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Set up to fail: Explaining systemic problems in the business model of in-home aged care

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Abstract

We seek to explain the role of external environmental constraints in embedding systemic problems within a dominant industry business model. Using qualitative data from the 2019–2021 Australian Royal Commission into Aged Care Quality and Safety, we show how three sector-wide constraints – channel constraints, revenue constraints and resource constraints – impinge on the business model for in-home aged care services, creating direct, first-order effects by embedding systemic problems directly within business model components. We also

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explain how second-order effects occur through interdependencies with other business model components. We discuss the consequences of our findings for value creation and value capture, and the implications for the delivery of quality care to older people. Through this analysis, we also contribute to the business models literature by extending our understanding of the impact of external factors on business model performance, innovation and managerial choice.

JEL Classification: L2 - Firm Objectives, Organization, and Behavior, M4 - Accounting and Auditing, I11 - Analysis of Health Care Markets.

Keywords
Aged care, business models, quality, value capture, value creation

1. Introduction

Researchers and practitioners alike are increasingly drawing on the concepts and language of business models to better explain and understand how organisations both create and capture value (Prescott and Filatotchev, 2021; Snihur and Eisenhardt, 2022). A business model is a system of interconnected activities that are centred on a focal organisation and span its internal and external boundaries in order to create value for stakeholders and also retain value for itself (Baden-Fuller and Morgan, 2010; Lanzolla and Markides, 2021; Leppänen et al., 2023; Zott and Amit, 2010; Zott et al., 2011). At the heart of the business model construct is the concept of interdependencies among internal and external activities and the role of those interdependencies in the production of value (Lanzolla and Markides, 2021).

Within the business models literature, there are strong traditions of research that have adopted an optimistic posture in examining business model outcomes. Research has, for example, considered the types of business model configurations or 'recipes' that yield positive performance (Brown et al., 2023; Flouris and Walker, 2007; Kulins et al., 2016; McNamara et al., 2013; Morris et al., 2013; Patel and Chan, 2021; Zott and Amit, 2007), how innovation and change in business models can lead to improved value creation and capture (Amit and Zott, 2010; McDonald et al., 2021; Sabatier et al., 2012; Weerawardena et al., 2021), and the emergence of preferred industry 'recipes' and dominant logics (Casadesus-Masanell and Zhu, 2013; Sabatier et al., 2012). However, while all organisations have a business model, it does not necessarily follow that those business models have been mindfully constructed by decision makers (Amit and Zott, 2015), and that the business model is satisfactory – or even viable (Casadesus-Masanell and Ricart, 2010).

A less examined implication of the above point is that business model configurations might be associated with persistent poor performance and systematic failures of value creation and value capture. Study of business model failure can draw attention to the antecedents of business model design and resulting configurations of components that inhibit performance or result in 'missed' or destroyed value for stakeholders (Martí, 2018). This possibility is especially significant when it is the dominant logic or 'recipe' of an industry that consistently underperforms. In such a case, we can look to the antecedents of business model design to identify novel boundary conditions and insights into factors that constrain value creation and capture, and prevent the development and diffusion of innovative, high-performing business models (Foss and Saebi, 2017; White et al., 2022).

Within the extant literature, Amit and Zott (2015) identify four main antecedents of business model design: goals to create and capture value, templates of incumbents, stakeholders' activities and environmental constraints. In this study, we seek to explore the latter category of environmental constraints in order to explain how systemic problems can become embedded in a dominant business model. The setting for our study is the Australian aged care sector, with a focus on the

delivery of government-subsidised aged care services in the home and community.[1] The Australian aged care sector has been the site of widespread business model failure, culminating in the establishment of the 2019–2021 Royal Commission into Aged Care Quality and Safety (RCACQS). During its proceedings, the RCACQS identified serious and systemic problems in the sector, and many of its 148 recommendations related to how the sector is funded and regulated. This occurrence of widespread problems within a highly regulated context makes aged care an ideal natural setting for a study of the effects of environment constraints on business model failure.

Working between theory and evidence from the Australian in-home aged care sector, we abductively derive the dominant business model type for the provision of in-home aged care services. For each component of the business model, we first analyse qualitative evidence generated by the RCACQS to identify and describe systemic problems experienced across the sector, and then draw on additional RCACQS documentation to trace the interdependent causes and effects of the problems within a business models framework. In doing so, we observe three sector-wide constraints originating in the external environment, which impinge on the business model for in-home aged care not only through direct restrictions on choices available to providers but also indirectly through interdependencies with other business model components. First, 'channel constraints', caused by a prescribed customer-provider interface, which in turn caused problems with accessibility of services and information by prospective customers. Second, 'revenue constraints', caused by unpredictable revenue flows, which then necessitated a variable cost structure that limited value-creating activities. Third, 'resource constraints' arising from an insufficient personal care workforce, which resulted in systematic challenges in developing satisfactory customer relationships. Each of these three constraints, while largely outside of the direct control of provider organisations, contribute to their failure to create value through the delivery of quality care and services to older people.

Our findings contribute to the business models literature by explaining how environmental constraints, specifically channel, revenue and resource constraints, generate first-order effects by embedding systemic problems directly within business model components. We also explain how second-order effects occur through interdependencies with other business model components. The components and relationships occur as systematic industry 'recipes'. We offer a contrasting perspective about the role of the external environment in the development of a dominant business model type, and the constraints it may place on business model innovation and managerial choice. Where prior analysis identifies 'internal' boundary conditions on business model innovation (Martins et al., 2015; Tykkyläinen and Ritala, 2021), our analysis illustrates how 'external' factors – in this case, a strong regulatory environment – can embed problems within business models directly by constraining the ability of managers to make adaptive choices within those business model components, and indirectly through the interdependencies of those components with others in the business model. The finding provides a counterpoint to the argument that this type of environmental uncertainty can be expected to promote business model innovation by managers (McDonald et al., 2021; Osiyevskyy and Dewald, 2018; Weerawardena et al., 2021). This finding also has practical significance in light of prior evidence that industries with lower managerial discretion may experience greater challenges in pursing non-economic goals, such as quality of care (Patel and Chan, 2021).

Our study makes a further contribution by explaining how government policy intended to improve consumer choice and care outcomes for older people has, instead, resulted in systemic value creation failures in the Australian in-home aged care setting. Rather than locating such failures at the level of the individual organisation, we show how policy settings can embed problems within a dominant business model by unintentionally 'baking-in' performance-inhibiting constraints via interdependencies between business model components, which in turn affects the extent

to which organisations are able to create value for consumers while also ensuring their own financial viability and future market capacity (Davies and Doherty, 2019). Our application of a business models framework provides a novel perspective on the drivers of such quality failures, which reflects the current context of increasing marketisation and outsourcing of human services by governments in developed economies (Hardell et al., 2020; Petersen et al., 2018; Rodrigues and Glendinning, 2015). Failure to create value for consumers within human service sectors is not simply a missed business opportunity (Alm and Guttormsen, 2023) but, more importantly, represents the potential marginalisation of consumers who rely on these services to maintain their dignity and independence.

In what follows, we lay out the initial conceptual framing of business models. Then we present the research method. We unpack the components of the business model for in-home care and the problems with these components, as identified from our analysis of the RCACQS data. The analysis reveals how constraints on particular components of the business model interact with interdependencies within the business model and inhibit providers' ability both to create value for stakeholders and to capture value within the organisation. Finally, we discuss the implications of our findings both for the delivery of quality care to older people, and for understanding the origins of systemic and systematic failure of a dominant industry business model.

2. Conceptual framing

2.1. Business models and value

Many definitions of business models exist in literature (Baden-Fuller and Morgan, 2010; Massa et al., 2017; Nielsen et al., 2019; Zott et al., 2011), in which scholars have mobilised the construct at different levels and for different purposes (Massa et al., 2017; Osterwalder et al., 2005). We adopt a definition of business models that accords with the view that business models are an attribute of real firms rather than existing exclusively as a cognitive phenomenon or formal representation (Massa et al., 2017; White et al., 2022). Within this frame, business models can also be considered in terms of a set of managerial choices and their causal consequences (Casadesus-Masanell and Ricart, 2010).

While there is significant variation in scope and perspectives on how a business model is defined, what sits at the centre of most of this work is the concept of 'value'. Value is the perceived worth and utility that an agent associates with something (Pitelis, 2009). Within the business models literature, value is, for the most part, broken down into two concepts: 'value creation' and 'value capture'. Value creation is defined as the overall value created by the firm for its customers (Lepak et al., 2007; Nielsen et al., 2019), which is realised as what the customer is willing to pay (Pitelis, 2009). Value capture consists of two elements: what customers pay for the product or service that an organisation delivers (Massa et al., 2017; Taran et al., 2016), and the extent to which this amount can be retained within the organisation (Lepak et al., 2007; Nielsen et al., 2019).

