others and hence shifting their beliefs. However, it has been difficult to operationalise and measure the concept of learning in general. Besides the previously mentioned heterogeneity of the concept, Bennett and Howlett (1992) also point out that policy learning includes three complex processes: learning about organisations, learning about programmes, and learning about policies. Thus they propose to differentiate between the three concepts of government learning, lesson-drawing and social learning (Bennett and Howlett 1992: 289). Nonetheless, adding more categories does not necessarily lead to a better understanding of the concept.

2.4 Policy diffusion

Similar to policy learning, policy diffusion is a process in which policy innovations spread from one government to another (Shipan and Volden 2008). In other words, the 'knowledge about policies, administrative arrangements, institutions in one time and/or place is used in the development of policies, administrative arrangements and institutions in another time and/or place' (Dolowitz and Marsh 1996: 344).

According to Shipan and Volden (2008), there are four mechanisms of policy diffusion: learning from earlier adopters, economic competition, imitation, and coercion. *Learning* is ‘the process that leads states [this could also be systems or schools] to be called laboratories of democracy’ (Shipan and Volden 2008: 841, Brandeis 1932). Policy-makers can learn from experiences of other governments: if an adopted policy elsewhere is deemed successful, then another country/system might also implement it. The second mechanism, *economic competition*, can lead to the diffusion of policies with economic spillovers across jurisdictions. Policy-makers consider the economic effects of adoption (or lack thereof). For example, if there are positive spillovers, then governments are more likely to adopt the policy of others (Shipan and Volden 2008: 842). This is less likely in the case of negative spillovers.

Another mechanism is *imitation* (sometimes referred to as ‘emulation’) which means ‘copying the actions of another in order to look like the other’ (Shipan and Volden 2008: 842). The focus lies on the action of the other government. Learning focuses on action (the policy being adopted by another government), while imitation emphasises the actor (the other government that is adopting the policy) (Shipan and Volden 2008). The last mechanism, *coercion*, is different from the other three which are voluntary. For instance, countries can coerce one another through trade practices or economic sanctions, either directly or through international organisations (Shipan and Volden 2008).

Shipan and Volden (2008) further note that a temporal effect takes place, in which imitation is a more short-lived diffusion process than the others. In contrast, learning and economic competition should have longer-term effects. Different conditions of each mechanism across countries, systems and cities exist. Some factors can condition policy diffusion, such as domestic politics (including political constraints and ideological preferences of politicians) (Meseguer and Gilardi 2009).

Drawing on the example of health care reform in Latin America, Weyland (2007) examines the diffusion of the Chilean model of pension privatisation and the moderate spread of health reforms in Latin America in the 1990s. The author further proposes that the diffusion of innovations is characterised by three aspects:

1. *An S-shape in time*: a pioneer takes the lead and many other countries jump rapidly on board until this trend eventually decreases (see also Gray 1973). This is similar to Hannon’s (2011) depiction of the S-curve for school improvement and innovation, and it can mean that policy-makers overemphasise initial success.
2. *Geographical clustering*: diffusion is more likely to happen when countries are clustered because they need a close and successful example.
3. *Commonality amid diversity*, which means that the same policy framework is adopted in varied national settings.

Weyland (2007) argues that policy-makers were not rational because they did not carefully evaluate the evidence after the Chilean pension privatisation and hence drew wrong conclusions. Policy-makers also relied on experience that was close and relevant for them, instead of examining world-wide evidence on privatisation. Lastly, policy-makers copied the Chilean model (with some minor adjustments), rather than adopting a model which would have been a good fit to their national economies (Meseguer and Gilardi 2009: 535).

Strengths and weaknesses

While the idea of policy diffusion is not new, it has been used again more recently due to some of its strengths. Policy diffusion differentiates between four mechanisms (including learning which was mentioned in an earlier section) and thus allows analysing change through a broader spectrum. However, it

can be difficult to draw sharp distinctions between different concepts and models, such as the aforementioned policy learning and policy diffusion. (There is also policy transfer which is not discussed further.) Other issues remain unclear, such as why some policies diffuse faster than others or why regional patterns of policy diffusion vary considerably (Meseguer and Gilardi 2009).

2.5 Punctuated equilibrium

Another model of change is the punctuated equilibrium model (Baumgartner and Jones 1991) which proposes that once an idea gets attention it will expand rapidly and become unstoppable. Many ideas are competing for attention but then something happens at some point. The process comes about from external events that disrupt the political system, particularly the ones that are big enough to disrupt or punctuate its equilibrium. One first has to show that punctuations occur and second that they occur because of political changes.

Punctuated equilibrium is the process of interaction of beliefs and values concerning particular policy (termed policy images) with the existing set of political institutions (venues of policy action). It explains both periods of extreme stability and short periods of rapid change. Policy venues are the 'institutional locations where authoritative decisions are made concerning a given issue', and different constituencies can be mobilised (Baumgartner and Jones 1991). Actors seek new venues when they need to adapt to institutional constraints in a changing environment – they resort to framing processes or policy images. Each venue carries decisional bias because both participants and decision-making routines differ. As the venue changes, the image may change as well; as the image of policy changes, venue change becomes more likely (Baumgartner and Jones 1991: 1047).

Using the example of nuclear policy, Baumgartner and Jones (1991) demonstrate how actors purposefully changed policy images by discussing it in a positive or negative light in relation to the selection of an appropriate venue. More precisely, opponents of nuclear power took advantage of divisions within the expert community, images in the popular media changed, opponents were able to obtain the attention of regulators, Congress, the courts and state regulators, and then the market responded (Baumgartner and Jones 1991: 1067). Policy-makers strategically manipulated the images and venues of local and national governments.

Political actors, capable of strategic action, employ a dual strategy: they try to control the image of the policy problem through the use of rhetoric, symbols and policy analysis. They also seek to change the participants who are involved in the issue by seeking out the most favourable venue for consideration of their issues. Both the institutional structures and the individual strategies of policy entrepreneurs play important roles (Baumgartner and Jones 1991: 1045). Policy entrepreneurs try to identify the most receptive alternative venues for the policy (Baumgartner and Jones 1991: 1052).

