

**RESEARCH AND EVALUATION**

# The implementation of complex social policy: Institutional layering and unintended consequences in the National Disability Insurance Scheme

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**Abstract**

In this article, we identify the unfolding unintended consequences which flow from one instance of policy layering in Australia's National Disability Insurance Scheme (NDIS). We show how use of a causal diagram, which highlights feedback loops and emergent properties, to map complex chains of causal factors can assist policy scholars and policy practitioners to understand the likely direction of change and possible responses. In the case of Australia's National Disability Insurance Scheme, our analysis suggests that the likely direction of change will work against two of the fundamental design features of the NDIS: providing participants with more choice and control, and ensuring all eligible Australians are able to access appropriate services and supports regardless of where they live. Our analysis points to the use of price regulation as the site of potential intervention because of the role it plays in subsequent feedback loops and the development of the two, unwelcome, emergent properties.

**KEYWORDS**

choice, disability services, equity of access, institutional change, policy layering

## 1 | INTRODUCTION

Launched in 2013, the National Disability Insurance Scheme (NDIS) has taken Australia from a block-funded approach to disability service delivery to a personalised approach, where individuals purchase services from a disability services market (Needham & Dickinson, 2017). To implement the scheme,

new institutional entities and governance arrangements were created. These include a set of scheme actuaries to model costs and set prices for the disability market place, a new implementation agency, the National Disability Insurance Agency (NDIA) which is co-owned by the Commonwealth and State and Territory governments and more recently, the establishment of a new market regulator for the disability sector (Department of Social Services, 2016; Productivity Commission, 2017). Although new institutions and new institutional arrangements have been created, policy layering has also been a feature of implementation of the NDIS (Carey, Kay, & Nevile, 2017). In this article, we look more closely at the unfolding unintended and unanticipated consequences of layering. By broadening the scope of the complex, causal pathways that may be triggered by policy layering, we offer prudential warning to policy-makers about relying on markets in disability services. For policy scholars, we show how identifying and mapping the complex interactions between state and non-state actors can assist in understanding both the likely direction of change and possible responses by uncovering the connections between instrument mixes, implementation levers and system-wide change.

For policy practitioners involved in complex policy reform which takes place over a number of years, the ability to elaborate causal chains is important because layering, sought out as a tool to handle institutional complexity, can cause feedback loops which have the potential to be uncontrollable once set in motion (Carey et al., 2017, p. 16). Being able to identify the precise dynamic causes that lead to unintended consequences (either of policy layering, or those that trigger further policy layering) means that those involved in implementing complex policy reforms are able to identify where they need to intervene in order to ameliorate unintended negative consequences generated by processes of layering or triggering further policy layering.

## 2 | UNDERSTANDING THE MECHANISMS OF CHANGE

Policy layering refers to the process by which new policy goals are added to existing rules or policy commitments without removing existing rules or commitments (Béland, 2007; Jacobs & Weaver, 2015). The concept of layering was developed within institutionalist theory in response to a first generation of historical institutionalism judged as over-emphasising positive feedback processes and the sensitivity of institutional development to small effects at origin, but under-emphasising the subsequent opportunity for endogenous change in the process of institutional reproduction over time. Policy layering is a form of endogenous change where actors can make use of institutions, either individually or in novel combinations, to introduce innovations. The concept of layering accepts path-dependent logic, but allows actors to introduce gradual within-system change, which eventually may be transformative.

Endogenous change requires a richer account of causation than simple analysis of institutional change that relies on identified external shocks as the *deus ex machina* driver. In reviewing Mahoney and Thelen's coedited book, *Explaining Institutional Change*, van der Heijden (2010, p. 239) noted that a focus on the causal chains of variables was needed to better understand underlying mechanisms that explain observed institutional change. We argue that employing the concept of layering requires greater attention than is currently paid in the literature to making the structure and content of causal relations and flows explicit through time. Layering comprises a complex, causal pathway of endogenous institutional change and is not simply a one-shot choice by policy-makers at a given point in time.

Because Mahoney and Thelen (2010, p. 8) conceptualise institutions as '*distributional instruments* (emphasis in original) laden with power implications', for Mahoney and Thelen, change occurs as actors with different endowments of resources seek to modify existing institutions or create different kinds of institutions. Mahoney and Thelen's (2010, p. 15) framework for identifying and explaining

different types of institutional change postulates that characteristics of the institution and the political context influence the type of dominant change agent that may emerge and the kind of strategies the dominant change agent may use to effect change.