2.2. Business model components

A business model also reflects a core logic for how it creates and captures value. One way to specify a business model type is to apply a generic framework or meta-model (Massa et al., 2017) that includes a set of business model components (Baden-Fuller and Morgan, 2010). Such components include: a value proposition, customer relationships, customer segments, key partnerships, channels, activities, key resources, costs structure and revenue streams. Following the studies by Bocken et al. (2014) and Davies and Doherty (2019), we arrange these components into three key

categories: (1) the value proposition of the model, (2) the value creation and delivery function, and (3) the potential for value capture by the provider organisation.

The first category clusters the value proposition, customer relationships and customer segment components. The value proposition refers to the need that is satisfied by the product or service that the organisation provides for specified customers or customer segments (Richardson, 2008; Taran et al., 2016; Wirtz et al., 2016). Depending on the nature of customer relationships, business models will vary to include: personal assistance, dedicated or individual client personal assistance, self-service, automated service and community and co-creation (Osterwalder and Pigneur, 2010). Customers and customer segments need to be sufficiently profitable or generate sufficient value for the organisation for it to be financially sustainable.

The second category encompasses components that enable value creation and delivery. These include key partnerships or external relationships that enable the deployment of resources, which the organisation itself may not have, and provide economies of scale and scope as well as strategic alliances (Osterwalder and Pigneur, 2010; Richardson, 2008; Wirtz et al., 2016). This category also includes channels, which refer to the methods an organisation uses to communicate with the customer both initially and through the customer lifecycle, as well as the ways in which the organisation delivers and follows up on its value proposition (Osterwalder and Pigneur, 2010). Resources are also part of this category and are the organisation's tangible and intangible assets as well as the skills, capabilities and competencies required to create and deliver value for the customer (Osterwalder and Pigneur, 2010; Richardson, 2008; Wirtz et al., 2016). In the literature, these can be either owned by the organisation or contracted (Demil and Lecocq, 2010; Osterwalder and Pigneur, 2010; Wirtz et al., 2016). Another component of this category is the activities contained within the boundaries of the organisation and sitting in a larger network of stakeholders (Demil and Lecocq, 2010; Zott and Amit, 2010). The activities and processes associated with the deployment of resources are what create value for the customer (Osterwalder and Pigneur, 2010; Richardson, 2008; Zott and Amit, 2010).

Finally, the third category of components relates to value capture, which reflects the relationship between business model costs and revenues. Revenue is linked to what customers pay for the value that is created by the organisation (Richardson, 2008; Wirtz et al., 2016). This can take multiple forms, such as revenues from service, usage fees, leasing or product sales (Osterwalder and Pigneur, 2010). Costs, on the contrary, are what are incurred to create value for customers and are reflected in organisational cost structures (Osterwalder et al., 2005; Osterwalder and Pigneur, 2010; Wirtz et al., 2016).

2.3. Constraints and business model innovation

Many industries have developed a dominant business model that describes the typical business model configuration of established players or a large proportion of incumbents (Baden-Fuller and Morgan, 2010; Nielsen and Bukh, 2011). Akin to industry 'recipes' (McNamara et al., 2013), 'ideal types' (Baden-Fuller and Morgan, 2010) or 'templates' (Casadesus-Masanell and Ricart, 2010), dominant business models tend to be replicated when business model designers fail to consider alternative practices or seek certainty by replicating models or components perceived to be associated with the success of a type of firm in an industry (Nielsen and Bukh, 2011). Dominant industry business models that have been studied in the literature include airlines (Flouris and Walker, 2007; Lawton and Solomko, 2005; Swatman et al., 2006; Tretheway, 2004), biotechnology (Bigliardi et al., 2005), media and digital platforms (Amberg and Schröder, 2007; Eriksson et al., 2008; Ha and Ganahl, 2004), restaurants and food (Morris et al., 2013) and creative industries (Rozentale and van Baalen, 2021).

Dominant business models can be disrupted by the emergence of new practices through the process of business model innovation (Casadesus-Masanell and Zhu, 2013; White et al., 2022). Business model innovation is widely recognised as an important driver of firm performance (Zott et al., 2011). However, recent studies provide evidence that challenges the latent assumption that business model innovation is always good for value creation and capture (Leppänen et al., 2023; White et al., 2022). These studies represent initial efforts to theorise the boundary conditions of business model performance and business model innovation, which remain comparatively poorly understood (Foss and Saebi, 2017). Leppänen et al. (2023) provide evidence that external macro conditions – specifically, political and economic stability – can meaningfully affect how much value firms receive by engaging in business model innovation, noting that there remains a need for research regarding the effects of environmental factors. Other environmental factors identified, but yet to be empirically investigated, include regulatory conditions (Amit and Zott, 2015), which are the focus of our study.

In what follows, we seek to explain why we observe the 'absence' of business model innovation at the level of the dominant industry business model in our setting of the Australian in-home aged care sector, despite a long history of failure to both create value for stakeholders and capture value for participating firms.

3. Research setting

3.1. The Australian in-home aged care sector, 2017–2021

The setting for this study is the part of the aged care sector that provided services to older people in their homes and community through the consumer-directed Home Care Package (HCP) system,[2] during the period following the implementation of the *Increasing Choice in Home Care* reforms in 2017 (Department of Health, 2017) to the conclusion of the RCACQS in 2021. In the HCP system, a fixed amount of money is allocated by the Australian Government to an older person for the provision of services that will enable them to continue to live independently in their own home. These services could include meals, gardening, domestic and social support, transportation and personal or nursing care. The amount of money provided depends on the person's needs, as determined by an independent assessment agency. The value of these packages range from approximately A$9000 per year for the lowest Level 1 package to A$52,000 per year for the highest Level 4 package. Consumers may be asked to provide a co-contribution in the form of a basic daily care fee, and some people may pay an extra contribution, depending on their level of income (Aged Care Financing Authority, 2021).

If an organisation wishes to enter the market and deliver services funded by an HCP, they must first be approved by the Australian Government, in accordance with the *Aged Care Act 1997* (Cth). In the original design of the HCP programme, provider organisations were funded to arrange services for a set number of eligible older people. However, since the implementation of reforms in February 2017, HCPs have been assigned directly to the person needing care rather than allocated to providers. This significant policy change is considered to have driven growth in the number of providers in the sector (RCACQS, 2019).

On 30 June 2021, there were 939 approved providers of HCPs serving 176,105 consumers (Department of Health and Aged Care, 2021). While there are several much larger national providers, operating many services across different regions in conjunction with other types of care services, the majority are small single-service organisations that specialise in home care services. Approximately 80% of provider staff are engaged in providing direct care to clients, most of whom are employed as low-qualified personal care workers (Department of Health and Aged Care, 2021).

The prevalence of not-for-profit providers is an important feature of the Australian aged care sector. A majority 63.8% of consumers are engaged with not-for-profit providers, with 30.1% served by for-profit providers and the remaining 6.1% by government providers (Department of Health and Aged Care, 2021). This diversity of ownership structures is helpful for understanding value creation and value capture, given that while these different ownership types might *ex ante* be expected to give rise to different business models, the failure of the sector to create value for consumers of in-home aged care services is pervasive.

Australia's aged care sector has a long history of challenges in the delivery of quality care to older people (Kaine and Green, 2013), as is the case in many other developed nations (Doerflinger et al., 2021; Molterer et al., 2020). Despite the highly regulated nature of the sector, as well as a series of industry-level inquiries and reports (see Table 2 of Appendix 1 for a list of previous inquiries and reports) seeking to improve the sector (Bernoth et al., 2014; Office of the RCACQS, 2019), systemic safety and quality failures have persisted.

3.2. Home care regulatory framework

The Australian regulatory framework for aged care consists of the Aged Care Act 1997 (Cth) and the *Quality of Care Principles 2014* (Cth), which define the obligations and responsibilities that providers need to abide by in the delivery of residential, home and flexible care for older Australians. This regulatory framework provides direction on issues such as the number of staff to be employed and the levels of skill required, as well as user rights and providers' management and governance structures.

