Management innovation: The influence of institutional pressures and the impact on competitive advantage
Abstract

Purpose
Drawing on DiMaggio and Powell’s (1983) perspective of institutional theory, this study examines the influence of institutional pressures on the adoption of management innovation and the subsequent impact of management innovation on competitive advantage.

Design / methodology / approach
Data were obtained from 156 middle-level managers in Australia using a survey questionnaire, with data analysed using structural equation modelling.

Findings
The results show that internal coercive pressures and normative pressures are positively associated with both dimensions of management innovation (i.e. practices and techniques). However, external coercive pressures were found to negatively influence management innovation techniques, and no association was found between mimetic pressures with either dimension of management innovation. Finally, both dimensions of management innovation were positively associated with competitive advantage.

Originality
The findings provide organisations with an insight into the institutional factors that influence their ability to introduce new management practices and techniques (i.e. management innovation), and the role of management innovation in enhancing competitive advantage.

Keywords: Management innovation; institutional theory; institutional pressures; competitive advantage
1. Introduction

The ability to innovate facilitates adaptation to environmental changes (Damanpour et al., 2009) and leads to improved organisational performance (Rhodes et al., 2008). In addition to offering new technological advancements, products, or services, innovative capability also encompasses the evolving nature of management styles. This is referred to as management innovation (Vaccaro et al., 2012; Volberda et al., 2013), and defined as “the invention and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organisational goals” (Birkinshaw et al., 2008, p. 825). Management innovations aim to improve productivity and achieve performance objectives (Damanpour and Aravind, 2012; Walker et al., 2015) and can involve novel changes considered to be ‘state of the art’, that is innovations that are new and without known precedents, or novel changes that are new to the adopting organisation, regardless of whether such changes have been adopted by other organisations. This study focuses on management innovation that is new to adopting organisations rather than ‘state of the art’ (Mol and Birkinshaw, 2009; Vaccaro et al., 2012; Walker et al., 2011).

The recent focus on management innovation is due, in part, to the growing realization of the importance of innovative management practices and approaches for organisational performance (Camisón and Villar-López, 2014; Walker et al., 2015). For instance, it has been proven that management innovations such as the lean production system and total quality management (TQM) at Toyota, the Six Sigma process at General Electric, and the virtual organisational structure at Visa have led those companies to improve their performance (Hamel, 2006). Further, management innovation is a firm-specific resource that is intangible and difficult to replicate, imitate, or transfer from one organisation to another, which makes it an important source of competitive advantage (Hamel, 2006; Mol and Birkinshaw, 2006, 2009; Volberda et al., 2013). Therefore, due to its important role in improving organisational performance (Camisón and Villar-López, 2014; Walker et al., 2015), there is a need to further explore the management innovation phenomenon, including the factors that influence its adoption and its impact on organisational outcomes (Khosravi et al., 2019; Walker et al., 2015). Accordingly, this study aims to provide an empirical insight into the influence of institutional pressures on the adoption of management innovation and the subsequent impact of management innovation on competitive advantage.
While previous research has examined the influence of various internal and external antecedents of management innovation including strategy (Naranjo-Gil, 2009) and leadership (Su and Baird, 2018; Vaccaro et al., 2012), this study empirically examines the influence of DiMaggio and Powell’s (1991) three institutional pressures (coercive, mimetic, and normative) on the adoption of management innovation. Hence, from a theoretical perspective, the study enriches the New Institutional Sociology strand of institutional theory by empirically examining the influence of external (macros) and internal (micro) organisational contexts (DiMaggio & Powell, 1991) on specific organisational behaviour i.e. the adoption of management innovation. Consequently, our enhanced understanding of management innovation is grounded in the new institutional sociology strand of institutional theory, which maintains that the prevalence or adoption of management innovation in organisations is driven by societal forces (Bocquet and Dubouloz, 2020), or more specifically, the coercive, mimetic and normative pressures which impact organisations and compel them and/or inspire them to engage in management innovation.

In addition, the study contributes to the performance-based literature by examining the impact of management innovation in respect to a particular strategic outcome, competitive advantage. Specifically, while previous studies have reported the positive influence of management innovation on organisational outcomes including organisational performance, organisational survival, and the quality of work (Damanpour et al., 2009; Mol and Birkinshaw, 2009; Volberda et al., 2013), in line with the Resource-Based Theory framework which maintains that organisations aim to utilise their resources and capabilities for the purpose of achieving competitive advantage over their rivals, we provide an empirical insight into the impact of management innovation on competitive advantage. The institutional perspective supports this relationship, maintaining that the adoption of management innovation is associated with social and legitimatization benefits, which influence both organisational performance and competitiveness (Walker et al., 2015). Hence, management innovation represents an important source of competitive advantage (Damanpour and Aravind, 2012; Hamel, 2006; Mol and Birkinshaw, 2006, 2009).

Therefore, the study employs institutional theory to provide an empirical insight into the influence of coercive, mimetic and pressures on management innovation and also
examines the subsequent impact of management innovation on competitive advantage. The findings will assist practitioners by highlighting the strategic benefits of management innovation (i.e. competitive advantage) and providing them with an insight into the effects of institutional pressures on management innovation, thereby enabling them to be aware of and take appropriate action to apply institutional pressures which encourage the engagement in management innovation.