In addition to rendering agency subordinate to structure, Mahoney and Thelen's model has attracted criticism because of its static nature (i.e. the four types of institutional change are seen as separate and distinct), whereas empirical studies identify different types of change occurring sequentially, which has led some scholars to argue that the distinct types of change identified by Mahoney and Thelen are better understood as transitional stages rather than a final outcome (van der Heijden & Kuhlmann, 2017, p. 544). Although change agents may deliberately use a combination of strategies to effect change, this contradicts the causal relationships identified by Mahoney and Thelen 'who uniquely assign contexts and agents to an individual mode of change' (van der Heijden & Kuhlmann, 2017, p. 545). Furthermore, the outcome of a combination of strategies may not be the same as the outcome when the same strategies are used separately (Shpaizman, 2014, p. 1040). For example, in analysing Israeli immigration policy, Shpaizman (2014, p. 1050) found that the combination of conversion through layering led to an expansion of institutional aims rather than the replacement of existing goals with new ones as suggested by Mahoney and Thelen (2010, p. 18).

Mahoney and Thelen's (2010) framework for explaining institutional change has also attracted criticism on the grounds that it lacks explanatory power because it does not account for the content of change, nor its direction (Shpaizman, 2014, p. 1040). For example, in their analysis of the EU budget system, Ackrill and Kay (2006, p. 130) describe a process of layering new meso-level institutions into the existing macro level framework which, contrary to Mahoney and Thelen's conception of layering as 'changing the ways in which the original rules structure behaviour' (2010, p. 16), had the effect of preserving and strengthening the existing macro level framework.

In discussing future research agendas in the field of institutional change, Hall (2010, p. 220) predicted that 'the greatest advances will be made by those willing to borrow concepts and formulations from multiple schools of thought'. The following subsection introduces two concepts, feedback loops and emergent properties, which we argue are useful in identifying and cataloguing the complex causal chains operating at the micro-level that underpin layering as an institutional dynamic observed at the meso-level.

## 2.1 | Feedback loops and emergent properties

Systems thinking is a branch of complexity theory that attempts to map and analyse the systemic causes that contribute to a given situation (Meadows & Wright, 2008). We suggest that systems thinking may be useful to both academics and policy-makers for the analysis of the process and implications of policy layering because of the assumptions systems thinking makes about causal processes and agency, in particular the concepts of feedback and emergent properties to explain endogenous change. This way of thinking about causal processes and agency offers an alternative to the structure and agency debate that is perennial in the historical institutionalist literature (Cairney, 2012; Hay & Wincott, 1998, p. 953). Although historical institutionalists agree on the importance of policy legacies and other kinds of historical constraints when explaining policy change, they disagree on the extent to which structure (institutions, patterns of behaviour) or agency (individual preferences and actions) determine outcomes (Rayner, 2009, p. 84; Capano, 2009, p. 16). For strong institutionalists, structure generally trumps agency, whereas weaker forms of institutionalism emphasise agency and the complexity of institutional structures which may contain internal contradictions that, over time, create opportunities for agents to modify existing institutional structures, or create new ones (Rayner, 2009, p. 89). Causal diagrams

offer a way to capture both the agent-based and structural conditions that give rise to policy effects (emergent properties).

Both systems thinking and complexity theory have a long lineage in public policy and the institutional literature (Geyer & Cairney, 2015; Tenbensen, 2018). Systems thinking and complexity theory have evolved alongside the study of institutions, and one of the earliest introductions of systems thinking to political science can be found in Easton's (1953) critique of the state of political science and his emphasis on the importance of the emergent effects from institutional structures, alongside the usual consideration of agents and their political strategies. Although systems thinking is, at times, presented as a 'fix-all' solution, best practice sees the judicious application of systems thinking alongside existing theory to organise and analyse information about complex and dynamic policy phenomena (Carey et al., 2015, p. 6). Applications of complexity theory to policy issues include insight into migrant children education (Lui, 2015), the interconnections between traffic congestion and health (Dyball & Newell, 2015), tree coverage and health (Brown et al., 2018) and violent crime in Brazil (Lehmann, 2015). These case study applications show the advantages of using the key concepts of complexity theory to understand institutional change. For Tenbensen (2018), the most significant contribution that complexity theory can make to public management and policy literature lies in the 'theoretical partnerships' with more established public management and policy theories, such as historical institutionalism. For example, Tenbensen (2018) combines the notion of population genetics with the HMNC (hierarchy, market, network community) framework popularized by authors such as Bovaird (2008) and Rhodes (1996). In doing so, Tenbensen (2018) uses key concepts from population genetics to argue that complexity theory helps to highlight the endogenous processes that give rise to institutional change. Similarly, in this article, we are using key concepts from systems thinking in theoretical partnership with historical institutionalism to better understand the processes involved in endogenous institutional change (policy layering), and the likely unintended consequences.