In this regard, Greener (2002: 163) distinguishes three orders of change. First-order change occurs only in settings of policy instruments, while second-order refers to the situation when instruments used to achieve policy goals are changed. Lastly, third-order change (constituting a policy paradigm shift) occurs when policy-makers reject their framework of ideas for interpreting the world and adopt another one. The level of change impacts the means and the policy images used.

Strengths and weaknesses

The idea of policy images and venues of action is helpful, and the theory of punctuated equilibrium has been used widely in the literature. How policies and proposals are framed and how actors strategically select venues can have a great impact on the success of change. Policy-makers therefore have to think carefully about what policy image they want to create and which venues of action they select in

order to bring other stakeholders (including the public) onboard. But the methodology is less clear in this model. For example, it is difficult to define frames in the first place, and then analyse how they change over time. In addition, determining when/how punctuations occur is less evident. In this regard, the punctuated equilibrium model suffers from similar challenges as some of the other models (such as the path dependence).

2.6 Institutional change

Streeck and Thelen (2005) have developed a useful typology for institutional change. Institutions are ‘formalised rules that may be enforced by calling upon a third party’ (Streeck and Thelen 2005: 9). While institutional change is not necessarily the same as policy change, there are some instances when the two overlap. Theories of institutional change can be theories of policy change, when ‘policies stipulate rules that assign normatively backed rights and responsibilities to actors and provide for their public, that is third party enforcement’ (Streeck and Thelen 2005: 12). Policies are institutions in the sense that ‘they constitute rules for actors other than for policy-makers themselves, rules that can and need to be implemented and that are legitimate in that they will if necessary be enforced by agents acting on behalf of society as a whole’ (Streeck and Thelen 2005: 12). To give an example, early retirement policies create expectations among workers and employers with respect to when people become entitled to receive a pension from the state, and they can consider their expectations to be legitimate and go to courts to have them defended (Streeck and Thelen 2005: 12).

First of all, Streeck and Thelen (2005) present a typology of the results and processes of change, which indicate either an incremental or abrupt process of change. The result of change is divided into continuity or discontinuity. For instance, with incremental change and continuity, we would expect reproduction by adaptation. But when change is abrupt and there is discontinuity, we would expect breakdown and replacement of the institutions. Table 1 presents all the options.

Table 1: Typology of results and processes

		Result of change	
		Continuity	Discontinuity
Process of change	Incremental	Reproduction by adaptation	Gradual transformation
	Abrupt	Survival and return	Breakdown and replacement

Source: Streeck and Thelen 2005: 9.

Streeck and Thelen (2005) then introduce five different types of change: displacement, layering, drift, conversion, and exhaustion. In *displacement*, the institutional configurations are vulnerable to change as traditional arrangements are discredited or pushed to the side in favour of new institutions and associated behavioural logics. Such change often occurs through rediscovery or activation and the cultivation of alternative institutional forms (Streeck and Thelen 2005: 20).

The second type - *layering* - involves active sponsorship of amendments, additions, or revisions to existing set of institutions. Change takes place through differential growth: the introduction of new elements sets in motion dynamics through which over time they actively crowd out or supplant the old

system whose domain decreases relative to before (Streeck and Thelen 2005: 24). In *drift*, institutions are subject to erosion or atrophy if they do not adapt to changing political and economic environment. It can be caused by gaps in rules. Change can be promoted by political cultivation (Streeck and Thelen 2005: 24).

Institutions are redirected to new goals, functions or purposes in *conversion*. This might happen as a result of new environmental challenges or through changes in power relations, or it may occur through political contestation over what functions and purposes an existing institution should serve. There are often unintended consequences, and change involves compromise as actors exploit ambiguities. Time matters for this type of change (Streeck and Thelen 2005: 26).

Lastly, *exhaustion* is a process which leads to breakdown, thus it differs from the other four processes of change (Streeck and Thelen 2005). However, the collapse is gradual and not abrupt. Exhaustion can happen when the normal working of an institution undermines its external preconditions and there is an erosion of resources (Streeck and Thelen 2005: 31).

Strengths and weaknesses

The theory by Streeck and Thelen has been very influential in the literature and has been applied across a wide range of institutional and policy changes. It is highly sophisticated as it distinguishes different types of change, and impacts on the system. Nonetheless, for the purpose of this review, the theory of institutional change applies mainly to institutions, even though policies can be institutions in some instances. But in practical terms, it is not always clear when this is the case.

2.7 Multi-level governance

So far it has been evident that change is a multi-actor and multi-dimensional process. Most of the literature has thus pointed to the need to consider policy change processes from a multi-level perspective involving a variety of actors. Policy-making has increasingly become complex where actors move between different levels of action and authority is dispersed across multiple tiers (i.e. national, regional or local) (Hooghe and Marks 2001). Government reforms can be seen as integral parts of ongoing processes of change where policies of governments can be a response to change as well as a source of change (Gornitzka, Kogan and Amaral 2005: 9).

Hooghe and Marks (2003) point out that multi-level governance has different meanings, though the term was initially used in European Union studies to describe a 'system of continuous negotiation among nested governments at several territorial tiers – supranational, national, regional and local' (Marks 1993: 392). Multi-level governance provides a useful transition from policy change to policy implementation as top-down versus bottom-up approaches have been used for both parts of the process (more on this in the implementation section). Top-down processes mean that policy decisions from the national level are passed on to lower levels, whereas bottom-up processes refer to the involvement of the local level in policy-making and subsequent impact on higher levels.

But the term of multi-level governance actually encompasses different forms; more specifically Type I and Type II (see Hooghe and Marks 2003 for further details). Type I multi-level governance is composed of general-purpose jurisdictions which are bundled in a small number of packages. It has also *non-intersecting memberships* (thus they are nested within each other), *jurisdictions at a limited number of levels* (be it international, national, regional, meso or local) and *system-wide durable architecture* (due to systemic institutional choice) (Hooghe and Marks 2003). For instance, these jurisdictions usually adopt the *trias politicas* structure of an elected legislature, an executive and a court system. Thus the United States federal government institutions are more similar to a French town than Type II arrangements. Jurisdictional

reform is usually costly and unusual, and change mostly consists of reallocating policy functions across existing levels of governance. Institutions for governance are sticky (Hooghe and Marks 2003).