2. Literature review and hypotheses development

2.1 Management innovation

Management innovation encompasses the introduction of new management practices, structures, processes, systems, and programs in an organisation, and aims to enhance organisational performance. According to Hamel (2006, p. 75), management innovation reflects a “marked departure from traditional management principles, processes, and practices or a departure from customary organisational forms that significantly alters the way the work of management is performed”. Introducing novel ways of implementing management is essential to the efforts of organisations to enhance their productivity, improve products and services quality, reinforce the efficiency and effectiveness of internal organisational processes, and maintain competitiveness (Mol and Birkinshaw, 2009; Volberda et al., 2013; Walker et al., 2011).

Following the definition of management innovation by Birkinshaw et al. (2008), management innovation encompasses four dimensions: practices, processes, structures, and techniques (Birkinshaw et al., 2008; Mol and Birkinshaw, 2009; Volberda et al., 2013). Management practices involve changes to the daily work practices of managers, such as setting objectives and plans and arranging tasks and functions (Birkinshaw et al., 2008; Hamel, 2006; Mol and Birkinshaw, 2009). With respect to processes, changes are implemented in the routines that underlie management work to convert these into actionable objectives. Examples of such routines include the process of performance assessment and lean manufacturing (Birkinshaw et al., 2008; Hamel, 2006). Management innovation in structures entails reorganizing communication systems to assign responsibilities and align efforts, as is the case with divisional structures (Hamel, 2006; Volberda et al., 2013). Finally, management techniques include the management accounting tools and approaches used to accomplish specific tasks or targets; for example, Activity Based Costing (ABC), the Balanced Scorecard (BSC), and Benchmarking (Birkinshaw et al., 2008; Hamel, 2006; Mol and Birkinshaw, 2008).
2.2 The association between institutional pressures and management innovation

Institutional theory suggests that institutional contexts are characterized by the rule-like social expectations and shared norms that organisations should comply with to protect their legitimacy and ensure access to scarce resources (DiMaggio and Powell, 1983; Estrada and Zhou, 2021). Institutional theory proposes that changes in organisational structures and behaviour are more strongly driven by the need for institutional legitimacy than by the desire to improve performance and organisational efficiency (DiMaggio and Powell, 1983; Liu et al., 2010). Hence, it is argued that institutional pressures influence organisational actions (Hsia et al., 2019; Qi et al., 2021) including the adoption of management innovation which is introduced for “social and institutional reasons rather than purely rational ones” (Bocquet and Dubouloz, 2020, p. 47).

DiMaggio and Powell (1983) identify three types of institutional pressures underlying managerial decisions to adopt similar practices: coercive, mimetic, and normative pressures. This study examines the association between each of these three institutional pressures and management innovation (see Figure 1).

2.2.1 Coercive pressures

Coercive pressures derive from the “formal and informal pressures exerted on organisations upon which they are dependent and by cultural expectations in the society within which organisations function” (DiMaggio and Powell, 1983, p. 150). This includes the political influence exerted by government regulations, industry policies, professional associations and networks, powerful organisations, and parent corporations (DiMaggio and Powell, 1983; Fikru, 2014; Hsia et al., 2019; Teo et al., 2003). Organisations may implement specific practices or systems in response to government mandates, such as tax and environmental requirements (DiMaggio and Powell, 1983). Further, powerful organisations may exert political pressures on other organisations, encouraging them to adopt or reject a management practice (Wang et al., 2018). According to Teo et al. (2003), coercive pressures are built into exchange relationships, whereby organisations maintain these relationships and satisfy their need for
legitimacy by responding to these forces (DiMaggio and Powell, 1983). For example, resource-
dominant organisations (e.g., customers or suppliers) possess and control scarce and vital assets
(John et al., 2001; Teo et al., 2003). Hence, from a resource-dependence perspective, these
organisations may coerce dependent organisations to adopt favourable management structures,
practices, processes, or organisational models that best serve the powerful organisation’s
interests (Bocquet and Dubouloz, 2020; John et al., 2001; Liu et al., 2010; Teo et al., 2003).
Similarly, parent corporations may also impose coercive pressure on their subsidiaries by
demanding conformity to practices and structures, for example the adoption of a specific hiring
system or internal financial reporting structure which is compatible with the policies and
standards of the parent entity (DiMaggio and Powell, 1983; Teo et al., 2003).

Munir and Baird (2016) found that the coercive pressures applied to banks resulted in them
adopting the use of multidimensional performance measures (i.e., BSC), while Wang et al.
(2019) found that coercive pressures influenced organisations to adopt Environmental
Management Accounting (EMA). Similarly, it is expected that an organisation that is subjected
to coercive pressure is likely to adopt management innovation to a greater extent.

Hypothesis 1: The influence of coercive pressure will be positively associated with
management innovation.