Service quality has grown in importance as an aspect of the regulatory framework since the *Aged Care Act* was introduced in 1997. This was initially expressed through the *Quality of Care Principles*, which were mainly concerned with residential care when introduced, but were broadened in 2014 to include three home care standards. Then, in July 2019, a new single set of standards came into force called the *Aged Care Quality Standards*, which apply across all types of aged care.[3] The set comprises eight standards of quality care that define how consumers can expect to be treated and the level of service that providers are expected to deliver (My Aged Care, 2022). The standards include a heightened focus on outcomes for consumers rather than the processes of providers (Smith and Office of the RCACQS, 2019). As explained during a hearing of the RCACQS:

> [The Standards] were designed with a greater emphasis on person-centred care, as evidenced by a more explicit expectation that providers have regard to the experiences of care recipients including requiring providers to offer care and services that promote quality of life and well-being. (Witness Statement of Aged Care Quality and Safety Commissioner, 28 May 2019)

4. Research method

4.1. Data sources and collection methods

The RCACQS is the primary source of data for this study. Royal commissions are considered to be the highest form of public inquiry in Australia (Australian Law Reform Commission, 2009; Prasser, 2006). They have wide-ranging powers to investigate and can summon witnesses to attend hearings and produce evidence. Consequently, they provide researchers with access to unique sets of data and research opportunities (McAllister et al., 2024). Datasets used for this study include archival and contextual data (e.g. reports and documents published or used by the RCACQS), and witness evidence and transcripts of the hearings. These datasets are in the public domain and can be accessed through the RCACQS's now-archived website.[4]

We collected and examined three main bodies of documents. First, we looked at exhibits from the RCACQS hearings, such as documents referred to in witness statements, including application forms, letters and emails, and consultant reports. Second, we examined reports by the RCACQS, such as the Interim Report (RCACQS, 2019), and detailed submissions from Counsel Assisting on workforce issues and the redesign of the aged care system (Counsel Assisting the RCACQS, 2020a, 2020b; see Table 3 of Appendix 1 for a full list of reports and papers published by the RCACQS included in our dataset). Third, we examined reports from previous inquiries into the sector's perceived systemic failure dating back more than 20 years (e.g. inquiries by parliamentary committees and commissioned by governments; see Table 2 of Appendix 1), and the RCACQS's analysis of 18 of these reports that identified key issues and recommendations (Office of the RCACQS, 2019). We also reviewed relevant regulatory frameworks, such as the *Aged Care Act 1997* and the *Aged Care Quality and Safety Commission Act 2018*.

In addition to the three bodies of documentation, we also collected and examined a second data set that contained verbatim transcripts of all witness testimonies and hearing sessions. These data enabled us to foreground and incorporate in our analysis the voices of a range of aged care sector stakeholders, including those of older people receiving and missing out on care within this system (Alm and Guttormsen, 2023). A total of 186 transcripts were sorted and coded using the qualitative research software NVivo (QSR International Pty Ltd, 2018) to help us identify problems relevant to home care from the perspective of: care recipients and their families; provider staff, managers and executives; industry and government representatives; and independent experts.

4.2. Data analysis

Our data analysis was undertaken in three stages. Stage 1 was designed to establish the business model for home care services. For this, we took an abductive approach (Dubois and Gadde, 2002), working from prior constructs and then moving between our own empirical analysis of the sector and theory to identify and represent the dominant industry business model.

In Stage 2, we identified the various problems in the home care sector through review of contextual data, industry reports and statistics, and then undertook detailed analysis of the RCACQS witness transcripts to understand problems from the perspective of stakeholders in the sector. We analysed the transcripts in two rounds. A first round of coding was based on foundational knowledge of the Australian aged care sector, which provided some initial structure to the coding scheme, including key thematic areas and terminology. Because of the expansive scope of issues covered by the RCACQS, this initial round of coding was exploratory and used a grounded theory approach to identify issues and perceptions (Charmaz, 2000; Glaser and Strauss, 1967). A majority of the text was coded to retain the 'voice' of each witness (Alm and Guttormsen, 2023). The coding was conducted independently by two researchers in an iterative manner, allowing for codes to be refined. It involved inductive or heuristic line-by-line coding, with each statement assigned to key thematic areas (Saldaña, 2021). The research team reviewed the coding and the development of the coding scheme as it progressed. The second round of coding sought to identify descriptive data that specifically referenced recurring issues in the delivery of HCPs and the systemic problems in the given business model for home care services.

Stage 3 of our data analysis involved reviewing the RCACQS testimony to better understand the main factors or constraints that sit behind the failure to create and capture value in the delivery of HCPs. For this, we mapped the 'problem' codes to specific components within the business model framework. Two members of the research team independently categorised each home care-specific problem code within one of the nine components of the generic business model, with any differences in categorisation resolved through discussion. This process resulted in the specification and

mapping of over 100 home care unique problems within the business model framework. This analysis is summarised in Table 1. We then used this analysis to organise our qualitative data and develop narrative explanations of how problems were related both within and between business model components.

5. The business model of in-home aged care

5.1. The in-home aged care business model

The value proposition at the heart of the dominant in-home aged care business model (see Figure 1) is based on the provision of quality personal, clinical, domestic and social support services that enable older people to remain at home. The quality of these services is determined by how closely they align with recipients' – and family or carers' – care needs and preferences, and the extent to which they support independence, dignity and control.

In aged care, the provision of 'safe and high quality care' is critical for value creation. For aged care customers, value is created through the delivery of services (e.g. meals, gardening, domestic and social support, transportation and personal or nursing care) that meet their needs, and that they are willing to pay for. However, an unusual feature of this business model is the ambiguous role of cost in customers' assessment of value. This is because while clients must be provided with an itemised statement of services provided and fees charged to the individualised HCP, out-of-pocket consumer contributions are a very small proportion of total fees (approximately 3% in 2019–2020; Aged Care Financing Authority, 2021).

Value is captured by provider organisations through the receipt of revenues related to the delivery of services to customers. Income is received, for the most part, through government funding, notwithstanding the small financial contribution that consumers can be asked to make. When this research was conducted, provider organisations could earn additional revenues through earnings on interest paid on unspent funds, and through donations and fundraising. Revenues are offset by expenses that typically include direct care staffing costs, care management and advisory costs, and administrative and support costs.

The components of the dominant business model for in-home aged care are represented in Figure 1.

5.2. Problems with the home care value proposition

Our analysis of the RCACQS data revealed systematic failures relating to the core 'value proposition' within the business model of providing safe quality in home aged care (see Section 5.1). First, many recipients who are eligible to receive services are not in fact able to access those services. In June 2020, the RCACQS noted that there were 102,081 people on the waiting list for an HCP (RCACQS, 2021b: 62). Waiting times varied according to the level of HCP, from 7 months for the lowest level package to 34 months for the highest level package (RCACQS, 2021b: 62). Second, some customers are allocated HCPs but at a lower level than what they actually need as an interim measure until full funding for an appropriate higher level becomes available. Thus, some customers are receiving services but continue to have unmet care needs as the services they can access are not at the level they need to maintain their independence, health, wellbeing and safety.

Furthermore, many services provided to HCP recipients are of poor quality. This was reflected both in survey results furnished to the RCACQS, and in the testimony of witnesses given at RCACQS hearings:

Table 1. Mapping problems to business model components and constraints.

Identified problems	Home care sector issue	Business model component	Business model constraint
• Complaints are ignored or devalued • It is hard to know where to go to complain about home care	Complaints	Value proposition	Problems relating to the value proposition of in-home aged care are the outcome of constraints and interdependencies between other business model components: • Channel constraints • Revenue constraints • Resource constraints
• Consumers expect choice and quality in return for their contributions • Consumers think they are not getting the services they pay for	Consumer financial contribution		
• Care agreements are enormously complex • Consumer needed to find own staff • Consumers are highly reliant on carers • Consumers need to tell staff what to do • Different providers do not communicate or coordinate their services • Home care packages are allocated at a lower level than the consumer's need and are inadequate	Home care services		
• Home care services are more likely to fail to meet standards • Providers need information to benchmark performance • Service quality falls as provider organisation grows rapidly	Performance of providers		
• Aged Care Assessment Team (ACAT) assessments need to be more available • ACAT assessments should involve comprehensive geriatric assessments (CGA) • ACAT assessors do not always understand dementia • ACAT should support re-ablement as well as increased care • Consumers are given a lower package level than their assessment • Consumers cannot readily compare costs on My Aged Care • Consumers need help to navigate the system • Face-to-face services needed within My Aged Care • My Aged care does not accommodate people with disabilities • My Aged Care does not consider the complexities of dementia • My Aged Care is incompatible with the context and populations of remote communities • My Aged Care is not working well • My Aged Care provides little information • Personal approach is preferred to impersonal ways • Provider information on My Aged Care needs to be accurate • Quality of advice from My Aged Care can be problematic • There are constant bureaucratic barriers • There needs to be multiple communication channels • You need computer skills to use My Aged Care portal	Access to aged care services	Channels	Channels through which older people register for services, apply for assessments and identify appropriate care providers are controlled by the Department of Health, with limited ability for providers to tailor communication or even correct inaccurate information being provided. Channels are especially problematic in the context of customer segments, as older people may be more likely to experience challenges accessing web- and phone-based platforms and may prefer in-person services. Assessments undertaken within networks & partnerships can result in delayed or inadequate funding entitlements. This means that providers are constrained in their ability to create value because of barriers to access that originate in the regulatory and funding environment.
• A provider performance dashboard could assist consumers • Consumers need better information to guide their choices • Information asymmetry makes it hard for consumers to determine quality • Prices and administration fees should be transparent • Providers should publish comparable pricing and service information	Consumer information needs to improve		
• Consumers are given a lower package than their assessment	Access to aged care services	Customer segments	
• Home care waiting list creates inequities • Home care waiting list is at crisis point • More high care packages are needed • Need to fast track referrals and packages for terminally ill people	Home care waiting list		
• Communities are very small and difficult to service; access to care is insufficient • There are issues around providing equitable care in rural and remote areas	Rural and remote communities		