In the remainder of this article, we illustrate how two concepts from complexity theory, feedback loops and emergent properties, may extend understandings about the process and implications of policy layering that occur during the implementation of complex social policies. Within systems thinking, a branch of complexity theory, the concept of 'feedback' refers to a circular chain of causal factors that acts to reinforce or perpetuate each other (Meadows & Wright, 2008). The existence of a circular chain of causal factors means that one factor can trigger a string of causal connections that can either reinforce or perpetuate the original factor: the change 'feeds back' into itself (Dyball & Newell, 2015). A commonly used example of a reinforcing feedback process is a bush fire. As the fire burns it dries out the leaf litter around it making it more likely that this leaf litter will catch alight, which spreads the fire and causes even more leaf litter to dry out and catch alight. In the political context, an example of a reinforcing feedback process occurs when there is a 'run' on the banks. As financial stability in one or two banks diminishes, bank users become fearful and withdraw their funds from other, previously unaffected banks, causing the financial stability of the whole banking system to be affected. The concept of feedback helps us to understand how multiple decisions by different actors, which might all have been made in isolation and with the best intentions for the success of a policy or program, can work together to reinforce certain processes that have unintended consequences for desired policy outcomes. Over time, these multiple decisions can produce a feedback process that drastically changes the outcomes (or 'emergent properties') of a given system or set of policies.

The concept of 'emergent properties' refers to a characteristic or 'property' that is found across the system but which individual parts of the system do not themselves hold (Meadows & Wright, 2008). As Cairney (2012, p. 348) explains, locations of control (centralised or de-centralised) are important when considering emergent properties because emergent properties result 'from the interaction between

elements at a local level rather than central direction'. Climate change is a common example of an emergent property as it is felt across the globe, yet no particular carbon-emitting object (e.g. cars, livestock or industrial complexes) 'holds' climate change or controls its direction. It is the accumulation of many carbon-emitting decisions that leads to the emergent property of climate change. When considering systems thinking in the context of policy studies, the characteristic of emergence focuses our analytic attention on the rules of the system (Cairney, 2012), and the ways in which these rules give rise to 'emergent properties' or outcomes that have no single root cause or centralised directive force (Dyball & Newell, 2015). This makes emergent properties difficult to influence as they result from a series of patterns within the system that have no central point of origin or control, and thus no root cause in either structure or agency, but in the interactions between both (Dyball & Newell, 2015).

### 3 | METHODS

This paper draws on data from the first 2 years of a 4-year study of the implementation of the NDIS (UNSW Human Ethics Grant number G160892). The study aims to investigate implementation with a particular focus on how governance structures develop and change over time. The study utilizes a case study research design because it enables us to investigate these changes in-depth and in their real-life contexts (Yin, 2014). Specifically, this paper draws on 33 semi-structured interviews conducted with senior public servants who played a role in determining the governance structures of the NDIS after relevant legislation was passed. We began with a purposive sampling of key individuals in charge of an initial NDIS implementation group established within the Department of Prime Minister and Cabinet. This was followed by interviews with senior public servants from a range of policy and program areas (Governance and Stakeholder Relationships, Policy and Legislation, NDIS Transition, NDIS Quality and Safeguards, NDIS Financial Policy and Performance, Financial Modeling, Budget Development, Market Oversight, Market Reform, Disability Employment and Carers, and Mental Health) within the Commonwealth Department of Social Services (DSS), the department charged with overseeing and co-ordinating the implementation of the NDIS at the national level.

The first round of interviews took place in March/April 2016. Themes covered in the first round of interviews included: decisions regarding the governance structure of the NDIS, deviations from the structure proposed by the Productivity Commission in its report, Disability care and support and the impact of the newly elected LNP Government on the design and implementation of the NDIS. The second round of interviews took place in April/May 2017 and focused on the interrelated issues of market development, regulation and accountability.

Data from the interviews with senior public servants were supplemented with data drawn from interviews with CEOs or senior managers from eight agencies providing disability support services to individuals living in the Australian Capital Territory (ACT). The service provider interviews focused on the impact of the NDIS pricing structure on their organisation and took place from September to December 2016. In addition, interview data were supplemented by information contained in recently published reports.

Data were analysed using a thematic approach (Blaikie, 2010). 'Like' data were grouped together to form categories and subcategories. These categories were developed into more substantive themes by linking and drawing connections between initial categories and hypothesizing about consequences and likely explanation for the appearance of certain phenomena (Strauss, 1987). This was done through discussion between the team. In the refining of themes for publication, selective coding was carried out, whereby transcripts were revisited with the explicit intent of finding further linkages and connections between the central issue being explored and other themes.