2.2.2 Mimetic pressures
Mimetic pressures arise due to uncertainty in the institutional environment which encourages
imitation i.e. organisations change over time to model their structures and strategies on other
organisations perceived as successful (DiMaggio and Powell, 1983). Mimetic practices may
be diffused directly by consulting organisations, or unintentionally and indirectly through
employee transfers and turnover (DiMaggio and Powell, 1983). In particular, mimetic
pressures manifest in two ways: the perceived success of organisations in the same industry
that have adopted the practice, and the prevalence of a practice in the focal organisation’s
industry (Teo et al., 2003). Either way, organisations “imitate actions or managerial practices
adopted by other users that appear better able to cope with economic difficulties and market
constraints” (Bocquet and Dubouloz, 2020, p. 51). In this way, organisations minimize the
costs of search and experimentation, and avoid the risk of being a first-mover (Teo et al., 2003).
An organisation may copy the practices of another organisation to achieve legitimacy in wider social structures (DiMaggio and Powell, 1983; Teo et al., 2003), to assure its survival and demonstrate that it is at least trying to improve its position in the market (DiMaggio and Powell, 1983). Further, they may imitate their competitors’ adoption of specific innovations to avoid risking their competitors achieving competitive advantage by adopting such innovations (Abrahamson and Bartner, 1990).

A number of studies have highlighted the influence of the imitation process on the adoption of specific management innovations, such as TQM (Westphal et al., 1997), E-health (Hsia et al., 2019) and ABC systems (Malmi, 1999). Similarly, in line with these findings, we hypothesise that an organisation that is subjected to mimetic pressure is likely to adopt management innovation to a greater extent.

**Hypothesis 2**: The influence of mimetic pressure will be positively associated with management innovation.

### 2.2.3 Normative pressures

Normative pressures stem primarily from professionalization (DiMaggio and Powell, 1983), which refers to “relations between management policies and the background of employees in terms of educational level, job experience and networks of professional identification” (Paauwe and Boselie, 2005, p. 990). Normative pressures involve socializing an organisation within its institutional environment and concerns social obligations that define the appropriate and expected conduct of organisations, i.e. norms, expectations, conditions (Hsia et al., 2019). Two aspects of professionalization are considered to be the primary sources of normative values: 1) formal education and training by universities and professional institutions; and 2) industry, professional associations, networks, and affiliations (DiMaggio and Powell, 1983; Paauwe and Boselie, 2005). Organisations and individuals interact with industry and professional associations, which creates shared norms and values (DiMaggio and Powell, 1983; Liu et al., 2010) that are shared among members of professional networks, and in turn influence organisational behaviour (Teo et al., 2003).

Normative pressures are considered to play an important role in the adoption of management innovation with organisations conforming by adopting prevailing management innovations.
(DiMaggio and Powell, 1983). For example, dos Santos et al. (2020) found that consultancy companies exert normative pressures on organisations to implement new management techniques. Similarly, D’Andreamatteo et al. (2019) refer to the role of professional associations and consultancy firms in influencing organisations to adopt management accounting practices while Wang et al. (2019) reported a positive association between normative pressures and the use of EMA. Further, participation in professional networks may influence the organisation’s decision to adopt management innovation (Damanpour and Aravind, 2012). Therefore, it is hypothesised that an organisation that is subjected to normative pressure is more likely to adopt management innovation to a greater extent.

**Hypothesis 3:** The influence of normative pressure will be positively associated with management innovation.

2.3 The association between management innovation and competitive advantage

An organisation has competitive advantage “if it is able to create more economic value than the marginal (breakeven) competitor in its product market” (Peteraf and Barney, 2003, p. 314). Hence, organisations that are more successful than their rivals or have superior performance over their competitors have competitive advantage (Schilke, 2014). According to Barney (1991, p.102), competitive advantage is achieved when organisations are able to implement a strategy that is not “simultaneously being implemented by any current or potential competitors”.

Generally, organisations adopt innovations to generate and maintain a competitive position (Camisón and Villar-López, 2014; Damanpour et al., 2018; Volberda et al., 2013). For instance, in the extant literature, management innovation is identified as an important source of competitive advantage (Barney, 1991; Hamel, 2006; Lin et al., 2016; Mol and Birkinshaw, 2006, 2009; Volberda et al., 2013; Zhang et al., 2019). In particular, given management innovation is inherently complex and specific to each organisation’s context, structure, and resources, it is likely to create competitive advantage that is difficult to replicate (Hamel, 2006; Khosravi et al., 2019; Lin et al., 2016). For example, well-known management innovations, such as Toyota’s production system, have driven the company’s long-term competitive advantage in the global marketplace (Hamel, 2006; Mol and Birkinshaw, 2006), with western automobile companies failing to duplicate such innovations. Similarly, brand management at
Procter & Gamble and Six Sigma at General Electric has assisted these companies in attaining a significant competitive position (Hamel, 2006; Mol and Birkinshaw, 2008).

Management innovation enhances competitive advantage through improving the efficiency and effectiveness of internal organisational processes (Volberda et al., 2013), and increasing productivity (Mol and Birkinshaw, 2009). Further, adopting new systems and methods to manage customer relationships, such as Customer Relationship Management (CRM), enhances customer loyalty and reduces the number of customer complaints (Mol and Birkinshaw, 2008), thus assisting in enhancing competitive advantage. Finally, implementing new structures to manage organisational activities and work responsibilities (e.g. work-out groups, decentralization and teamwork) (Mol and Birkinshaw, 2008) improves the effectiveness of work tasks and improves the decision-making process, thereby enhancing competitive advantage. Therefore, management innovation is expected to enhance competitive advantage.