(Continued)

Table 1. (Continued)

Identified problems	Home care sector issue	Business model component	Business model constraint
• Accreditation process does not currently drive quality • Accreditation processes are not working	Accreditation and assessment processes for providers	Networks and partnerships	
• Different providers do not communicate or coordinate their services	Home care services		
• Consumers are not using all their funding • Flexible funding for providers could augment packages • Individualised funding has meant less time for staff meetings and training • Providers can no longer pool funds	Consumer directed care	Revenues	Revenues are generated when services are delivered and fees are paid in arrears. However, revenues are effectively capped by (a) the number of 'packages' a provider is approved to service and (b) the total value of 'packages' across the client base. This means that the ability for providers to create value for the delivery of services is limited by funding rather than either capacity to supply services or demand for those services. Unpredictable and largely uncontrollable revenues are problematic because they necessitate a correspondingly variable cost structure. This results in the use of a casualised workforce and acute time pressure on the value creating activities of personal care workers. This constrains the ability of providers to both create value for consumers through the provision of services by consistent and experienced staff, and capture value by retaining surplus funds (either as returns to owners or for re-investment in the business).
• Are there sufficient controls on the application of funds by providers to service home care consumers? • Difficulty accessing home care funding during transition from residential to home care • Flexible funding mechanisms are needed • Funding and not demand determines availability of services • Funding has not kept pace with demand and costs • Need for more higher level flexible home care packages • Requests and need for home care exceeding service provision due to lack of funding • Some home care providers are self-funding palliative care clients • There are targets for funding of home care packages • Unspent home care funds are sitting with providers	Funding		
• Delays in home care packages mean some providers are self-funding • More high care packages are needed • Providers are able to supply the waiting list (i.e. could meet demand and earn more)	Home care waiting list		
• Culture of workplaces, systems and processes are factors contributing to the failure of care • There is technological incompetence and poor information communication	Causes of failure in aged care	Activities	
• Individualised funding has meant less time for staff meetings and training	Consumer directed care		
• Distance makes it difficult to provide and access services	Rural and remote communities		
• Staffing needs are unpredictable for providers • There is a lack of induction for new staff	Staffing in home care services		
• Basic minimum training inadequate for the expanding role and expectations of assistants in nursing and care workers • Gaining qualifications has minimal impact on wage level or job role • Ongoing training is important but lacking • There are limited aged care placements during tertiary education • Many RNs and graduate nurses in aged care are junior and lack experience • Workers' qualifications need to be recognised and they should be paid accordingly • Workers and nurses need and want better training • Workers are asked to perform medical procedures and give medicines without adequate training • Workers expected to do compulsory training during work hours	Training and education		
• Costs are higher in servicing remote communities	Rural and remote communities	Costs	
• Industry is highly casualised • Some staff are sub-contractors	Staffing in home care services		

(Continued)

Table 1. (Continued)

Identified problems	Home care sector issue	Business model component	Business model constraint
• Aged care workers do not have the time to do their job properly • Aged care workers have no time or need more time to develop relationships with consumers • More time is required to allow for the emotional and personal care that can surround a simple task • Staff workload is an issue in home care services • There is not enough time to assist inexperienced staff • Time pressure increases risk of assault for workers • Time pressure increases risk of injury and decreases dignity of risk	Aged care workers are time pressured	Key resources	Aged care workers are the key resource for home care services providers, yet the availability of a sufficient workforce is highly constrained at the sector level due to perceptions of poor pay and working conditions relative to alternative pathways within the care economy.
• Aged care workers experience job insecurity • Aged care workforce do additional work without pay • Communication between employers and employees in aged care is poor • Employment conditions are poor • Good staffing levels and better pay would create attraction and retention in the workforce • Increased wages and improved working conditions would improve quality and safety of care • There are OHS risks and hazards in home care • There is high turnover in the workforce • Work is stressful • Workers are low paid • Workers with high qualifications can only get permanent work at a lower grade of work and a lower level of pay	Aged care workforce		Difficulties recruiting and retaining sufficiently skilled and qualified workers inhibits the ability of providers to develop consumers preferred customer relationship, which is person-centred rather than task-focused and involves continuity of carers. A lack of the resources required to provide safe, high-quality person-centred care is a constraint on the ability of providers to create value for consumers in the sector.
• Staff competency and qualifications are poor	Causes of failure in aged care		
• Aged care needs to be seen as an attractive career • Employment conditions need to improve including wage increases, job security and working time security • Funding is required to establish staffing models that include adequate staffing mix and time allowance	Future of the workforce		
• Certificate III qualification should be a minimum requirement • Home care providers are understaffed • Home care staff have no training • Home care staff need to have the right temperament and compassion • Home care staff would appreciate additional training • Some staff are sub-contractors	Staffing in home care services		
• Employers do not facilitate nor support staff study and employees have to pay for their own qualifications	Training and education		
• Aged care workers have no time or need more time to develop relationships with consumers and residents • Care provision is rationed • More time is required to allow for the emotional and personal care that can surround a simple task • Staff workload is an issue in home care services	Aged care workers are time pressured	Customer relationships	
• Poor communication with families • Poor interface between staff and consumers	Causes of failure in aged care		
• Consumer education is needed about how home care funds can be spent • There is confusion about what funds can be spent on	Consumer-directed care		
• Time-driven task-focused care is poor quality care • Understaffing makes person-centred care provision more difficult	Person-centred care		
• Consumer-directed care model does not work in areas where there is a thin market	Rural and remote communities		

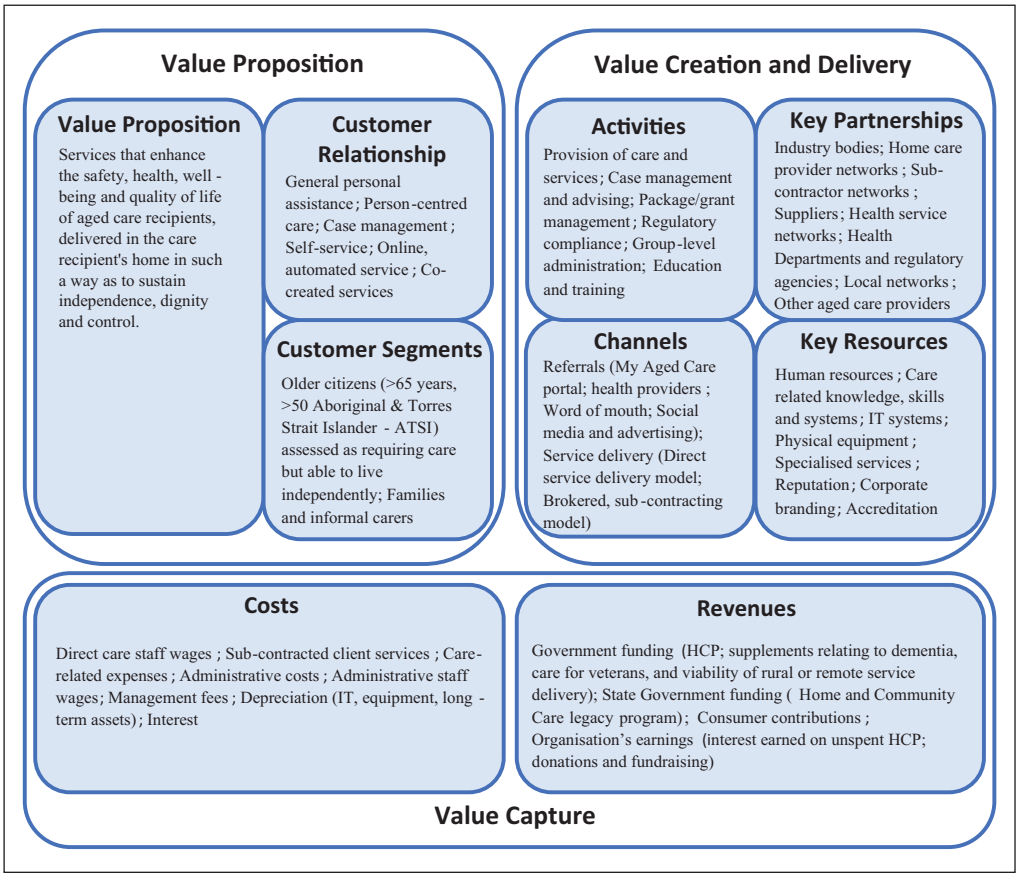

Figure 1. The home care business model (format adapted from Davies and Doherty, 2019).