The systems diagram, also known as a causal diagram, was developed using researcher-defined variables based on the thematic analysis, with the substantive themes and connections established in accordance with Meadows and Wright (2008). This diagram tells the same narrative as the interviews, but is presented in a form that conceptually and visually highlights the causal impacts of one instance of policy layering. As noted earlier, policy layering occurs when new policy goals are introduced whilst retaining existing rules or policy commitments. The NDIS introduced a new policy goal, more choice and control for participants, which means participants are able to choose their service providers as well as being involved in decision-making around the sort of supports they require. However, existing commitments (existing State and Territory government contracts) were retained and participants are required to use service providers funded under these existing contracts until the contracts expire. In this article, we do not present a full systems analysis but instead present the causal diagram as an illustrative example of the way in which the concept of causation found in systems thinking and complexity theory may be useful for thinking through the impacts of policy layering.

#### 4 | THE NATIONAL DISABILITY INSURANCE SCHEME

The National Disability Insurance Act 2013 came into effect on 1 July 2013, establishing the framework for the National Disability Insurance Scheme and a new independent statutory agency, the National Disability Insurance Agency (NDIA) to implement the Scheme, initially in four trial sites in regional NSW and Victoria, in South Australia and Tasmania. On 1 July 2014, a further three trial sites commenced in Western Australia, the Northern Territory and the ACT. National roll-out of the Scheme commenced on 1 July 2016 (the transition phase), with the goal of increasing enrolments in the Scheme from 20,000 individuals to 460,000 individuals by 2019, by which time it was anticipated that enrolment of all eligible individuals would be complete (Buckmaster & Clark, 2018).

Prior to the introduction of the NDIS, most disability support services were provided under State or Territory government programs where service delivery organisations received block grants and the organisation made decisions about how that block of money would be spent. Consequently, the type and extent of services available to people with disability varied depending on where they lived. The architects of the NDIS wanted to provide all eligible Australians with a consistent level of support regardless of where they lived (Productivity Commission, 2011).

*I think the intent is that we'll by and large have national consistency...in decision making around the Scheme and what people are able to access (Senior public servant P2).*

Under the old State or Territory government programs, people with disability had little or no choice about what services they received or who provided those services. For this reason, another fundamental design principle was 'more choice and control' for participants (Nevile, Kay, & Carey, 2018, p. 1295).

In its report, Disability care and support, the Productivity Commission described existing State and Territory programs as 'underfunded, unfair, fragmented, and inefficient...[giving] people with disability little choice and no certainty of access to appropriate supports' (Productivity Commission 2011, p. 2). In an attempt to provide certainty of access to appropriate supports, the NDIS was designed as an insurance-based scheme where eligible participants are given funding packages determined by their level of need and self-defined goals, with the continuation of individual funding packages not tied to time limited contracts or annual appropriation cycles. For this reason, the financial sustainability of the Scheme is vitally important.

*One of the things that really struck me is how much of that budgeting and finance function drives an awful lot of what happens...because the overall success of the NDIS is very dependent on its financial viability (Senior public servant P6).*

Although the NDIS is a nationally based scheme, funding and governance is shared between Commonwealth, State and Territory governments. The COAG Standing Council on Disability Reform is the decision maker on NDIS policy issues and consists of Commonwealth, State and Territory ministers responsible for disability. The NDIA Board reports to the Standing Council on Disability Reform. In broad terms, the NDIA is responsible for day-to-day implementation of the Scheme. For example the NDIA holds all funds contributed by the Commonwealth, State and Territory governments in a single pool, administers enrolments in the Scheme and approves the payment of individual support packages. The NDIA also sets prices which determine the level of funding allocated to NDIS participants to purchase reasonable and necessary supports. However, participants who choose to manage their own funding package, or employ someone to manage their funding package on their behalf, are able to purchase services directly from service providers at a price determined by the service provider. Funding for participants who do not want to self-manage, or are unable to self-manage, is managed by the NDIA and subject to NDIA price controls. The Commonwealth Department of Social Services (DSS) is responsible for overseeing and co-ordinating the implementation of the NDIS at the national level.

## 5 | CAUSAL PROCESSES IN THE NDIS

Because funding and governance of the NDIS is shared between Commonwealth, State and Territory governments, the introduction and gradual roll-out of the NDIS required a series of bilateral agreements between the State and Territory governments and the Commonwealth government. The Scheme's tight implementation timeframe meant aspects of the Scheme were designed after national roll-out commenced. Consequently, 'the design of the transition agreements was very State focused' (Senior public servant P16), with States using existing financial commitments to cover their agreed contribution to the NDIS (Senior public servant P18), thereby creating policy layering. Thus, as part of the bilateral agreements, NDIS participants are required to use existing State and Territory funded services until existing contracts expire, rather than purchasing services from other providers operating in a disability services market (Carey et al., 2017). The practice of directing participants to use existing State or Territory funded services is referred to by Commonwealth public servants as using 'in-kind' supports. The requirement to use in-kind supports goes against the design principle of increasing choice and control for participants.