**Hypothesis 4:** Management innovation will be positively associated with competitive advantage.

3. Method

3.1 Data collection

The data was collected using the survey method. Initially, 480 questionnaires were distributed by mail to middle-level operating managers (e.g. in finance, marketing, production, research and development, business development and human resources) in Australia with participants randomly chosen from the OneSource database (D&B Hoovers). These respondents were chosen on the basis that in addition to being held accountable for their own areas’ performance it is highly likely that they would be informed of and possibly even involved in higher level management discussions regarding the performance and day-to-day functioning of the organisation and hence, possess the relevant knowledge regarding their organisation’s operations that was necessary for them to complete the survey.

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1 OneSource is a dataset that provides in-depth business information of private and public companies.
2 The final selection was based on calls made to the selected organisation as well as checking both their website and managers’ LinkedIn accounts.
The mail questionnaire was developed using Dillman’s (2007) Tailored Design Method (TDM) to improve the response rate. This approach consists of guidelines in respect to the style and format of questions and distribution procedures. For example, the instrument was structured in a respondent-friendly style, while the questions were carefully phrased in a simple manner and presented in colour to enhance the attractiveness of the questionnaire.

Despite following the TDM approach carefully, only 46 completed questionnaires were returned following the initial and follow-up mail-outs (i.e. a response rate of 9.6%). Consequently, an additional online survey was administered using the Qualtrics platform. This resulted in the return of an additional 110 questionnaires, providing a total of 156 completed questionnaires.

3.2 Non-response bias and common method bias

The data was tested for potential biases by testing for non-response bias and common method bias. Non-response bias was tested using a comparison of the mean variable scores of the early and late respondents for both the mail and online surveys. No significant differences were found between the mean variable scores of the 19 respondents from the initial mail-out (i.e. early responders) and the 27 respondents from the follow-up mail-out (i.e. late responders), and therefore, non-response bias wasn’t considered to be a problem for the mail survey. Regarding the online survey (i.e. Qualtrics), the mean variable scores of the first 55 responses was compared with the second 55 responses. With the exception of the mimetic pressure variable, this comparison also revealed no significant differences.

In addition, given that both mail and online data were obtained from a single-respondent, common method bias was tested using Harman’s (1967) single-factor test with the results revealing that the total variance explained by a single factor was 34.65%. This was below the 50% threshold recommended by Podsakoff et al. (2003), thereby indicating that common method bias was not a problem.

3.3 Variables measurement

3.3.1 Institutional pressures

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3 This is considered to be a random result given no such problems were found in respect to the other institutional pressure measures.
The influence of institutional pressures on the adoption of management innovation was measured by asking the respondents to indicate the extent to which 20 different institutional pressures (see Table 1) identified from the literature (Munir and Baird, 2016), influenced their organisations to use specific management innovations, using a five-point scale with anchors of 1 “not at all” to 5 “to a great extent”.

Exploratory factor analysis (EFA) was conducted, with principal component analysis (varimax rotation) used as the extraction method. The analysis uncovered four factorial groups that accounted for 66.2% of the total variance, with the results of the factor analysis presented in Table 1. The first factor encompassed six items relating to compliance with external standards and professional bodies and therefore was labelled “normative pressures”. The second factor comprised pressures exerted by the surrounding institutional environment (four items) including the pressure to comply with industry and government regulations, and therefore was labelled “external coercive pressures”. The third factor consisted of four items and was labelled “internal coercive pressures” as it included forces from within the organisation, such as pressure from senior management, directors, and head office. Finally, the fourth factor covered five items including competition, awareness of best practices and legitimisation of activities and was therefore labelled “mimetic pressures”.

Confirmatory factor analysis (CFA) was subsequently performed to assess the validity of the measurement constructs (Table 2), with the reliability of the measures tested by calculating the Cronbach’s alpha scores. The measurement model for normative pressures and internal coercive pressures exhibited a good fit and reported Cronbach’s alpha scores above the 0.70 threshold suggested by Nunnally (1978). However, the CFA for external coercive pressures and mimetic pressures resulted in the removal of items due to low loadings (items 14 and 15, and items 4 and 5 respectively). Hence, there were not enough items to determine the model goodness of fits. However, the reliability of these measures is assured due to the reported Cronbach’s alpha scores of 0.851 and 0.738 respectively.
3.3.2 Management innovation

Management innovation was measured based on Volberda et al.’s (2013) integrative framework which focuses on four aspects: new managerial practices, processes, structures and techniques. The measure included a combination of Volberda et al.’s (2013) six-item scale (using anchors of 1 = “strongly disagree” and 5 = “strongly agree”) and the extent to which six contemporary innovative management accounting practices (TQM, ABC, BSC, EMA, Benchmarking and Value Chain Analysis) were adopted (using anchors of 1= “not at all” and 5 = “to a great extent”) (see Appendix). These six contemporary management accounting practices are identical to those used by Su and Baird (2018) who chose them as they “involve fundamental changes in the way in which organisations are managed” (Su and Baird, 2018, p. 2762).

EFA with principal component method (varimax rotation) was conducted on the 12 management innovation items and revealed two dimensions that accounted for 63.84% of the total variance explained. The first dimension encompassed six items that measure new management practices, processes, and structures and was therefore labelled “management innovation practices”. The second dimension included items relating to new management techniques (six items) and hence, was labelled “management innovation techniques”.