In contrast, Type II governance is composed of task-specific jurisdictions. It has intersecting memberships, there is no limit to the number of jurisdictional levels, and a flexible design exists which means that jurisdictions can come and go as demand for governance changes (Hooghe and Marks 2003). It is quite widespread at the local level, for instance in the communes in Switzerland or special districts (including schools) in the United States.

The idea of multi-level governance is also evident in Fullan's (2007) account of educational change, in which he proposes a tri-level reform at the (1) school and community level, (2) district level and (3) state or national level. That there should be a two-way interaction and mutual influence within actors at all three levels highlights the complexity of change on a large scale (Fullan 2007).

Strengths and weaknesses

The main benefit of multi-level governance is its scale flexibility, while its main disadvantage lies in the transaction costs of coordinating multiple jurisdictions (Hooghe and Marks 2003). Coordination is necessary due to potential spillover effects of jurisdictions. Since multi-level governance covers a large group of actors, it can also suffer from free riding. To counteract this problem, one solution is to limit the number of autonomous actors, another one is to reduce interaction among actors (Hooghe and Marks 2003). Both Type I and Type II have specific benefits and costs, and they can be complementary. In this theory, it remains difficult to determine all the actors and jurisdictions involved in multi-level governance and which type of governance they refer to. In addition, it focuses mainly on formal actors and institutions and can thus leave more informal actors and flexible arrangements aside. That is why some scholars have considered a broader analysis of multi-level governance by analysing how decision-making is diffused to informal and overlapping policy networks (see, for instance, Ansell 2000, Kohler-Koch and Eising 1999). For this review, the network approach is particularly relevant, and is discussed in the next section.

2.8 Policy networks

A policy network is 'a cluster or complex of organisations connected to each other by resource dependencies and distinguished from other clusters or complexes by breaks in the structure of resource dependencies' (Rhodes and Marsh 1992: 182). This definition is then further elaborated into different types of networks, ranging from highly to less highly integrated networks, differentiated by their membership. According to John (2003: 486), the 'structure of coalitions across complex policy sectors determines policy outputs (long-term relationships between interest groups and executive agencies) evolved into more complex networks between public and private organisations as the number of institutions and participants grew'.

For example, Phillips (1991) argues that social movements can be seen as networks providing structures within which organizations negotiate meaning by constructing collective identities. She maps the relationships between 33 national Canadian women's organizations. These diverse groups form an expansive but loosely coupled network that is bound by a collective identity of feminism. The author claims that the network position is a significant predictor of whether social movement organisations are perceived to be effective.

Strengths and weaknesses

The policy network theory is useful in highlighting complex interactions between stakeholders (both in the public and private sector) which can span a large number of actors. The networks can be more fluid but also develop over time into an institutionalised structure. But the theory suffers from several weaknesses. For example, Dowding (1995) provides a critical view of the network theory and asks what is not a policy network? In fact, he describes networks as metaphors (as they developed through terms such as ‘iron triangle’ in the United States), rather than models. Thatcher argues that the categories are ‘arbitrarily chosen or do not form part of a continuum and hence are neither comparable nor exhaustive’, and also generally ‘poorly defined’ (Thatcher 1998: 397). In addition, these classifications cannot be used to help in the operationalisation of research questions, as the breadth of factors and linkages arising from poorly defined categories makes them ‘unusable’ (Thatcher 1998: 397).

Other literature has also offered critical views of both theoretical and methodological approaches to network theory. One major drawback is that network ideas have not been good at explaining how networks arise in the first place, and how they change. Most accounts of the transformation of networks rely on exogenous shocks such as changing government policy, economic ruptures or natural disasters (Dowding 1995, Thatcher 1998). For instance, a ‘true’ theory should be generalisable to all objects and explain variance as well as similarities between these objects (Dowding 1995). But the policy networks model is not able to do that since it instead provides a map of the policy process than makes predictions about how different actors are expected ‘to behave under different institutional arrangements’ (Dowding 1995: 141).

To add to this, the study of networks can be seen as one of classification, rather than theory-building. Dowding (1995) explains this shortcoming with reference to the fallacy of developing theories that are based on the properties of actors rather than the network itself. As a result, they make up new types for every possible combination of actor and network configuration, rather than explain how different actors would behave in the same structural context.

There are also methodological problems in policy network research. Dowding (1995) uses the example already mentioned of Phillips’ research into Canadian women’s associations which relies on interviews with actors to judge network members’ influence. Those actors at the core of the networks were perceived to be the most important ones (Phillips 1991). However, this does not show their actual power because actors at the core will always have the most contact to those actors that were interviewed. Interviewees often do not understand or know of interest groups, unions or parties that influence those intermediary organisations with which they are in direct contact. They are not objective judges of the actual effect of any group on the formation of policies.

Another drawback is that only visible decisions are taken into account, while non-decision and non-participation are ignored (Thatcher 1998). This might overlook potential anticipated reactions. Finally, Thatcher (1998) claims that most theories explain the shape of networks by focusing on the effects that those shapes have on policy-making, which can also lead to problems. While the study of networks is potentially useful, a more formal analysis of networks and better data need to be developed in order to reap these benefits.

2.9 Disruptive innovation

Different from the other theories of change presented in this review, disruptive innovation is a model of social change taken from management. Nevertheless, it is an interesting concept especially for more radical change and has been applied to a variety of policy areas (see Christensen, Aaron and Clark 2003, Christensen et al. 2006). Disruptive innovation needs to be differentiated from *sustaining innovation*,

which ‘introduces improved performance to existing services, systems or products along an established trajectory (OECD 2009: 69, see also Christensen and Laergreid 2001). In contrast, disruptive innovations ‘do not meet existing customers’ needs as well as currently available products or services’ (Christensen et al. 2006: 3). These might be simpler and less expensive products, and appeal to new or less-demanding customers (Christensen et al. 2006). Disruptive innovation is a two-stage process: first, an innovator makes a product more affordable and simpler to use than an existing one, while in the second stage, additional technological change in the industry makes it simple and inexpensive to build and upgrade the products (Christensen, Horn and Johnson 2008: 122-123). As the authors remark, disruptive innovations have had a significant impact on industrial structures and have often led to social change in the process, even if it was unintended.