*So although we're telling [participants] 'you can go and get whatever provider you want', actually [participants] have to use this [provider] first because otherwise we'll run out of money (Senior public servant P6).*

Use of in-kind supports also constrains market development. Those responsible for oversight of NDIS implementation are well aware that, in the NDIS, increased choice for participants is dependent on market provision.

*[A]t the end of the day we need the market to be there. I mean there is no choice and control for participants if there's no services being delivered in a particular area, and the whole fundamental underpinning is 'let's improve choice and control' (Senior public servant P2).*

In most cases, the price of existing government services is higher than the price determined by the NDIA actuary. DSS is aware of the effect of these layered 'legacy systems', noting that 'transitional cost issues can create expectations and precedents within the sector, both government and non-government, which can go on to create long-term [financial] pressures for the NDIS' (DSS 2017, p. 20).

In its submission to the Productivity Commission's Study into National Disability Insurance Scheme Costs, DSS (2017, p. 7) argued that 'in the short term, the NDIA is best placed to continue setting prices for NDIS providers...[because] inflationary pressures could be placed on long-term Scheme sustainability if there is an absence of pricing signals from the NDIA as the market expands'. Some in the Department believe price regulation may be necessary even after the development of a robust market, but acknowledge that

*[p]rice regulation is a tricky issue, especially if another provider is offering services at a slightly higher price and the participants want choice and control. So you can see the more people self-manage, the more the Scheme will be vulnerable to price escalation (Senior public servant P28).*

The NDIA (2017, p. 5) argues that price controls are necessary when markets are not fully competitive and providers are able to set prices that are above the level that would occur in a competitive market.

Used to a less restrictive, and possibly more generous, funding model, many existing service providers are finding it difficult to maintain the same level and quality of service provision. For example a recent report by Cortis, Macdonald, Davidson, and Bentham (2017, p. 54) concluded that NDIA 'prices are incentivizing cost-cutting and creating imperatives for low quality provision...[because] pricing is predicated on under-classification of workers and insufficient time for workers and supervisors to do their jobs well'. Service providers operating in the ACT agree.

*I think the whole pricing issue is really a huge elephant in the room for the NDIS...being able to continue to deliver that quality with the pricing structure is going to get more and more difficult (ACT service provider P7).*

*We've got a pricing signal sent by the NDIA that is already pushing people back into communal living arrangements, and I think there is some risk in that (ACT service provider P5).*

In the Australian Capital Territory, the only State or Territory where the NDIS trial covered all age groups and types of disability, some service providers have responded to the new pricing structure by only providing services they believe are financially viable.

*We had a problem with the pricing initially, and we did the sums and went to the Board and said, 'if we participate at that price...we'd lose over a million dollars in our first year...The price for skill development – that makes us just about break even with where our current funding is. So we said, 'we'll only do skill development' (ACT service provider P1).*

Other service providers responded to the NDIA pricing structure by making the decision not to work with NDIS participants whose funding package is managed through the NDIA.

*In April 2016 we sent out a letter to tell all of our NDIS clients that we would only be able to continue to work with them if they were self-managed, or financially managed, because if we have to do stuff through the NDIA, the price is not sustainable...So for all our [self-managed] clients we say, 'this is what we can deliver, for that amount of money' (ACT service provider P8).*

In the above example, most of the agency's existing clients chose to stay with the agency, 'even if it meant an hour less service a week', but in trying to find alternative providers for clients who did not want to self-manage, or could not afford to employ someone to manage their funding package, agency staff discovered

*there is a not a lot of choice out there in Canberra. The market has shrunk...so there are a lot less options if you are [NDIA] managed. Overall the number of registered providers has increased, but if you drill down into agencies that provide direct support, which is the thing that has the tightest cap on it, there are a lot less operating in that space (ACT service provider P8).*

Choice is further eroded when agencies stop providing a particular type of service altogether.

*Effectively what's happened is that people...who have been with us for twenty years...say, 'we really want to go to [Agency name], and then the NDIA says, 'you can't go to [Agency name] because [they don't provide that service anymore'] (ACT service provider P1).*

As agencies stop providing specific services, or restrict their clients to those who self-manage, further pressure is put on the remaining providers who still work within the NDIA managed system: a workforce that is already under substantial pressure. For example in a recent survey of 1,500 disability support workers, 55.9% strongly agreed or agreed with the statement, 'under NDIS I don't have enough time to do everything in my job' and, as a result, were experiencing a high level of work intensity and unpaid overtime. An even higher percentage of supervisors felt overstretched, with 64% strongly agreeing or agreeing with the statement, 'under NDIS I can't provide proper supervision due to lack of time' (Cortis, 2017, p. 21 & 33).