The CFA and high Cronbach’s alpha scores supported the validity of each dimension of management innovation. Therefore, the level of management innovation practices and management innovation techniques were measured based on the average score for the items included in each dimension, with higher (lower) scores representing a higher (lower) level of management innovation practices and management innovation techniques.

3.3.3 Competitive advantage

Competitive advantage was evaluated using an adapted version of Schilke’s (2014) six-item instrument (see Appendix). Respondents were required to identify how their organisation performed in relation to seven items that covered various aspects of financial and strategic performance, using a seven-point Likert scale, with anchors of 1 = “strongly disagree” and 7 = “strongly agree” (see Appendix). EFA demonstrated that all seven items loaded onto one factor. Further, CFA and the Cronbach’s alpha score (0.933) supports the validity of the
measure. Hence, competitive advantage was measured as the average score of the seven items, with higher (lower) scores reflecting stronger (weaker) competitive advantage.

4. Results

4.1 Descriptive statistics

The descriptive statistics are presented in Table 3 and reveal that both management innovation practices and management innovation techniques have moderate mean scores\(^4\). The mean scores for the institutional pressures indicate the extent of influence of each type of pressure with mimetic pressures exerting the strongest pressure and internal coercive pressures exerting the least pressure. Competitive advantage has a relatively high mean score, indicating a high level of competitive advantage.

| Insert Table III about here |

4.2 Reliability and validity

In addition to the Cronbach’s alpha (\(\alpha\)) scores, the reliability of the constructs was further tested by calculating composite reliability (CR) scores, with Table 4 revealing that the CR values exceeded the 0.60 threshold for all of the constructs (Bagozzi and Yi, 1988). In addition, the average variance extracted (AVE) was calculated to test the convergent validity, with all of the constructs having an AVE value that exceeds the required cut-off value of 0.50 (Hair \textit{et al.}, 1998). In assessing the discriminant validity, the value of the square root of the AVE scores for each construct was greater than the correlation values with all of the other constructs (Fornell and Larcker, 1981), with the results in Table 5 supporting the discriminant validity of the constructs.

| Insert Table IV about here |

| Insert Table V about here |

4.3 The structural model

\(^4\) Mean scores at the mid-point of the range are considered moderate.
The data was analysed using structural equation modelling using AMOS software, with the results of the path analysis presented in Table 6 and Figure 2. In accordance with Anderson and Gerbing (1988), non-significant paths were removed from the model until the final model was achieved. The results indicate a good model fit\(^5\) (CMIN/DF = 1.698, GFI = 0.981, AGFI = 0.913, CFI = 0.987, RMSEA = 0.067).

4.3.1 The association between institutional pressures and management innovation

The structural equation modelling reveals a positive association between internal coercive pressures and management innovation practices ($\beta = 0.213$, $p = 0.019$) and techniques ($\beta = 0.200$, $p = 0.017$). However, external coercive pressures are negatively associated with management innovation techniques ($\beta = -0.147$, $p = 0.044$), and hence, H1 is only partially supported. No association was found between mimetic pressures and management innovation and therefore H2 is not supported. Finally, normative pressures were found to be positively associated with both management innovation practices ($\beta = 0.244$, $p = 0.007$) and techniques ($\beta = 0.462$, $p = 0.000$), thereby providing support for H3.

4.3.2 The association between management innovation and competitive advantage

Table 6 illustrates that both dimensions of management innovation, practices ($\beta = 0.206$, $p = 0.013$) and techniques ($\beta = 0.306$, $p = 0.000$), were positively related to competitive advantage, thereby providing support for H4.

5. Discussion and conclusion

The study contributes to the New Institutional Sociology strand of institutional theory and the contingency-based literature by providing empirical evidence in respect to the influence of institutional pressures on management innovation. In addition, the study highlights the benefits of management innovation through examining its subsequent influence on competitive

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\(^5\) Values of CMIN/DF < 5, CFI \(\geq\) 0.95, GFI \(\geq\) 0.90, AGFI \(\geq\) 0.90 and RMSEA < 0.08 (Hu & Bentler, 1999) are considered indicative of a good model fit.
advantage with the results confirming that both management innovation practices and techniques are positively related to competitive advantage. Such findings reinforce claims that management innovation is a source of competitive advantage (e.g. Damanpour and Aravind, 2012; Hamel, 2006; Mol and Birkinshaw, 2006, 2009). Accordingly, it is recommended that managers employ new management practices (structures, processes, practices) and techniques (TQM, BSC, ABM, Benchmarking, EMA, and Value chain Analysis) in order to enhance the competitive advantage of their organisations.

The crucial role of management innovation in enhancing competitive advantage highlights the importance of investigating the antecedents of management innovation. Our study contributes to this literature through examining the influence of DiMaggio and Powell’s (1983) three institutional pressures (coercive, mimetic, and normative) on management innovation. The findings revealed that internal coercive pressures are positively related to both management innovation practices and techniques. This suggests that coercive pressures from within an organisation, particularly pressure from senior management, the board of directors, head office, and changes in an organisation’s strategic orientation, can enhance the level of management innovation in organisations.