Online learning, corporate training programmes or community colleges are all examples of disruptive innovation in the education sector (Christensen, Aaron and Clark 2003). There are many possibilities to apply this model also at the secondary level, where existing structures are disrupted and new innovations replace old services and products (Christensen, Horn and Johnson 2008). For instance, online language or advanced placement courses offer an affordable option to people who otherwise would not have had any or only limited access to some types of course content or degree opportunities (Christensen, Aaron and Clark 2003). As a more concrete example, Apex Learning and the non-profit Virtual High School and Florida Virtual School have provided specialised (advanced placement) classes to thousands of students through online learning curricula, which offer students courses at a small fraction compared to live courses (Christensen, Aaron and Clark 2003). But student attrition is higher in online courses than in live ones, so there are some disadvantages.

Strengths and weaknesses

Disruptive innovation has been a powerful explanation for policy change across a wide range of areas. ‘Disruption is how industries achieve the seemingly incompatible goals of increased access, higher quality and lower prices’ (Christensen, Aaron and Clark 2003: 41). At times of challenging education reforms and decreasing state budgets, disruptive innovation could be a useful new framework for improving primary and secondary schools – and thus could be drawn upon more widely by officials in the future (Christensen, Aaron and Clark 2003: 41). However, it remains less clear which conditions predict disruptive innovations, and why they occur in some sectors and countries, but not in others. Therefore, more work needs to be done on cross-national and cross-sectional variation.

2.10 Politics of change and reform

The presented theories have highlighted so far that ‘introducing, sustaining and assessing educational change is a political process’ because it addresses issues of conflict and representation among multiple actors (Hargreaves 1998: 291). In similar vein, Mehta (2013) argues that remaking the schooling system in the United States will not be easy as it will require political will and significant changes to long-standing institutions. Thus the politics of policy change and reform play a substantial part in the whole process. Politics affects origins, formulation and implementation of public policy especially when significant changes are involved (Reich 1995:48). As Reich (1995: 48) emphasises, broad reforms are possible when there is sufficient political will and when changes to a sector are designed and implemented by capable planners and managers. Reich (1995: 49) further notes that reform is political for the following reasons:

1. It represents a selection of values that express a particular view of society.
2. Reform has distinct distributional consequences in the allocation of benefits and costs.

3. Reform promotes competition among groups that seek to influence consequences.
4. Enactment or non-enactment of reform is often associated with regular political events or political crises.
5. Reform can have significant consequences for a regime's political stability.

A strong and narrow political coalition improves the capacity of political leaders to resist the pressures of concentrated economic costs. Reich (1995:47) argues that for reform to succeed, policy-makers need effective methods to analyse relevant political conditions and shape key political factors in favour of policy reform. According to him, different models for policy reform exist, and they represent three clusters of political conditions under which policy reform can occur. It should be mentioned that the three models are not mutually exclusive.

- *Political will model*: decisions by political leaders are necessary and sufficient for a major policy change. This model emphasises a technocratic approach with a rational actor model of decision-making, but it tends to ignore political constraints to policy reform. This model is more likely under political circumstances such as 'a strong mandate, strong state, narrow coalition and strong leadership' (Reich 1995: 58).
- *Political factions model*: politicians seek to serve the desires of different groups (interest groups, political parties). Rational analysis is the main means to promote and serve organisational interests. Reform occurs when it corresponds to a preferred distribution of benefits to specific constituent groups of government leaders.
- *Political survival model*: government officials seek to protect individual interests (as power-holders) in order to maintain or expand their existing control over resources. It assumes that politicians operate in a logic of opportunistic politics, in which decision-makers manipulate policies to achieve desired means. Reform occurs when it serves the personal political survival or the personal interests of political leaders (Reich 1995: 58).

As mentioned before, for reform to happen, several conditions have to be present (Wilford 1995). In health care reform in the United Kingdom, for instance, the state could ignore doctors' opposition to reform because of 'increased militancy and heterogeneity and the corresponding decline in the legitimacy of medical representation' (Greener 2002: 174). In addition, an attack from the media, public and opposition on the government's record of managing health care can be important for the reforms to be initiated.

In another health care example, Immergut (1992) analyses health policy reform across four countries and notes that the degree of public control over health insurance varied considerably because of different institutional structures in each political system. These differences fostered different coalitions of interests, ranging from doctors, patients, labour unions and other actors (Wilsford 1994). Actors and institutions hence play an important role in policy reform.

But policy reform can have potentially negative consequences due to the classic collective action problem (i.e. multiple individuals would benefit from an action, but costs make it unlikely that any individual can or will solve it alone). Concentrated effects on more powerful societal groups tend to have more influence on government decisions than diffuse effects on less powerful groups (Reich 1995: 52). These problems can be overcome by political alliances and compensatory benefits. Bargains reached with external actors have to be politically acceptable and sustainable in the domestic political game (see Putnam 1988). As a result, passing a new policy requires a well-organised and highly mobilised interest group.

Political timing provides opportunities for policy entrepreneurs to introduce ideas into the public debate and political management of group competition allows leaders to control the political effects of distributional consequences and protect regime's stability (Reich 1995: 47). The opportunity to achieve policy reform is often affected by external events (Reich 1995: 54). For instance, change is more possible at the beginning of a regime, and major concurrent events can open up political windows for reform (Reich 1995: 54). Radical changes require careful consideration of timing, while minor incremental changes are not as dependent on timing (Reich 1995: 55).

Reich (1995: 75) has proposed an interesting policy mapping model, which is meant to improve the political feasibility of policy reform. It assesses the following six dimensions which should be taken into consideration for a successful policy change.

1. The consequences of policy reform efforts
2. The positions of support and opposition taken by key players
3. The analysis of stakeholders' objectives
4. The relationship of players in the policy network map
5. The transitions underway that create opportunities
6. The construction of strategies for change

Strengths and weaknesses

The politics of change and reform is not a theory *per se*, but it highlights that political will, favourable timing and suitable institutions are needed in order to push through change. The role of policy entrepreneurs is key in seeking out windows of opportunity (this is also the case in the punctuated equilibrium model). Nonetheless, some scholars have developed specific models in this area, and Reich's (1995) three models of policy reform are especially helpful since they represent three clusters of political conditions under which reform can occur. In addition, Reich's (1995) policy mapping model is also very interesting as it is supposed to improve the political feasibility of policy reform. However, it is quite an elaborate process and highlights how difficult it is to determine all six dimensions in the first place.