If the ACT experience is replicated across Australia as other jurisdictions move to full Scheme roll-out, there is significant risk of creating a bifurcated market consisting of a private market delivering higher quality services and a thin market within the NDIA managed system delivering lower quality services. A bifurcated market in disability services is not a desired outcome as it is inconsistent with the Scheme's fundamental design principle of national consistency.

As noted earlier, senior bureaucrats who have responsibility for overseeing the Scheme's implementation are aware of the risk of unintended negative consequences, such as unequal access to quality services, because 'you're turning over inelastic demand over to the market and the market always exploits inelastic demand' (Senior public servant P30).

*We always knew that the transition [period] for the market was going to be a time of intense risk in terms of quality and safeguards, the appropriate provision of services, and escalation in prices (Senior public servant P28).*

Senior bureaucrats are also aware that, at times, they have to 'do things that are outside of the [bilateral] agreements...[and as] good public administrators you've got to re-open those agreements and make judgement calls about whether it is worthwhile doing that and at what time' (Senior public servant P33). However, in the case of a complex social reform where responsibility and accountability are spread over different levels of government, with new governance and regulatory institutions still evolving, questions of when to act, who acts (whose responsibility is market development?), and what actions should be taken are difficult to answer. For example when senior bureaucrats were asked who is responsible for market development, all responded by saying responsibility is shared between the Commonwealth government, State and Territory governments and the NDIA (Senior public servants P8; P10; P15; P27; P28; P30; P31; P32), with some indicating that they believed the new national regulator will also have some oversight responsibility for market development.<sup>1</sup>

*The response to a lot of things in the market will be what powers are available and their appropriate application by the regulator at some stage (Senior public servant P28).*

Senior bureaucrats involved in setting up the new national regulator noted that ‘the meta regulatory powers of competition belong to the [already existing] Australian Competition and Consumer Commission (ACCC), but the ACCC has said to us that, in reality, they don’t have the resources to spend their time looking over the shoulder of the NDIS’ (Senior public servant P15). A national regulator, resembling the U.K. Care Quality Commission, which would be responsible for aged care and child care as well as a wide range of disability support services, would be a more efficient option, both for government and for providers who work across sectors, but a major impediment is timing.

*[H]ow do you get this thing in place in the timeframe? As soon as you introduce a level of complex negotiations across portfolios and sectors, then immediately all your timelines go out the window. So it is always going to be this very difficult kind of trade off for government around how it does these things (Senior public servant P15).*

The question of what action(s) should be taken is also not straightforward, as measures taken to strengthen service quality, for example have to potential to limit market development.

*I worry about the impost...that a Cert III or Cert IV can do to a market. It's a really important quality set up, but it also limits growth. Mandating a certain qualification [for disability support workers] does limit growth (Senior public servant P29).*

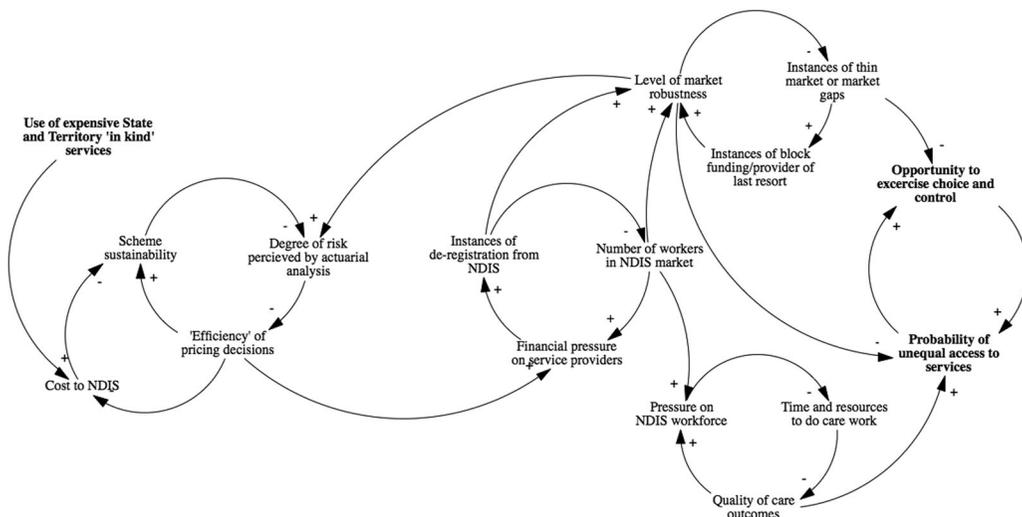
## 6 | DISCUSSION

The analysis of events unfolding in Australia illustrates Cairney's (2013, pp. 288–289) observation that ‘the issues of implementation are central to complexity theory’ because, so often, the effects of particular decisions are contingent on a variety of factors, some of which may be difficult to identify. However, causal loop diagrams, which focus on feedback and emergent properties, allow researchers to clearly map the, often multiple, effects of a particular set of policy decisions (Figure 1).