Alternatively, external coercive pressures, such as the pressure to comply with industry and government regulations were negatively associated with the adoption of management innovation techniques. This finding implies that the imposition of such regulations may inhibit an organisation’s extent of management innovation through providing specifications and/or guidelines in respect to management practices and/or restricting their ability to reflect on and be creative due to the extensive amount of time spent ensuring compliance with such regulations. Alternatively, whilst the exact nature of these pressures is unknown and specific to each organisation, the negative association here may be attributed to “the reluctance [of employees] to conform to new modes of thinking and behaviour, either by choice or through difficulty in adapting” (Burns and Scapens, 2000, p.16). Hence, while organisations are unable to manage these external forces, managers should be aware of them and their ability to negatively influence their adoption of management innovation techniques.

Surprisingly, mimetic pressures showed no association with management innovation practices or techniques, suggesting that organisations do not tend to follow their
competitors in adopting management innovations. This result is inconsistent with the findings of previous studies in which mimetic isomorphism is argued to stimulate the organisational adoption of innovation in general, and management innovation in particular (e.g. Walker et al., 2011). However, this finding is consistent with dos Santos et al. (2020) and may be attributed to organisations trying to avoid the negative performance consequences associated with the imitation of other organisations’ management innovation (Barreto and Baden-Fuller, 2006). For instance, as such innovations require in-house knowledge and expertise, and are customised for individual organisational circumstances, organisations may fear that they will not be as successful in implementing such innovations. Alternatively, as Wang et al. (2019) suggest as an explanation of their finding of no association between mimetic pressures and the implementation of EMA, this may reflect a conscious decision to not incur the costs associated with installing management innovations either due to a lack of resources and/or cost-benefit analysis. Finally, rather than imitating management innovation practices, it may be that organisations choose to devote their efforts and limited resources to pursuing legitimacy through developing their own management innovation practices, thereby enabling them to achieve stronger competitive advantages. Future qualitative research could examine this issue further.

Finally, the results indicated that normative pressures were positively associated with both management innovation practices and techniques. This outcome is consistent with the findings of dos Santos et al. (2020) and indicates that normative pressures are an important force underlying the adoption of management innovation. Hence, the findings indicate that the recommendations of professional associations and experts (e.g. international accounting and auditing bodies, trade associations, and professional networking) and the introduction of new professional standards or principles are likely to facilitate enhancements in the level of management innovation.

The findings have a number of practical implications. Initially, through highlighting the positive association between management innovation (both practices and techniques) with competitive advantage, the findings reinforce the importance of and the need for managers to regularly engage in management innovation. Accordingly, it is recommended that managers should be regularly adapting and renewing rules and regulations, as well as employee tasks, functions, and compensation systems, in a way
which enables them to achieve competitive advantage. In addition, they should be looking to embrace new ideas and implement new management systems, make adjustments to their organisational structure, and implement new management and communication systems. Further, as the use of the six identified techniques exhibited a positive effect on competitive advantage, managers are also encouraged to implement and/or enhance their focus on the use of TQM, BSC, ABM, EMA, Benchmarking and Value Chain Analysis.

In addition to highlighting the importance of management innovation, the study provides managers with a practical insight into the mechanism through which it can be enhanced, focusing on the role of institutional pressures in enhancing management innovation. The findings here point to the important role of normative pressures and internal coercive pressures in influencing the uptake of management innovation. From a managerial perspective, these findings have two important practical implications. First, given the observed influence of normative pressures, managers are encouraged to participate in networking events, engage with their peers, and keep abreast of the advice and recommendations of local and international professional trade associations and standard setting bodies in respect to the introduction of new management practices and techniques. In particular, managers should constantly reflect upon their organisational activities with a view to introducing new management practices and techniques which may provide them with the opportunity to manage such activities more efficiently and/or effectively, thereby facilitating competitive advantage.

Secondly, the observed positive effect of internal coercive pressure on management innovation, specifically the pressure from senior management (including Directors, head office and strategic plans), highlights the crucial role of senior management in promulgating management innovation within organisations. Acknowledging that managers and/or employees may be reluctant to initiate and/or conform to change (Burns and Scapens, 2000), the introduction of new management practice and techniques may be challenging, which may serve to explain why senior management must play such a key role here in proactively coercing the adoption of management innovation. At the same time, while the findings allude to the role of senior management in pressuring the use of management innovation, in doing so, it is recommended that they attempt to overcome employee resistance to change through providing an appropriate supportive environment...
i.e. the provision of adequate resources, training and general support to facilitate the effectiveness of management innovation.

The study is subject to some limitations, which suggest avenues for future research. The usual limitations associated with the use of a mail survey method apply, including common method bias and social desirability bias. Accordingly, future studies may reinforce the findings of this study by using alternative research methods, such as interviews, to provide further insights into the influence of institutional pressures on management innovation. Future research can also conduct longitudinal and comparative investigations into the impact of management innovation on competitive advantage. Further, given the lack of a significant relationship between mimetic pressures and the adoption of management innovation, future studies are encouraged to further investigate this relationship. Future research may also examine how organisations strategically respond to institutional pressures to adopt management innovation. Finally, given that management innovation is important to enhance organisational performance and competitive advantage, future research may examine the role of organisational capabilities in the adoption of management innovation.
References


Appendix

Management innovation

Management innovation practices
1. Rules and procedures within our organisation are regularly renewed.
2. We regularly make changes to our employees’ tasks and functions.
3. Our organisation regularly implements new management systems.
4. The policy with regards to employee compensation has been changed in the last three years.
5. The intra- and inter-departmental communication structure within our organisation is regularly restructured.
6. We continuously alter certain elements of the organisational structure.