2.11 Lessons from policy change research

Lessons from the policy change literature suggest that theories have become more sophisticated over the years, and have built upon earlier ones. Each theory has its own strengths and weaknesses, and their applicability differs across policy areas as well as the extent of change. This review has presented ten theories, which is a small selection considering the number of theories of change proposed in the literature. Sometimes, scholars are creating new theories or renaming old ones, instead of building upon and ameliorating existing theories.

Methodologically, it is often difficult to determine the points in time when change occurs, but this is a key question for some of the theories. It is also complicated to establish the preferences of actors and their beliefs, as well as to determine the extent of policy learning or the make-up of coalitions and networks. Theories should be able to generalise observations and have predictive power. But most of the presented theories are more able to explain change in the past rather than predict change in the future based on certain conditions. But this has not stopped researchers from trying to come with more general theories (such as the advocacy coalition framework) though there are usually some conditions and constraints specified. It might not be possible or even desirable to create theories which are applicable across all policy

areas since different conditions are usually present. Therefore, it seems reasonable to mix and match convincing elements of the theories, depending on the policy area and context.

3. POLICY IMPLEMENTATION

Fullan (2007: 14) rightly notes that many change attempts fail because ‘no distinction is made between theories of change (what causes change) and theories of changing (how to influence those causes)’. Therefore, it is important to point out that policy change goes hand in hand with policy implementation. Mazmanian and Sabatier (1983: 20) define implementation as ‘the carrying out of a basic policy decision, usually incorporated in a statute but which can also take the form of important executive orders or court decisions’. A policy decision ‘identifies the problem(s) to be addressed, stipulates the objective(s) to be pursued and structures the implementation process’ (Sabatier and Mazmanian 1980: 540). Passing policies does not guarantee success on the ground if policies are not implemented well. Pressman and Wildavsky (1984) were the first ones to show that implementation dominates outcomes.

It is difficult to say which factors or conditions facilitate successful implementation since so much depends on the political, economic and social context. For instance, local factors (e.g. size, institutional complexity) matter for policy responses (McLaughlin 1987). In this vein, Payne (2008) argues that only looking for general solutions and not acknowledging the particular context can lead to incoherent implementation efforts. Therefore, no ‘one-size-fits-all’ policy exists. However, this has not stopped some scholars from trying to come up with the most important factors for certain policy areas. To take the example of education policy, according to Payne (2008), successful implementation has been evidenced in schools where there is:

- Coherence
- Stability
- Peer support
- Training
- Engagement.

Successful system reform means that a small number of powerful actors are interacting to produce substantial impact (Fullan 2009: 108). Successful implementation implies that ‘agencies comply with the directives of the statutes, agencies are held accountable for reaching specific indicators of success, goals of the statute are achieved, local goals are achieved or there is an improvement in the political climate around the programme’ (Ingram and Schneider 1990). Local capacity and will matter for policy success; adequate resources and clear goals are important too (McLaughlin 1987). In addition, the implementation process is characterised by a ‘multi-staged, developmental character’ (McLaughlin 1987: 176).

Even if policy implementation appears to be successful, Fullan (2000) points out that there is no guarantee that success will last. In terms of the change process in schools, there has been strong adoption and implementation, but not strong institutionalisation. Fullan (2000; 2007) further notes that both local school development (which engage teachers and students) and quality of surrounding infrastructure are key for lasting success. But successful examples of policy change (in schools) are still in the minority (Fullan 2007). Changing policies is not sufficient if there is no ‘reculturing’ of classrooms (Fullan 2000; 2007). As

a result, a number of conditions need to be satisfied to enhance the change of successful and sustainable implementation, though these conditions vary across systems. This adds to the difficulty of the whole process.

3.1 Top-down and bottom-up approaches

A widely used concept in the policy implementation (and change) literature distinguishes between top-down and bottom-up approaches. The two approaches vary in a number of areas, such as the role of actors and their relationships and the type of policies they can be applied to.

3.1.1 Top-down approach

Top-down theorists see policy designers as the central actors and concentrate their attention on factors that can be manipulated at the central level (Matland 1995). The most detailed top-down approach was presented by Sabatier and Mazmanian (1979), who identified a number of legal and political variables and then synthesised them into six conditions needed for effective implementation ranging from clear objectives, causal theory, legal structure of the implementation process, committed officials, supportive interests groups to no undermining of changing socio-economic conditions (for more detail on these conditions, see Sabatier 2005: 19). In terms of policy areas, ‘top-downers’ usually prioritise clear policies (Matland 1995: 155).

Strengths and weaknesses

One strength of the top-down approach is that it seeks to develop generalisable policy advice and come up with consistent recognisable patterns in behaviour across different policy areas (Matland 1995). But top-down approaches are criticised for only taking statutory language as a starting point and hence do not consider the significance of previous actions. The approach may be said to consider implementation as an administrative process and ignores or eliminates political aspects. The emphasis on statute framers as key actors is another source of criticism (i.e. local actors are not taken into consideration).

3.1.2 Bottom-up approach

Bottom-up theorists emphasise target groups and service deliverers, arguing that policy is made at the local level (Matland 1995: 146). These scholars (e.g. Hjern and Hull 1982, Hanf 1982, Barrett and Fudge 1981, Elmore 1979) thus criticise top-down theorists for only taking into consideration the central decision-makers and neglecting other actors. The bottom-up approach, developed by Hanf, Hjern and Porter (1978), identifies the networks of actors who are involved in service delivery in one or more local areas and asks them about their goals, strategies, activities and contacts. It then uses the contacts in order to develop a networking technique to identify the local, regional and national actors involved in the planning, financing and execution of relevant governmental and non-governmental programmes. This provides a mechanism for moving from local actors and decision-makers such as teachers or doctors up to the top policy-makers in both the public and private sectors (Sabatier 2005: 23). In terms of policy areas, bottom-uppers examine policies with greater uncertainty in the policy (Matland 1995: 155).