> We do hear concerns that [staff are] not properly trained. We do hear concerns that they're unreliable and it makes a huge difference if someone is due to turn up and they don't. So . . . those complaints go to quality of service. (Testimony of Consumer Advocate, 12 February 2019)

At the same time, evidence prepared for the RCACQS showed a steady decrease in the profitability in the in-home care sector over time, with the profit margin shrinking considerably from 10.7% in FY2017 – prior to the introduction of consumer-directed care – to 3.7% in FY2019 (BDO, 2020: 59). For FY2018, 29.5% were assessed as 'not profitable' (BDO, 2020: 65). This trend continued into 2021, with the financial performance of in-home care services declining by 25.5% from December 2020 to December 2021 (Sutton et al., 2022).

Next, we consider the extent to which these problems with the delivery of the value proposition of in-home aged care are related to external factors that constrain business model design.

5.3. Constraints on the delivery of the value proposition

Three major constraining factors emerged from our analysis of problems with the delivery of the value proposition: (1) channel constraints, (2) revenue constraints and (3) resource constraints. In

the following analysis, we show how external constraints work through interdependencies between business model components to limit service providers' capacity to innovate and adapt, and, ultimately, to deliver on the value proposition of quality care. This analysis is also summarised in Table 1.

5.3.1. Channel constraints: prescribed customer–provider interface. The first constraint relates to the channels through which consumers learn about and access in-home aged care services. To access HCP services, government regulation prescribes that potential customers must use *My Aged Care*.[5] This government-designated channel for the HCPs business model is a predominantly web-based portal conceived as the single-entry point to connect customers to government-funded aged care services. It comprises a website, contact centre, assessment services and a referral service. While the intention of *My Aged Care* is to simplify the customer experience by offering a 'one-stop-shop', evidence presented to the RCACQS indicates that *My Aged Care* is instead 'time-consuming, overwhelming, frightening and intimidating' (RCACQS, 2021a: 65). As *My Aged Care* had no physical presence at the time of the study, it relied on potential customers having a computer, an Internet connection, and the skills to use the website or the capacity to discuss their complex needs over the telephone.

However, constrained choice around the channels through which consumers learn about and access services is rendered problematic by its interdependence with the particular customer segment that the services are intended to reach. This customer segment is people aged 65 and above – or 50 and above for Aboriginal and Torres Strait Islander people – who may not be comfortable with web- and phone-based platforms. *My Aged Care*, thus, poses an immediate barrier to the purchase of services by consumers because it is difficult to access and use by the customer segment being targeted. Additional barriers to consumers being able to access services they require are long delays and often inappropriate outcomes of assessment processes undertaken outside of provider firms by assessment organisations within the broader network and partnerships. This was highlighted by many witnesses as illustrated by the following quotes:

> The idea that this is a system that is navigable by the average client is absurd. (Testimony of Independent Expert, 17 June 2019)

> I live in a retirement village and so many, mainly elderly, women have said: 'It's just too hard. I – I will just give up. I will stay as I am and my daughter will have to keep coming up from the country', or whatever their arrangements are now, they resolve to continue with them because it's just all too hard. (Testimony of Care Recipient, 20 March 2019)

For those consumers who have successfully navigated the *My Aged Care* portal and subsequent assessment process, a second barrier arises: lack of information. As noted by the RCACQS: 'People seeking services are not able to find out from *My Aged Care* whether a service will meet their specific needs' (RCACQS, 2021a: 65). A consistent theme in testimony before the RCACQS was that information about services on *My Aged Care* is not presented in a standardised way, and critical information that could help customers compare the quality of services delivered by different providers is simply not available. As a result, it is difficult for customers to identify high-performing providers or to know whether a service will meet their needs (RCACQS, 2021a). There were numerous calls for a standard rating or assessment system that would enable customers to meaningfully compare different services and providers: The following quote highlights this point:

> I think that there needs to be more options for researching home care providers. They need some kind of comparison service, particularly given that they all charge such variable rates. The lack of consistency is

> very confusing for me as a consumer. In my experience, some of the companies charge 48 per cent of the package's fees and others charge only 10 per cent. The fees are described differently across providers, as things like case management, administration, rostering or core components. (Testimony of Care Recipient, 7 July 2019)

From a provider perspective, *My Aged Care* imposes additional limitations on the capacity to communicate with customers. Providers need to update their information in *My Aged Care*, but they too find it a difficult system to use:

> The other aspect is, it's often complex for us as provider organisations to use the system as well. And in order for the system to work well, it's really important that the providers can update their information in a simple manner, have it actually communicating the key issues about their own services. And our experience has been, at the provider end as well as the consumer end, that there could be difficulties with that. (Testimony of Provider Organisation CEO, 18 March 2019)

External constraints on the channels that connect consumers with providers thereby inhibit a provider's ability to create value through the delivery of safe and high quality aged care services. However, this constraint only emerges in the context of the interdependency between channels and customer segments in the business model – the online *My Aged Care* platform may not be (as) problematic for a different customer segment (e.g. family members or carers of older people) with other communication preferences and expectations. In the setting of in-home aged care, this constraint has resulted in many eligible older people not feeling able to access the services they require or to make informed choices about which provider to engage.

5.3.2. Revenue constraints: capped, unpredictable revenue flows. The second constraint relates to how revenues for home care services are constrained, and the implications that this constraint has for organisational activities and cost structure. As mentioned earlier, government regulation stipulates that older people are eligible for an HCP if they satisfy certain criteria relating to age and need. However, a determination of eligibility does not immediately lead to the allocation of an HCP. Government funding of HCPs is rationed and based on government budget allocation rather than assessment of community need or demand (RCACQS, 2019). As explained above, this results in significant waiting lists where potential in-home care customers cannot be converted into actual customers by providers until funding is released by the government, or in customers being allocated a lower level HCP than they are actually entitled to as an interim measure.

These limits to the amount and type of services customers can purchase and providers can sell create significant funding disparity. People assessed as needing the highest Level 4 care package are entitled to funding of A$52,000 per year. However, many of these people are being offered an interim Level 2 package of approximately A$15,750 per year (RCACQS, 2021b: 62).

Another revenue flow issue for in-home care providers pertains to the unpredictability of revenue. Given the age of customers in this sector, customers can pass away or suffer a sudden decline in health that means they need to go into residential care. In either case, for the provider, revenue abruptly ceases, as explained by this Manager:

> [L]ike I said, we were up to 90 packages at one point, then in the month of April this year we went from 86 to 75 in three weeks because people passed away or went into permanent care, and that has a huge impact then on our budget in a short timeframe. Working up here, it's not the kind of work environment where you can pull in casual workers. You know, you've got to have permanent staff, so you've got to go for staff for the median amount of clients you think you're going to have. But when there's sudden big changes like that, and with no idea how long you will be waiting to get more packages because of the

> national wait list being so long, it's very difficult to manage, especially when you've got small numbers of packages. (Testimony of Provider Manager, 18 June 2019)

The response of many providers to these revenue limitations and uncertainties is to shift their business model towards a variable cost structure. Given that care staff wages are the largest expense for in-home care providers, representing 43% of all expenses (BDO, 2020: 62), this has meant a considerable use of agency staff together with casualisation of the workforce. The 2016 National Aged Care Workforce Census and Survey data show the extent of this phenomenon: 27% of in-home care staff were agency brokered or self-employed workers, while 14% of staff were employed on a casual basis (National Institute of Labour Studies, 2017: 28–30).