Figure 1 is a causal diagram of the implications of one instance of policy layering in the NDIS. It shows that multiple decisions made by different actors in the system, such as State and Territory governments, actuaries, the NDIA, service providers, care workers, people with disability and the Commonwealth Department of Social Services, accumulate to influence the opportunities participants have to exercise choice and equity of access to services. In systems thinking terms, Figure 1 depicts a number of feedback loops that act to reinforce or perpetuate aspects of the Scheme, most notably the level of market robustness. In addition, the emergent properties that are of most concern are limits on the opportunities of participants to exercise choice and control, and equity of access to services.

It needs to be noted that there are many other factors that also influence the emergent properties of the NDIS system that are not captured in Figure 1, the purpose of which is to show how one instance of policy layering affects choice, control and equity of access. In Figure 1, we have included the factors that arose in our interviews and illustrate the ways in which a systems thinking approach can help to articulate the unintended consequences of policy layering. Overall, this diagram represents a theory of causal connections that flow from one instance of policy layering (*Use of expensive State and Territory in-kind services*), to the policy goals of the Scheme (*Opportunity to exercise choice and control* and *Probability of unequal access to services*).

The easiest way to read Figure 1 is to start at the top left variable (*Use of expensive State and Territory in-kind services*) and follow the arrows right towards the end loop which sets out the policy goals of the Scheme. We begin with top left variable, *Use of expensive State and Territory in-kind services*,



**FIGURE 1** Causal diagram of the implications of one instance of policy layering in the NDIS

because this is a crucial example of policy layering. The use of in-kind services increases the *Cost to NDIS*, which affects *Scheme sustainability*. NDIA actuaries monitor *Scheme sustainability* (*Degree of risk perceived by actuarial analysis*) and set prices for services that are ‘efficient’ according to their actuarial models (*‘Efficiency’ of pricing decisions*). However, if prices are set too low, this will cause *Financial pressure on service providers*, which can result in agencies choosing not to provide certain types of services or only providing services to NDIS participants who manage their own funding package (*Instances of opt-out from NDIA managed system*). As the number of providers opting out of the NDIA managed system increases, this can lead to greater pressure on the remaining workforce (*Number of workers in NDIS market*), as well as a lower *Level of market robustness*. With greater pressure on the NDIS workforce, the *Time and resources to do care work* may be reduced, resulting in a reduction in *Quality of care outcomes* for service users. Although this is occurring, a lower level of market robustness can lead to *Instances of thin markets or market gaps* where services are unavailable for purchase. Declining levels of market robustness may be ameliorated by *Instances of block funding/provider of last resort* actions undertaken by government. Ultimately all of these different variables and points of decision making by actors in the Scheme can impact on the emergent properties; namely, *Opportunity to exercise choice and control* and equity of access to services for people with disability (*Probability of unequal access to services*), both of which are central concerns of the NDIS.

The possibility that the NDIS may not provide participants with more opportunities to exercise choice, and may not improve equity of access to services, represents the two greatest sociocultural and political risks associated with the NDIS.<sup>2</sup> Complicating any government response to these sociocultural and political risks is the actuarial risk of the NDIS becoming financially unsustainable, with regulatory measures, such as price caps, introduced in order to mitigate this actuarial risk, but which, as shown in Figure 1, increase the likelihood of sociocultural and political risks. The dilemma is clear: how to balance sociocultural, political and actuarial risk.

Risk-based approaches to regulation involve separating out, analysing and managing discrete risks with the greatest attention directed at areas where problems are likely to have the greatest impact (Haines, 2017, pp. 189–190). In the case of the NDIS, our analysis suggests that price regulation is the area that deserves the closest monitoring and attention because of the role it plays in feedback loops and the development of emergent properties. In December 2016, the Commonwealth government finalised

the NDIS Quality and Safeguarding Framework, a national framework, which will replace existing quality and safeguarding measures, many of which are embedded in individual State and Territory funding agreements. The principles of proportionality and risk responsiveness underpin this piece of regulatory policy making which, among other things, aims to ‘respond to market failure risks with prudential monitoring for some segments of the market’ (DSS 2016, p. 13).