Strengths and weaknesses

Among the benefits of the bottom-up approach is its focus on centrally located actors who devise and implement government programmes, thus contextual factors within the implementing environment are important. Actors and their goals, strategies and activities need to be understood in order to comprehend implementation. Bottom-up approaches do not present prescriptive advice, but rather describe what factors have caused difficulty in reaching stated goals (Matland 1995). It is significant that strategies are flexible

so that they can adapt to local difficulties and contextual factors. Nonetheless, bottom-up approaches have been criticised on two counts. First, policy control should be exercised by actors whose power derives from their accountability to sovereign voters through their elected representatives, but the authority of local service deliverers does not derive from this. Second, this approach tends to overemphasise the level of local autonomy (Matland 1995).

3.1.3 Combined approach

Increasingly, the literature has focused on combining (micro-level variables of) bottom-up and (macro-level variables of) top-down approaches in implementation research in order to benefit from the strengths of both approaches and enable different levels to interact regularly (Elmore 1985, Fullan 2007, Goggin et al. 1990, Matland 1995, O'Toole 2000, Sabatier and Jenkins-Smith 1999). Building on Matland (1995), Suggett (2011) develops a framework distinguishing areas by the level of political conflict about goals or intent of a policy, and the level of uncertainty about the means or actions to achieve the goal. The two-by-two typology captures how top-down and bottom-up approaches can vary according to policy areas.

For instance, strategies that use bottom-up approaches (e.g. networks and devolution) are more common in areas of low conflict but high uncertainty and lack of consensus about the means to achieve a goal – such as educational disadvantage (Suggett 2011:8). In contrast, strategies that use such top-down approaches as strong political direction and sound governance are more likely in areas of high conflict about the goal but relatively high certainty on how it might be implemented (e.g. taxation for a specific industry sector) (Suggett 2011: 8).

Strengths and weaknesses

Combining the two approaches might thus draw on their main strengths while minimising their weaknesses. Policy implementation often takes place because a wide range of stakeholders interact between different levels – thus both central policy-makers and local actors on the ground are important for successful implementation. In addition, this combined approach allows for differentiating between various policy areas. For instance, while the suggested framework by Suggett (2011) in its current form could be further elaborated, it is a good start for differentiating between implementation strategies. It matters whether health care, taxation or education policies are considered. Even within policy sectors, implementation strategies are not the same for higher education and secondary education policies, for example (see Gornitzka, Kyvik and Stensaker 2005). As a result, implementation varies according to different content and type of policies.

3.2 Rational-choice theories

At times, researchers have looked for more sophisticated ways of theorising about implementation by applying rational-choice approaches. In a nutshell, rational choice theories are based on the assumptions that actors have a fixed set of preferences and act rationally in order to maximise the attainment of these preferences. Politics is seen as a series of collective action dilemmas due to the lack of institutional arrangements to encourage cooperation. In addition, strategic interactions between actors determine political outcomes (Hall and Taylor 1996: 944-945).

3.2.1 Game theory

One example of a rational choice approach is game theory which is ‘a mathematical treatment of how rational individuals will act in conflict situations to achieve their preferred objectives’ (Firestone 1989: 18). It is in particular helpful for theories that seek to clarify how coalitions build and pass legislation. The literature on implementation and game theory is still rather sparse in the political science

literature (for exceptions, see Bardach 1977, Koremenos and Lynn 1996, O'Toole 1995, Stoker 1991 and Weber 1998). For example, Bardach (1977) considers implementation as a continuation of a political game from the policy adoption stage, but with other actors and other relations between actors. He analyses the type of games that actors apply in the implementation process in order to pursue their own interests. But these games distort implementation from the legislative goals (Winter 2003: 213). Despite limitations, game theoretic models are helpful for exposing points of leverage for implementation managers (O'Toole 2000).

O'Toole (1995) examines the use of rational choice theories (in particular game theory) in implementation research. He argues that while game theory might enhance inter-organisational management, it has some serious practical limitations which constrain what might be theoretically possible (O'Toole 1995: 43). There are several challenges in rational-choice approaches to implementation, such as uncertainty across different areas and the lack of institutionalisation in the implementation setting (since many implementation networks are not highly institutionalised). But active and skilful multilateral implementation managers can successfully intervene at several points in a network context to reduce uncertainty and institutionalise cooperation. Such strategies include facilitating moves and linking games through signalling, commitment, and iteration; influencing preferences of actors and persuading them of the benefits to encourage cooperative outcomes; developing norms of trust and cooperation; and shifting the inter-unit structure to facilitate cooperation (O'Toole 1995: 47-51).

Also drawing on game theory, Firestone (1989) offers an education policy example by analysing an ecology of games. Individuals compete in one or few available games, which can be in government, education, business, religion or news. This model borrows from ecology as species interrelate in their environment in different ways – through competition, cooperation or interdependence (Firestone 1989). Educational games are linked through flows between them: an downward flow of resources and regulation from legislature to classroom, and an upward flow of demands from educators as well as the general public (Firestone 1989: 19). Again, the temporal dimensions and context play an important role in the implementation of education policy. Local variation should be taken advantage of, and practitioners should experiment with different models at the local level (Firestone 1989).

3.2.2 Agency theory

A different application of rational choice is *agency theory* - how principals delegate implementation to state agents - which has been applied in political science, economics and sociology (Kiser 1999). Different political science scholars (e.g. Bendor and Moe 1985, Kiewiet and McCubbins 1991, Weingast and Moran 1983, Wood 1988) have focused on the monitoring of agents by principals in order to reduce drift in implementation. In contrast to the economics literature on this topic, political science pays attention to three issues: third parties, administrative procedures and multiple principals. But several questions remain unanswered, such as who exactly the principal is that is supposed to monitor the actions of the agents, and how agents are selected (Kiser 1999).

Strengths and weaknesses

Rational choice theory proposes a parsimonious framework in which actors are rational in the pursuit of their preferences and interact strategically with other actors in the system. However, as John (2003: 485) argues, 'rational choice does not offer solutions for all cases and contexts'. The theory is better at explaining outcomes when preferences are settled, rather than clarifying the origin of preferences and the reason for change (John 2003). Game theory provides several advantages, such as a rigorous deductive theory and the potential to combine top-down and bottom-up approaches by treating all relevant actors as strategic players. But, as mentioned before, there are a few challenges, such as uncertainty and the lack of

institutionalisation (O'Toole 1995: 54). Overall, there is considerable potential to apply rational choice theories, including game theory, to implementation, especially when there are testable hypotheses.