Management innovation techniques
1. Total Quality Management
2. Balanced Scorecard
3. Activity-Based Management
4. Environmental Management Accounting
5. Benchmarking
6. Value Chain Analysis

Competitive advantage
1. We have gained strategic advantage over our competitors.
2. We have a large market share.
3. Overall, we are more successful than our major competitors.
4. Our EBIT (earnings before interest and taxes) is continuously above industry average.
5. Our ROI (return on investment) is continuously above industry average.
6. Our ROS (return on sales) is continuously above industry average.
7. Our sales growth rate is continuously above industry average.
Table I: Factor analysis of institutional pressures

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An uncertain economic environment</td>
<td>0.043</td>
<td>0.037</td>
<td>0.186</td>
<td>0.730</td>
</tr>
<tr>
<td>2. Higher economic growth and development</td>
<td>0.351</td>
<td>0.038</td>
<td>0.110</td>
<td>0.775</td>
</tr>
<tr>
<td>3. Competition in the industry</td>
<td>0.023</td>
<td>0.168</td>
<td>0.122</td>
<td>0.737</td>
</tr>
<tr>
<td>4. Awareness of best practices in the industry</td>
<td>0.157</td>
<td>0.509</td>
<td>-0.051</td>
<td>0.521</td>
</tr>
<tr>
<td>5. Legitimizing our activities</td>
<td>0.375</td>
<td>0.382</td>
<td>0.256</td>
<td>0.403</td>
</tr>
<tr>
<td>6. Compliance with industry regulations</td>
<td>0.258</td>
<td>0.800</td>
<td>0.113</td>
<td>0.067</td>
</tr>
<tr>
<td>7. Compliance with government regulations</td>
<td>0.240</td>
<td>10.794</td>
<td>0.148</td>
<td>0.127</td>
</tr>
<tr>
<td>8. Compliance with media pressures</td>
<td>0.738</td>
<td>-0.023</td>
<td>0.304</td>
<td>0.107</td>
</tr>
<tr>
<td>9. Compliance with IFRS and International Auditing Standards</td>
<td>0.702</td>
<td>0.236</td>
<td>0.293</td>
<td>0.085</td>
</tr>
<tr>
<td>10. Recommendations from professional bodies and experts</td>
<td>0.604</td>
<td>0.344</td>
<td>0.220</td>
<td>0.225</td>
</tr>
<tr>
<td>11. Recommendations from trade associations</td>
<td>0.779</td>
<td>0.225</td>
<td>0.129</td>
<td>0.211</td>
</tr>
<tr>
<td>12. New accounting standards</td>
<td>0.715</td>
<td>0.334</td>
<td>0.031</td>
<td>0.141</td>
</tr>
<tr>
<td>13. New corporate governance requirements</td>
<td>0.562</td>
<td>0.559</td>
<td>0.160</td>
<td>-0.110</td>
</tr>
<tr>
<td>14. Initiatives taken by experienced staff</td>
<td>0.264</td>
<td>0.529</td>
<td>0.101</td>
<td>0.431</td>
</tr>
<tr>
<td>15. Education and training received by staff</td>
<td>0.414</td>
<td>0.490</td>
<td>0.178</td>
<td>0.377</td>
</tr>
<tr>
<td>16. Obligation to follow international standards</td>
<td>0.735</td>
<td>0.321</td>
<td>0.289</td>
<td>-0.034</td>
</tr>
<tr>
<td>17. Pressure from senior management</td>
<td>0.258</td>
<td>0.158</td>
<td>0.831</td>
<td>0.181</td>
</tr>
<tr>
<td>18. Pressure from the Director</td>
<td>0.210</td>
<td>0.151</td>
<td>0.846</td>
<td>0.074</td>
</tr>
<tr>
<td>19. Pressure from head office</td>
<td>0.383</td>
<td>-0.005</td>
<td>0.798</td>
<td>0.182</td>
</tr>
<tr>
<td>20. New vision, mission or strategic plans</td>
<td>0.084</td>
<td>0.497</td>
<td>0.561</td>
<td>0.273</td>
</tr>
</tbody>
</table>

Extraction Method: principal component. Rotation Method: Varimax with Kaiser Normalisation. Rotation converged in 5 iterations. The bold items are loaded to each factor based on the cut-off point of 0.4.

Table II: Results of the measurement models

<table>
<thead>
<tr>
<th>Variable</th>
<th>No. of items</th>
<th>Cronbach’s α</th>
<th>CMIN/DF</th>
<th>df</th>
<th>GFI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal coercive pressures</td>
<td>4</td>
<td>0.868</td>
<td>0.267</td>
<td>2</td>
<td>0.998</td>
<td>1.000</td>
<td>0.000</td>
</tr>
<tr>
<td>External coercive pressures</td>
<td>2</td>
<td>0.851</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Mimetic pressures</td>
<td>3</td>
<td>0.738</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Normative pressures</td>
<td>7</td>
<td>0.896</td>
<td>1.343</td>
<td>13</td>
<td>0.969</td>
<td>0.992</td>
<td>0.047</td>
</tr>
<tr>
<td>Management innovation practices</td>
<td>6</td>
<td>0.869</td>
<td>2.109</td>
<td>7</td>
<td>0.968</td>
<td>0.981</td>
<td>0.085</td>
</tr>
<tr>
<td>Management innovation techniques</td>
<td>6</td>
<td>0.890</td>
<td>1.614</td>
<td>8</td>
<td>0.973</td>
<td>0.990</td>
<td>0.063</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>7</td>
<td>0.933</td>
<td>1.570</td>
<td>10</td>
<td>0.972</td>
<td>0.994</td>
<td>0.061</td>
</tr>
</tbody>
</table>