Cost pressure also has implications on the activities undertaken by personal care workers, increasing their workloads, and reducing quality of services delivered and connection with customers. A 2019 survey of aged care workers (Meagher et al., 2019) found that only a minority of in-home care staff felt able to routinely engage in practices characteristic of individualised, person-centred care, including treating each person as an individual, with respect for their wellbeing and quality of life, rather than just treating their clinical conditions (Cleland et al., 2021). Indeed, 74% of survey respondents reported that they had insufficient time to listen and connect to older people while delivering in-home care (Meagher et al., 2019). These survey findings are supported by testimony presented to the RCACQS. When asked whether they were given adequate time to work with in-home care customers, a personal care worker responded:

> It varies from client to client . . . But if you are continuously going into somewhere, you know, you see the deterioration in some of the clients and it can be quite rapid. And that 15 minutes might turn into 35 minutes. And, of course, the funding that is out there and every minute you go over it, it's every minute they get charged. And so we are on a time clock and it can be quite distressing for myself trying to get the job done if the person is not quite right that day. (Testimony of Personal Care Worker, 19 March 2019)

In our setting, revenue constraints are problematic because they necessitate the adoption of a business model that includes variable cost structure and impairs providers' ability to engage in key activities, including induction, training and development of permanent/directly employed staff. This limits the ability of providers to both create value for consumers through the provision of services by experienced and well-trained staff, and capture value by retaining surplus funds – either as returns to owners or for re-investment in the business.

5.3.3. Resource constraints: insufficient personal care workforce. The third constraint relates to the key resources available to provider organisations (i.e. the personal care workforce) as a critical input to the development of customer relationships within which value can be created. The significance of personal care workers in this sector is evidenced in findings from the National Aged Care Workforce Census and Survey: 84% of the in-home care workforce were personal care attendants or community care workers in 2016 (National Institute of Labour Studies, 2017: 29). In this setting, it is the personal care worker who engages with the consumer in their home and manages the customer relationship. They are responsible for delivering dedicated personal assistance in accordance with the personal needs and preferences of the customer:

> [T]he relationship and the contact and where that trust sits is actually with the direct worker, the people that are coming into their houses every day. (Testimony of Provider, 5 November 2019)

Despite the central importance of personal care workers and their significance in cultivating and maintaining the customer relationship, there are no minimum qualifications or training required for

personal care workers, and skills are often limited (RCACQS, 2021b). This means that most staff are left to learn on the job, where, as was noted by witnesses to the RCACQS, induction and training are severely limited. Compared to nurses and allied health professionals, we observed a 'lack' of regulation of the training and professional development of personal care workers. Constrained and uncertain revenues discussed in the previous section also affect the extent to which providers are prepared to invest in staff development, as highlighted by this statement:

> [W]hen I first started, we had two weeks of full-on induction training followed by two weeks of buddying. Now, new staff only get two days of induction training, when they're put out with a buddy, and then they're put out with a buddy for five to seven days. They have to work out the new phone and roster system on the job. New staff are just pushed out the door. I don't get paid any extra for being the buddy. My current employer does not provide quality training for new starters. This means new staff are given clients they don't feel prepared to care for, and they get burnt out. (Testimony of Personal Care Worker, 17 October 2019)

Poor training and development opportunities and a lack of clear career paths for personal carers result in a high level of attrition, not just from provider organisations but from the sector. This high turnover of staff means that dedicated personal assistance, a type of customer relationship that is central to the delivery of the value proposition in this sector (Edelbalk et al., 1995; Russell et al., 2011), is not always available. Staff are constantly changing so cannot develop strong relationships with customers nor a close understanding of their personal needs. High turnover of staff and its effect on the customer relationship, the level of complaints and resulting quality of care was the subject of extensive commentary at the RCACQS:

> I have lost count of [how many workers attended my house during a seven-year period]. There's so many different workers coming to the house without the name tag, without any identification. They just arrived up at the given time and when I opened the door, there was another strange person there. (Testimony of Care Recipient, 19 March 2019)

> So the complaints you hear, first of all, is the high turnover of home care staff, which makes a real difference, I think, to the – to people who are by themselves and that's the only person they may ever see in their lives and they tend to become – they may become friends, you know, they become familiar faces. If they're changed every two or three or four months, they lose that. They haven't even built up the relationship yet. (Testimony of Consumer Advocate, 12 February 2019)

In business model terms, this constraint originates in the availability of key resources, but its effect on value creation subsequently emerges from the interdependencies with the nature of the customer relationship in this sector. The lack of qualifications or training of workers (i.e. key resource) to deliver highly personalised care, combined with a reluctance or inability of provider organisations to fund comprehensive training internally, can compromise the capacity to deliver high quality services, and the customer relationship itself, which in turn impacts value creation.

6. Discussion

6.1. External constraints on business model innovation

Our analysis demonstrates that the systemic constraints on the components of the in-home care business model type have first- and second-order effects and consequences for the ability of providers to create and capture value. Overall, the failures of both value creation and value capture in

this sector rest not so much in poor performance of particular service providers (e.g. Davies and Doherty, 2019), but reside predominantly in the industry's dominant business model that emerged in response to constraints established by the regulatory and policy environment.

Systemic problems are first-order effects that are embedded in the components of the business model type by external environmental factors. In the home care setting, both the channels and revenue models available to providers are directly determined by government regulation, while the critical resource of appropriately skilled and qualified personal care workers is constrained in part due to a lack of regulation. These systemic problems then give rise to second-order effects due to the interdependencies that exist in the business model and further limit the choices available to providers, resulting in additional problems such as inappropriate communication, activities, workforce and customer relationships. These components and interdependencies are configured within a dominant or typical industry 'recipe'. For example, the mandated 'one-stop-shop' digital portal only becomes problematic in the context of a customer segment exclusively comprised of individuals who are aged 65 and over, whose ability to engage with digital channels cannot be assumed (a constraint on the customer-provider interface). Similarly, the shift towards a consumer-directed funding model has largely failed to provide greater choice, autonomy and control for consumers, as intended, due to the impact of an unpredictable revenue model on the scope of firm activities and, ultimately, the ability of firms to create value through the delivery of safe and high quality services (constraints on revenue flows).

Much of the business models literature envisages an active role for managers in innovating and shaping business models (e.g. Casadesus-Masanell and Ricart, 2008a, 2008b, 2011). Zott and Amit (2010) view the business model as offering a conceptual toolkit that enables entrepreneurial managers to design their business model, while Liu et al. (2021: 13) argue that '[b]usiness models should . . . be treated as dynamic systems that can and should be altered to address challenges and opportunities of the broader environment'. Previous studies have shown how events, such as economic recession or a natural disaster, can lead a firm to innovate and adapt its business model (McDonald et al., 2021; Sosna et al., 2010).

The literature also, however, highlights how systemic problems within a dominant industry 'recipe' have implications for managers' ability to make adaptive choices and innovate within the constraints of the business model type (Patel and Chan, 2021). When external factors, such as highly prescriptive policy settings, preclude the use of alternative business model approaches, their configurations become similarly negatively affected in terms of their ability to create and capture value. Where Leppänen et al. (2023) suggest a focus on performance-enhancing complementarities between business model components and their total effect on the 'operating system' of the business model, our findings caution that misalignment between components can just as easily be performance-inhibiting. Our findings further suggest that prescriptive and multi-faceted policy constraints, when applied to highly interdependent business model components, dramatically reduce the 'degrees of freedom' that are available to managers seeking to adapt and innovate their business model in order to create and capture value. Unlike other uncertainties that have been shown to stimulate business model innovation (McDonald et al., 2021; Osiyevskyy and Dewald, 2018; Weerawardena et al., 2021), external factors that impose constraints on specific business model components can, therefore, embed systemic problems within an entire business model type.

Yunus et al. (2010) suggest that business model innovation is facilitated by three major strategic moves: challenging conventional wisdom, setting up appropriate partnerships, and undertaking experimentation. In regulated sectors, such as the one we studied, there can be limited scope for challenging conventional wisdom and undertaking experimentation. Rather, change and innovation within the Australian aged care sector are likely to be the result of the development of

appropriate partnerships with and between government and industry representative bodies, within which the constraints on provider business models and their effect on the sector's potential for value creation and value capture can be explored and negotiated.[6] By exploring the consequence of the constrained ability of organisations to undertake business model innovation, our findings challenge assumptions about the significance of managerial choice of components and configurations for business model performance (Tykkyläinen and Ritala, 2021), and suggest an additional, external boundary condition on business model innovation.