In 2013, the Institute for Government, an independent think tank in the United Kingdom, issued a report outlining the role of government in the development of robust public sector markets. In particular, the report emphasised the need for governments to be constantly monitoring the ways in which the market is developing and how providers are responding to existing rules, assessing potential impacts and adjusting the ‘rules of the game’ when potential risks are perceived as being too high (Gash, Panchamia, Sims, & Hotson, 2013, p. 19). The Institute for Government report also emphasised the need ‘for on-going, iterative and piecemeal adaptation’ (Gash et al., 2013, p. 20). Under the Quality and Safeguarding Framework, the NDIS registrar will be responsible for monitoring and reporting on the effectiveness of NDIS markets, including early indicators of thin markets and market failure (DSS 2016, p. 17). However, as the Department of Social Security acknowledge, the Quality and Safeguarding Framework is a high-level policy document ‘with significant work still to be done on the implementation design and roll out of the Framework’ (DSS 2016, p. 17). Our analysis suggests that the risk of thin markets is not confined to rural and remote locations or services provided to a very specific client group. If the Framework is to achieve the goal of mitigating the risks associated with thin markets and market failure, the NDIS registrar will have to work closely with the NDIA because assessments of market-related risks depend upon information about the number of NDIS-registered providers who are actually providing basic support services to NDIA managed participants, and the percentage of participants who have chosen to manage their own funding package, in each local area across Australia.

## 7 | CONCLUSION

The work of Thelen and her co-authors has proved to be a useful lens for many scholars seeking to understand the process of endogenous institutional change (van der Heijden, 2011, p. 15). The concept of layering has received the most attention in empirical studies (van der Heijden & Kuhlmann, 2017, p. 543), but useful though it is, the concept does not overcome perennial arguments over the relative importance of structure or agency in driving institutional change. In particular, the concept of layering remains resolutely focused on institutions: endogeneity of layering remains limited to cases where exogenous events or shifts in the political context create spaces for forms of creative agency to lead change. The possibility of bottom-up change – that agency may lead to observed layering without any perturbations in the broader institutional environment – is precluded.

In this article, we argue that use of a causal diagram which highlights feedback loops and emergent properties allows researchers to transcend debates about structure and agency that continue to bedevil new institutionalist approaches in social policy because it allows for the existence of circular chains of causal factors that may be the result of both structure and agency. For example the requirement to use State and Territory-funded services in preference to alternatives available in the market was driven by structure, whereas decisions by individual service providers to opt-out of the NDIA managed system are driven by consideration of their specific circumstances and preferences. As shown in Figure 1, over time, the combination of a number of feedback processes can have a significant effect on policy outcomes. The elaboration of causal chains also shows that decisions taken by individual actors are not

made with the intent to harm the system. Instead such decisions are distorted by feedback loops and result in unintended consequences, ultimately impacting on equal access and opportunities for choice.

In the case of Australia's National Disability Insurance Scheme, our analysis suggests that the likely direction of change will work against two of the fundamental design features of the NDIS; providing participants with more choice and control, and ensuring all eligible Australians are able to access appropriate services and supports regardless of where they live. Our analysis also points to the use of price regulation (*Degree of risk perceived by actuarial analyst and 'Efficiency' of pricing decisions*), as the site of potential intervention, and hence the area that deserves the closest monitoring, because of the role price regulation plays in subsequent feedback loops and the development of the two, unwelcome, emergent properties.

While our analysis focused on a single case, the potential for emergent properties exists within any complex policymaking system. Even when policy practitioners are aware of possible unintended consequences, they may still choose to add new rules without removing existing rules and commitments because doing so allows them to manage more immediate implementation goals, such as finalizing transition agreements with the State and Territory governments. However, using a causal diagram to map complex causal chains assists policy practitioners to understand the likely direction of change and possible responses, thereby allowing them to take action which will ameliorate risks associated with any unwelcome emergent properties.

<sup>1</sup> At the time the second round of interviews was conducted, DSS had released a report setting out the regulatory framework, had developed draft legislation, the Expenditure Review Committee of Cabinet had approved the establishment of a new national regulator (the NDIS Quality and Safeguards Commission), although this decision had yet to go through the budget process. The NDIS Quality and Safeguards Commission commenced operation in NSW and South Australia on 1 July 2018 and will commence operation in Victoria, Queensland, Tasmania, the ACT and the Northern Territory on 1 July 2019. The Commission will commence operation in Western Australia on 1 July 2020.

<sup>2</sup> Sociocultural risks are risks that pose a political threat to the well-being of society as a whole, or a particular group within society. Political risk refers to risks that threaten the political legitimacy of the government of the day, or the legitimacy of the whole political system. Sociocultural risks often generate political risk. A third type of risk is actuarial risk that refers to the possibility of harm arising out of an unwanted event (Haines, 2017, pp. 183–185).

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