Note: Recommended threshold CMIN/DF < 5; GFI > 0.90; CFI > 0.95; RMSEA < 0.08
Table III: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Theoretical range</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal coercive pressures</td>
<td>3.39</td>
<td>1.06</td>
<td>1-5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>External coercive pressures</td>
<td>3.53</td>
<td>0.95</td>
<td>1-5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Mimetic pressures</td>
<td>3.64</td>
<td>0.8</td>
<td>1-5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Normative pressures</td>
<td>3.45</td>
<td>0.89</td>
<td>1-5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Management innovation practices</td>
<td>3.4</td>
<td>0.86</td>
<td>1-5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Management innovation techniques</td>
<td>3.18</td>
<td>1.09</td>
<td>1-5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>4.78</td>
<td>1.25</td>
<td>1-7</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Table IV: Reliability and validity of the measurements

<table>
<thead>
<tr>
<th>Variable</th>
<th>AVE</th>
<th>CR</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal coercive pressures</td>
<td>0.64</td>
<td>0.87</td>
<td>0.87</td>
</tr>
<tr>
<td>External coercive pressures</td>
<td>0.64</td>
<td>0.78</td>
<td>0.85</td>
</tr>
<tr>
<td>Mimetic pressures</td>
<td>0.50</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>Normative pressures</td>
<td>0.56</td>
<td>0.90</td>
<td>0.90</td>
</tr>
<tr>
<td>Management innovation practices</td>
<td>0.61</td>
<td>0.86</td>
<td>0.86</td>
</tr>
<tr>
<td>Management innovation techniques</td>
<td>0.56</td>
<td>0.89</td>
<td>0.89</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>0.65</td>
<td>0.93</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Note: AVE = Average variance extracted; CR = Composite reliability; α = Cronbach’s Alpha

Table V: Square root of average variance extracted (AVE) and correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Internal coercive pressures</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. External coercive pressures</td>
<td>0.39</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Mimetic pressures</td>
<td>0.39</td>
<td>0.31</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Normative pressures</td>
<td>0.59</td>
<td>0.55</td>
<td>0.34</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Management innovation practices</td>
<td>0.36</td>
<td>0.26</td>
<td>0.29</td>
<td>0.37</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Management innovation techniques</td>
<td>0.42</td>
<td>0.21</td>
<td>0.30</td>
<td>0.50</td>
<td>0.55</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>7. Competitive advantage</td>
<td>0.38</td>
<td>0.19</td>
<td>0.33</td>
<td>0.39</td>
<td>0.42</td>
<td>0.47</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Note: The diagonal scores in bold represent the square root of AVE
Table VI: Results of structural equation model

<table>
<thead>
<tr>
<th>Regression path</th>
<th>Path coefficient</th>
<th>SE</th>
<th>t-value</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal coercive pressures → Management innovation practices</td>
<td>0.213</td>
<td>0.073</td>
<td>2.343</td>
<td>0.019</td>
</tr>
<tr>
<td>Internal coercive pressures → Management innovation techniques</td>
<td>0.200</td>
<td>0.087</td>
<td>2.381</td>
<td>0.017</td>
</tr>
<tr>
<td>External coercive pressures → Management innovation techniques</td>
<td>-0.147</td>
<td>0.082</td>
<td>-2.010</td>
<td>0.044</td>
</tr>
<tr>
<td>Normative pressures → Management innovation practices</td>
<td>0.244</td>
<td>0.093</td>
<td>2.686</td>
<td>0.007</td>
</tr>
<tr>
<td>Normative pressures → Management innovation techniques</td>
<td>0.462</td>
<td>0.119</td>
<td>5.053</td>
<td>0.000</td>
</tr>
<tr>
<td>Management innovation practices → Competitive advantage</td>
<td>0.206</td>
<td>0.119</td>
<td>2.481</td>
<td>0.013</td>
</tr>
<tr>
<td>Management innovation techniques → Competitive advantage</td>
<td>0.306</td>
<td>0.094</td>
<td>3.682</td>
<td>0.000</td>
</tr>
<tr>
<td>Mimetic pressures → Competitive advantage</td>
<td>0.177</td>
<td>0.099</td>
<td>2.528</td>
<td>0.011</td>
</tr>
</tbody>
</table>

Goodness-of-fit indices: $\text{CMIN/DF} = 1.698$, $\text{GFI} = 0.981$, $\text{AGFI} = 0.913$, $\text{CFI} = 0.987$, $\text{RMSEA} = 0.067$
Figure 1: Conceptual model

![Diagram showing conceptual model with nodes labeled Coercive pressures, Mimetetic pressures, Normative pressures, Management innovation, and Competitive advantage. Arrows from coercive pressures to management innovation labeled H1, from mimetic pressures to management innovation labeled H2, from normative pressures to management innovation labeled H3, and from management innovation to competitive advantage labeled H4.]
Figure 2: The structure model