6.2. Government policy for value creation within human services

Consideration of business models for the specific case of aged care services delivery is an important research issue in light of the trend for governments in developed economies to take a policy approach of outsourcing their delivery of human services (Hardell et al., 2020; Petersen et al., 2018; Rodrigues and Glendinning, 2015). The policies associated with the introduction of consumer-directed care into the Australian in-home care service sector were intended to provide older people with greater autonomy and resources within the aged care system. However, testimony presented to the RCACQS revealed a system that has instead resulted in the widespread exclusion of eligible older people from care services, and increased dependence of some care recipients on an unreliable and inconsistent service. This illustrates how current policy and legislation have resulted in a form of exclusionary business model, with unexpected effects, including inadvertently shutting out many of the stakeholders the regulatory system was intended to support (Martí, 2018).

The vulnerable nature of consumers within the aged care sector means that issues of value in providers' business models inevitably intertwine with practice and policy-based considerations (Bernoth et al., 2014). Although organisations that deliver aged care services can have appropriate care practices, this is different from having appropriate care embedded in their business model. An 'ethics of care' suggests that quality service provision is realised in the intersection of professional and relational logics (Molterer et al., 2020) and requires skilled caregivers with appropriate knowledge, attitude and ethical values (Hosseinabadi et al., 2019). Beyond the operational or practice level, Machold (2017) proposes that a business model centred on an ethics of care would need to be 'anchored in a duty of care toward the firm, which is manifested and enacted through processes of caring in actual relationships with concrete others' (Machold, 2017: 303). By explicitly defining 'value' in terms of a relational ethics of care and explicitly embedding it in the value proposition of the in-home care service delivery business model type, providers may be better positioned to create value for stakeholders while also maintaining the economic viability of their organisation.

As with many societal grand challenges (Martí, 2018), the problems faced by aged care sectors in Australia and elsewhere are intricate and resist simple solutions. It is clear that there are significant challenges with the current trajectory of marketisation, a trend which has been observed in Australia since substantial reforms were undertaken in 1997 to establish a competitive system for the allocation of care funding to provider organisations (Kaine and Green, 2013), and accelerated by the adoption of individualised funding models that allocate funding packages directly to clients rather than to provider organisations (Green and Dalton, 2016; Walker et al., 2022). While the challenges of marketisation for the delivery of long-term care are well-established (Fine and Davidson, 2018; Walker et al., 2022), evidence on the effect of ownership structure (i.e. for-profit, not-for-profit or government) on quality of care remains largely confounded by the complexity of firm-level business model characteristics (Comondore et al., 2009). Our insights contribute a novel way to consider the first- and second-order effects of policies and reform proposals, which considers

not only the direct constraints on business model components but also how interdependencies between components can give rise to unintentional, second-order constraints and thereby embed systematic problems with the creation of value within human services provision.

7. Conclusion

The objective of this study was to explore how environmental constraints can explain how systemic problems become embedded in a dominant business model. We analysed qualitative evidence generated by the RCACQS to identify systemic problems in the dominant industry business model of the Australian in-home aged care sector, and traced the consequences of these problems in terms of the creation of value for stakeholders and capture of value by providers. Business models can both reflect and contribute to industry-level failures when systemic external constraints interact with interdependencies between business model components to severely limit choice and innovation. Within the specific case of in-home aged care services in Australia, we documented a series of constraints generated by the regulatory and policy settings for the sector, and showed that provider organisations across the sector have responded to these constraints in a similar way, resulting in a poor-performing dominant industry business model. These findings suggest that failure of a dominant business model in a sector can be understood not only in terms of systemic problems within business model components, but also through attention to the interaction of interdependencies between business model components and with external constraints.

Because the unit of analysis of the study is the home care service industry, our findings reflect industry-level inputs and outcomes and are not able to represent the circumstances of individual firms, at which level there would undoubtedly be more variation than at the level of the dominant industry business model. This limitation of our study could be addressed through additional research at the firm level in order to understand how problems within this sector are perceived by managers and the nature of their responses. What kinds of workarounds or compensatory strategies might different firms adopt in response to industry-wide constraints and business model interdependencies? To what extent is the range of possible responses related to the tightness or looseness of interdependencies, and the resulting 'degrees of freedom' available to managers? Future studies could use a business models framing to identify alternative configurations in the wider aged care sector in Australia and beyond, and how the in-home aged care service delivery business model sits alongside the other models.

Our findings provide a useful framework to analyse what is to come for the Australian aged care sector, which currently faces a wave of reforms, including the replacement of the HCP programme with a unified system for the delivery of home and community care and the development of a new, fit-for-purpose *Aged Care Act*.[7] The business models framework offers a potentially useful tool for policymakers during this process as a way of locating the effects of regulatory interventions among the components of the dominant business model type, and understanding how interventions can be expected to either enable or constrain their value proposition, especially in terms of the delivery of quality care. Ultimately, our analysis suggests that business model innovation in this sector will require sustained partnerships between regulators and provider organisations, an orientation towards an ethics of care, and careful attention to how regulatory interventions interact with interdependencies within the dominant business model.

These theoretical insights could be further extended to sectors that are also highly regulated, or that create value through the delivery of human services, such as the provision of disability services or childcare services. At the level of policy and practice, consideration of business models for services such as aged care is an important research issue in light of the trend for governments in developed economies to outsource the delivery of human services (Hardell et al., 2020; Petersen et al., 2018;

Rodrigues and Glendinning, 2015). Identifying systemic problems with business model components and their interdependent configurations is an important step to remedying unintended consequences of regulation through intervention and improved policy settings, with the ultimate goal of improving the ability of the business model to deliver its value proposition in a way that supports inclusion, quality and sustainability within the sector.

Key practical and research implications

For researchers: The study of business model failure offers many potential insights into the nature of both value creation and value capture. This case study illustrates how value creation in particular was severely constrained for in-home aged care providers during the period of the study, and draws on business model framing to explain the external origins of those constraints.

A key element of business model framing is that it highlights interdependencies between business model components, such as channels, customer relationships and cost structures. Understanding those interdependencies can help to disentangle the influences of the business environment from managerial choices and their consequences for value creation and value capture.

For policymakers: The business model framework can be a useful tool to anticipate the responses of organisations to constraints generated by complex regulatory and policy settings.
Within our case study of the Australian aged care sector, we show how:

- A prescribed customer–provider interface caused problems with accessibility of services and information by the consume cohort (channel constraint);
- Unpredictable revenue flows necessitated a variable cost structure that limited delivery of services (revenue constraint); and
- An insufficient personal care workforce often inhibited the development of satisfactory customer relationships (resource constraint).

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Notes

1. Home and community based aged care services in Australia are delivered through a range of government-funded programmes, including the Home Care Packages programme, Commonwealth Home Support Programme and Short-Term Restorative Care Programme. In this study, we focus on the Home Care Packages programme as this is associated with the largest amount of public expenditure of the three

programmes (approximately A$4.2 billion of A$7 billion in total spending in 2020–2021; Department of Health and Aged Care, 2021) and provides more comprehensive service offerings to older people with more complex support needs.

2. This analysis does not, however, cover the other components of the in-home aged care system, which include the Commonwealth Home Support Programme and Short-Term Restorative Care Programme. While there is some overlap in the services that are provided under each programme, we focus on the HCP programme because it tends to provide a more comprehensive set of services and is funded through individual subsidies, rather than block grants to providers (Smith and Office of the RCACQS, 2019).
3. The standards are: consumer dignity and choice (about dignity, respect, identity and choice), ongoing assessment and planning (to ensure timely access to appropriate levels of care), personal care and clinical care (providing integrated and safe social and health care), services and supports for daily living (focused on everyday wellbeing), organisation's service environment (about a sense of safety and belonging), feedback and complaints (providing opportunities to address issues as they emerge), human resources (or carers who are knowledgeable and skilled) and organisational governance (about being confident in the way the organisation is run).
4. The complete Terms of Reference and all data used in this study can be found on the archived website for the RCACQS: https://webarchive.nla.gov.au/awa/20210603072444/https://agedcare.royalcommission.gov.au/.
5. See www.myagedcare.gov.au.
6. The role of industry representative bodies in the development of partnerships may be of particular significance in this setting, given the relatively low levels of industry concentration. Low concentration can be attributed to the highly localised nature of in-home aged care services and the challenge of managing geographically dispersed business units, and the subsequently limited ability of firms to achieve cost advantages through mergers and other market consolidation activities.
7. Details of upcoming aged care reform in Australia can be accessed here: https://www.health.gov.au/our-work/aged-care-reforms.

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Appendix 1

Table 2. Reports from previous aged care inquiries included in the dataset.