3.3 Examples from education policy

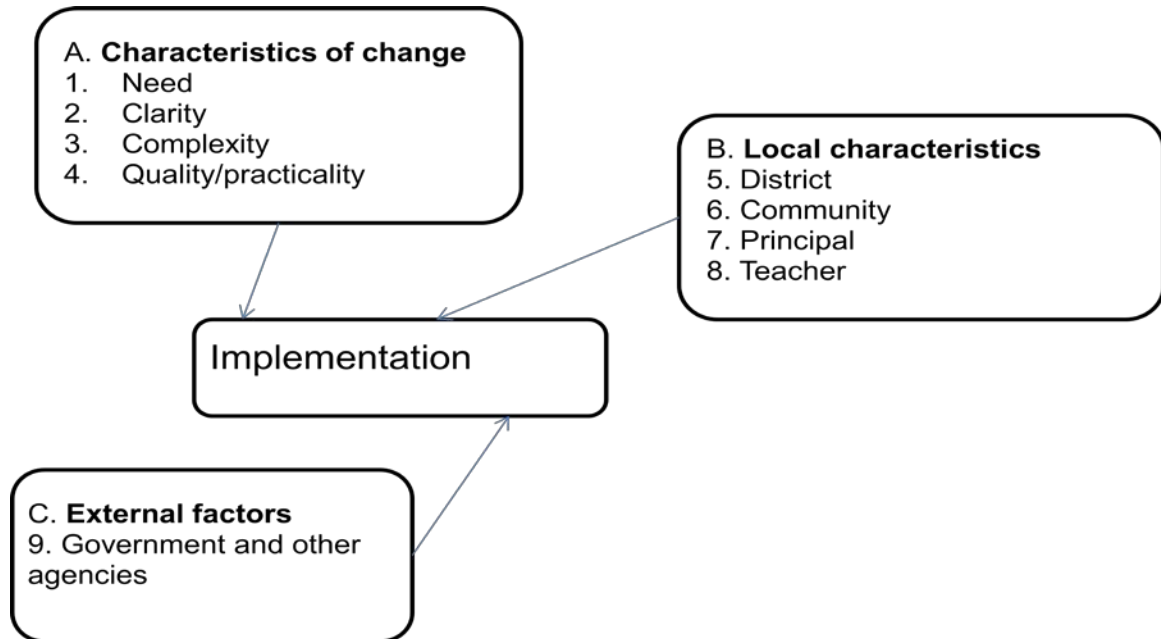
A review of the implementation literature several years ago suggested that the education sector constitutes about 65 percent of the research in the 1970s, but other policy areas such as environment and health have increased in importance in later years (Saetren 2005: 570). To stay with the example of education policy, Spillane, Reiser and Reimer (2002) examine why the local implementation of education policy is difficult. In particular they focus on agents' sense-making with regard to reform initiatives. Their framework considers three aspects: individuals and their beliefs and experiences, the importance of the situation or context, and the role of external representation in the sense-making process. Complexity of human sense-making plays a major role as sense-making is not simply decoding policy messages but 'the process of comprehension is an active process of interpretation that draws on the individual's rich knowledge base of understanding, beliefs and attitudes' (Spillane, Reiser and Reimer 2002: 391).

In general, implementing agents/participants should have a shared understanding about values and assumptions of a programme (Werner 1980). However, many implementing agents are novices and thus miss deeper relationships. In addition, agents tend to be biased towards interpretations that are consistent with prior beliefs and values. Reform is a value-driven and emotional process. Different sectors structure work practices, innovations and the implementation process (Spillane, Reiser and Reimer 2002). The social context influences the ways in which teachers make sense of policy and the need to revise their practice (Spillane and Zeuli 1999).

The challenges of implementation differ according to the level of social change, ranging from incremental change, change requiring growth on the part of those undertaking change and change that represents loss for the implementing agent (Marris 1975). It is not surprising that the more fundamental changes are sought, the more existing frameworks need to be restructured (Spillane, Reiser and Reimer 2002). As Majone and Wildavsky (1978) have argued, implementation is evolution. One explanation for this evolution is the process of human sense-making (Spillane, Reiser and Reimer 2002).

According to Fullan (2007), nine critical factors affect the implementation of education policy (see Figure 2). They vary from characteristics of change (such as need, clarity, complexity and quality/practicality), local characteristics (e.g. district, community, principal and teacher) to external factors (in this case the government and other agencies). Thus educational change is a dynamic process which involves interacting variables over time.

Figure 2: Factors affecting implementation



Source: Fullan 2007: 87.

To sum up, implementation is a multidimensional process. Three dimensions need to be taken into consideration when implementing a new educational programme or policy. First is the possible use of new or revised materials (i.e. curriculum materials), second is the possible use of new teaching approaches (i.e. teaching practices), and third is the possible alteration of beliefs (or understandings about the curriculum and learning practices) (Fullan 2007: 30). All three aspects are necessary for change. However, while educational change is technically simple, it is socially complex (Fullan 2007: 84). Actors need to have a shared meaning of educational change, and the commitment to pursue it.

3.4 Lessons from implementation research

Policy implementation looks different across countries – involving other actors, agencies and contexts. Some useful lessons have emerged from specific research and policy examples. Sabatier and Mazmanian (1979: 484-485) present five conditions beneficial for effective implementation. These include:

1. The programme is based on a sound theory relating to changes in target group behaviour.
2. Policy decisions have to contain unambiguous policy directives and structure the implementation process in a way that increases the chances of good performance of target groups.
3. The leaders and implementing agencies require significant managerial and political skills and commitment to the goals.
4. The programme also needs to be supported by organised constituency groups and few key legislators throughout the process.
5. The priority of objectives is not undermined over time by conflicting public policies or changes in socio-economic conditions.

According to the authors, the set of conditions should be sufficient to achieve policy objectives. It is possible to omit one of the last three conditions unless a major policy change requiring five to ten years of effort is sought (Sabatier and Mazmanian 1979: 486). Policy feedback and evaluation are important to consider in the wider implementation process in order to take into account a range of impacts. Other scholars (e.g. Cerych and Sabatier 1986, Van Meter and Van Horn 1975, Pressman and Wildavsky 1984) have refined the list for effective implementation, which has led to the following critical variables (Gornitzka, Kyvik and Stensaker 2005: 42).