Reports from previous aged care inquiries		
Date	Author	Title
June 1997	Senate Community Affairs References Committee	*Report on funding of aged care institutions*
Apr 2004	Hogan, W. P.	*Review of pricing arrangements in residential aged care*
Mar 2005	House of Representatives Standing Committee on Health and Ageing	*Future ageing: Report on the inquiry into long-term strategies to address the ageing of the Australian population over the next 40 years*
Dec 2005	Productivity Commission	*Australia's health workforce. Productivity Commission research report*
June 2005	Senate Community Affairs References Committee	*Quality and equity in aged care*
Oct 2007	Campbell Research & Consulting, commissioned by the Australian Government Department of Health and Ageing	*Evaluation of the impact of accreditation on the delivery of quality of care and quality of life to residents in Australian Government subsidized residential aged care homes*
Apr 2009	House of Representatives Standing Committee on Family, Community, Housing and Youth	*Who Cares . . .? Report on the inquiry into better support for carers*
June 2009	National Health and Hospitals Reform Commission	*A healthier future for all Australians: Final report*
June 2011	Australian National Audit Office	*Monitoring and compliance arrangements supporting quality of care in residential aged care homes*
Aug 2011	Productivity Commission	*Caring for older Australians. Productivity Commission report no 53*
Mar 2011	Australian Institute for Social Research	*Implementing the Teaching Nursing Homes initiative: Scoping study final report*
Jan 2012	KPMG for the Department of Health and Ageing	*Evaluation of the consumer-directed care initiative: Final report*
May 2013	KPMG commissioned by the Aged Care Financing Authority	*Scenario analysis of selected LLLB financial arrangements: Interim Report*
June 2013	Aged Care Financing Authority	*Inaugural report on the funding and financing of the aged care sector*
Sep 2013	Australian Skills Quality Authority	*Training for aged and community care in Australia*
June 2014	KPMG for Department of Social Services	*Applicability of consumer directed care principles in residential aged care homes*
Sep 2014	Aged Care Financing Authority	*Improving the collection of financial data from aged care providers*
Mar 2014	Senate Community Affairs References Committee	*Care and management of younger and older Australians living with dementia and behavioural and psychiatric symptoms of dementia (BPSD)*
June 2015	Aged Care Financing Authority	*Factors influencing the financial performance of residential aged care providers*
June 2015	Senate Community Affairs References Committee	*Adequacy of existing residential care arrangements available for young people with severe physical, mental or intellectual disabilities in Australia*

(Continued)

Table 2. (Continued)

Reports from previous aged care inquiries		
Date	Author	Title
Mar 2016	Aged Care Sector Committee	*Aged Care Roadmap*
Sep 2015-June 2016	Aged Care Financing Authority	*Report on the impact of financial reforms on the aged care sector*
Feb 2016	Aged Care Financing Authority	*Report on issues affecting the financial performance of rural and remote providers, both residential and home care providers*
June 2017	Applied Aged Care Solutions, commissioned by the Department of Health	*Review of the Aged Care funding Instrument*
Jan 2017	Aged Care Financing Authority	*Report on access to care for supported residents*
Apr 2017	Aged Care Financing Authority	*Report to inform the 2016-17 review of amendments to the Aged Care Act 1997*
July 2017	Tune, D.	*Legislated review of aged care*
June 2017	Senate Community Affairs References Committee	*Future of Australia's aged care sector workforce*
Oct 2017	Carnell, K., & Paterson, R.	*Independent review of national aged care quality regulatory processes*
June 2017	Australian Law Reform Commission	*Elder abuse – A national legal response. ALRC Report 131*
Oct 2017	Productivity Commission	*Introducing competition and informed user choice into human services: Reforms to human services. Productivity Commission inquiry report no 85*
July 2017	Department of Health	Future reform: An integrated care at home programme to support older Australians
Mar 2017	Aged Care Financing Authority	*The protection of residential aged care lump sum accommodation payments*
May 2017	Ernst & Young Australia	*Review of aged care legislation which provides for the regulation and protection of refundable accommodation payments in residential aged care*
June 2017	Aged Care Financing Authority	*Report on the base interest rate study*
June 2018	Aged Care Workforce Strategy Taskforce	*A matter of care: Australia's aged care workforce strategy*
Sep 2018	Aged Care Financing Authority	*Update on funding and financing issues in the residential aged care industry*
Oct 2018	House of Representatives Standing Committee on Health, Aged Care and Sport	*Report on the inquiry into the quality of care in residential aged care facilities in Australia*
Dec 2018	House of Representatives Standing Committee on Health, Aged Care and Sport	*Advisory report on the Aged Care Amendment (Staffing Ratio Disclosure) Bill 2018*
Apr 2019	Senate Community Affairs References Committee	*Effectiveness of the Aged Care Quality Assessment and accreditation framework for protecting residents from abuse and poor practices, and ensuring proper clinical and medical care standards are maintained and practiced*

(Continued)

Table 2. (Continued)

Reports from previous aged care inquiries		
Date	Author	Title
Feb 2019	Australian Health Services Research Institute, University of Wollongong	*Resource Utilisation and Classification Study (RUCS) reports*

Table 3. Papers and reports published by the RCACQS included in the dataset.

Reports and papers published by the RCACQS		
Date	Author	Title
Feb 2019	Smith, C. & Office of the Royal Commission	Background paper 1: *Navigating the maze: An overview of Australia's current aged care system*
May 2019	Cullen, D. & Office of the Royal Commission	Background paper 2: *Medium- and long-term pressures on the system: The changing demographics and dynamics of aged care*
May 2019	Office of the Royal Commission	Background paper 3: *Dementia in Australia: Nature, prevalence and care*
May 2019	Office of the Royal Commission	Background paper 4: *Restrictive practices in residential aged care in Australia*
June 2019	Office of the Royal Commission	Background paper 5: *Advance care planning in Australia*
July 2019	Office of the Royal Commission	Background paper 6: *Carers of older Australians*
Aug 2019	Office of the Royal Commission	Background paper 7: *Legislative framework for Aged Care Quality and Safety regulation*
Oct 2019	Office of the Royal Commission	Background paper 8: *A history of aged care reviews*
Dec 2019	Office of the Royal Commission for Commissioners	Consultation paper 1: *Aged care program redesign: Services for the future*
June 2020	Office of the Royal Commission for Commissioners	Consultation paper 2: *Financing Aged Care*
Feb 2020	Counsel Assisting the Royal Commission	*Counsel Assisting's submissions on workforce*
Mar 2020	Counsel Assisting the Royal Commission	*Counsel Assisting's submissions on program redesign*
Jan 2020	Flinders University	Research paper 2: *Review of international systems of long-term care of older people*
Jan 2020	Flinders University	Research paper 3: *Review of innovative models of aged care*
July 2020	Roy Morgan	Research paper 4: *What Australians think of ageing and aged care*
July 2020	Ipsos	Research paper 5: *They look after you, you look after them: Community attitudes to ageing and aged care*
July 2020	Flinders University	Research paper 6: *Australia's aged care system: Assessing the views and preferences of the general public for quality of care and future funding*
Aug 2020	National Ageing Research Institute	Research paper 7: *Models of integrated care, health and housing*
Aug 2020	South Australian Health and Medical Research Institute	Research paper 8: *International and national quality and safety indicators for aged care*

(Continued)

Table 3. (Continued)

Reports and papers published by the RCACQS		
Date	Author	Title
Aug 2020	University of Queensland	Research paper 9: *The cost of residential aged care*
Aug 2020	University of Wollongong	Research paper 10: *Technical mapping between ACFI and AN-ACC*
Sep 2020	Deloitte Access Economics	Research paper 11: *Aged care reform: Projecting future impacts*
Sep 2020	BDO	Research paper 12: *Report on the profitability and viability of the Australian aged care industry*
Oct 2020	Deloitte Access Economics	Research paper 13: *Inside the system: Aged care residents' perspectives*
Oct 2020	National Ageing Research Institute	Research paper 14: *Inside the system: Home and respite care clients' perspectives*
Nov 2020	Office of the Royal Commission	Research paper 15: *Residential care quality indicator profile*
Nov 2020	Office of the Royal Commission	Research paper 16: *How far do people move to access aged care?*
Dec 2020	Office of the Royal Commission	Research paper 17: *Experimental estimates of the prevalence of elder abuse in Australian aged care facilities*
Feb 2021	Office of the Royal Commission	Research paper 18: *Hospitalisations in Australian aged care: 2014/15–2018/19*
Feb 2021	Office of the Royal Commission	Research paper 19: *Does the quality of residential aged care vary with residents' financial means?*
Feb 2021	Flinders University and the Caring Futures Institute	Research paper 20: *The quality of care experience and community expectations*
Oct 2019	Royal Commission into Aged Care Quality and Safety	*Interim report: Neglect*
Feb 2021	Royal Commission into Aged Care Quality and Safety	*Final report: Care, dignity and respect*