- *Policy standards and objectives*: effective implementation depends on the nature of policy to be carried out and the specific factors contributing to the realisation or non-realisation of policy objectives, which vary across policy types.
- *Policy resources*: funds are needed for implementation, but the ones available are usually not adequate, which makes reaching policy objectives difficult.
- *Inter-organisational communication and enforcement activities*: technical advice and assistance should be provided, and superiors should rely on positive and negative sanctions.
- *Characteristics of implementing agencies*: both formal structural features of organisations and informal attributes of their personnel are important. These include, for example, the competence and size of an agency's staff, degree of hierarchical control of processes within implementing agencies.
- *Economic, social and political conditions*: general economic, social and political conditions are important for the relationship between objectives and results.
- *Disposition of implementers*: This concerns the motivation and attitudes of those responsible for implementing the reform.

The variety of conditions identified for a successful implementation has been rather descriptive and highly contextual. In fact, the literature has proposed about 300 potential variables which can affect the success of implementation, but falls short of specifying a model of implementation (O'Toole 1986). Besides the above critical variables, a time span of implementation is also important. Mazmanian and Sabatier (1983) suggest that a time span of four to five years, commonly used in implementation studies, is too short. Instead, they recommend extending it to at least ten years in order to enable policy-oriented learning. Based on Sabatier and Mazmanian (1980: 553), it is also significant to keep in mind that different stages in the implementation process exist:

1. The policy outputs (decisions) of implementing agencies
2. The compliance of target groups with those decisions
3. The actual impacts of agency decisions
4. The perceived impacts of those decisions
5. The political system's evaluation of a statute in terms of major revisions in its content.

Lessons from decades of implementation research indicate that the trend is towards a multi-theoretical approach, in which the direction of change is non-linear and systemic change happens due to dynamic interactive processes, rather than a centrally determined design (Gornitzka, Kogan and Amaral 2005). While theories aim to generalise observations, it is difficult to create generalised implementation theories in culturally saturated areas because national policy-making and implementation systems vary so widely (Kogan 2005). Policy fields such as education are not only country specific but also sub-sector specific (Kogan 2005: 62) which means that different issues arise for primary, secondary and higher education. Therefore, several implementation theories are combined for specific policy areas and contexts in order to draw on the strengths of each theory. For instance, top-down and bottom-up approaches used to be opposed to each other, but more recent efforts combine the two approaches and differentiate implementation strategies by policy area, context, leadership, stakeholders and organisational capability.

In addition, the process of policy-making and implementation should be considered to take place in a network structure mentioned earlier, and no longer as a bilateral relationship between the government and other institutions (Gornitzka, Kyvik and Stensaker 2005). Similar to the discussion on policy change, implementation is seen as a multi-actor and multi-level approach, thus stakeholders operate in a flexible network structure where processes can be informal and constellations spontaneous (O'Toole 2000, Stoker 1991).

Overall, implementation is characterised by complexity, which can create both benefits and risks. That is why Wanna, Butcher and Freyen (2010) argue that it is not possible to come up with any single or simple model for meeting the challenges of implementation. In similar vein, Suggett (2011) proposes that complexity can lead to nuanced implementation strategies. 'The complexity of public policy and political sub-systems poses serious challenges to the student of implementation, when ideas of self-regulation mix with continued aspirations and practices of central control, and when structures of responsibility and governance are unclear' (Gornitzka, Kyvik and Stensaker 2005: 48). Thus the variety of implementation frameworks should be taken advantage of, and combined according to the needs and policy areas. Gornitzka, Kogan and Amaral (2005) propose that a case-by-case approach might be necessary as it is difficult to come up with a combined theoretical model applicable to all areas.

4. CONCLUSIONS

This review has sought to answer the following question: how can we explain policy change and implementation? To do so, it has discussed selected theories of policy change and then examined the challenges of policy implementation. The list of theories presented is not exhaustive, but can be built upon in the future.

First of all, the paper has presented a number of theories of change, ranging from path dependence, advocacy coalition framework, policy learning, policy diffusion, punctuated equilibrium, institutional change, multi-level governance, policy networks, disruptive innovation to the politics of change and reform. The theories of change have their own strengths and weaknesses and apply differently across policy areas and degrees of change. Methodologically, it is often difficult to determine some points in time (such as a critical juncture) when change occurs. Similarly, establishing the preferences and beliefs of actors is complicated, as is the extent of policy learning, the make-up of advocacy coalitions or networks. Overall, theories should help us to generalise observations as well as have predictive power. However, most of the theories presented are better at explaining change in the past, rather than predicting

change in the future based on certain conditions. As Fullan (2007: 81) argues, 'change is and always will be initiated from a variety of different sources and combination of sources'. The initiator of change is less important than the quality of the change process.

Policy change goes hand in hand with policy implementation. Passing policies does not necessarily mean that the desired outcomes are achieved as policy implementation plays an important part of the process. Thus the second part of the review has sought to present some insights and lessons from the literature on policy implementation. Numerous scholars have come up with a list of conditions that ought to be present in order to facilitate successful implementation. However, challenges remain as the situational context as well as beliefs and priorities of implementing agents differ across policy areas and systems. Therefore, no 'one-size-fits-all' solutions exist. It is important to realise that there is diversity in implementation research and hence researchers should not look for one common theory. Instead, it should be sufficient to develop partial theories, which mix and match the most convincing elements of different theories, depending on the policy area and context.

It is evident that both policy-making and implementation are composed of multiple layers, be it institutional, regional, state, federal or local), which points to the complexity of this research and practice (Gornitzka, Kogan and Amaral 2005). Future work should review empirical examples of how the theories of change and implementation apply to specific policy areas, including education. For instance, as previously mentioned, Gornitzka, Kogan and Amaral (2005) use the advocacy coalition framework for higher education, but less has been written on how theories of change apply at the primary and secondary levels of education. A similar limited application goes for other theories of change.

Additional research should consider how theories of change and implementation apply at various levels (such as countries, systems, communities and schools). It would be fruitful to examine the challenges of implementation across policy areas (such as education policy) and what lessons can be learned from empirical examples. Overall, while policy-makers can plan to pass new policies, the dynamics of policy change are rather complex, and thus a successful policy change and implementation often does not take place. That is why it is essential to understand better the conditions and factors behind these interactive processes.

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