

Dynamic managerial capabilities, organisational capacity for change and organisational performance: the moderating effect of attitude towards change in a public service organisation

DMCs, OCC
and
organisational
performance

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Abstract

Purpose – The aim of this study is to explore dynamic managerial capabilities (DMCs) and their effect on public organisational performance. While the previous research has focused on how leadership style impacts on organisational performance, the authors have investigated how the dynamic managerial capabilities of middle managers and their organisational capacity for change as well as their attitude towards the change are linked to organisational performance.

Design/methodology/approach – The dataset was gathered during the field research carried out in a large public Indonesian government institution. In total, 313 managers and their direct followers participated in this study. The authors have employed structural equation modelling to test the hypotheses.

Findings – The results of this study demonstrate the role of the dynamic capabilities of the middle managers associated with organisational performance. The results show that dynamic managerial capabilities and organisational performance are mediated by the organisational capacity for change.

Practical implications – Middle managers should equip and develop their capabilities in order to embrace change in the organisation through the communication between the different staff levels, uniting the vision and mission with the organisational members. Further, the organisation should empower the role of the middle managers by increasing their authority and participation in the policy-making that is part of the change process. In addition, the workplace could implement interventions to optimise the dynamic managerial capabilities held by the middle manager and employees through assessments and mentoring. Finally, particular training programmes could be implemented to boost the employees' skills and flexibility, thereby keeping them agile in the context of the changes in the work environment.

Originality/value – The role of the dynamic managerial capabilities of the middle manager is a prominent factor when facilitating a high level of organisational performance in a public organisation. However, the role of dynamic managerial capabilities does not have a direct effect on organisational performance if the organisation does not have the capacity to change, particularly in the Indonesian context.

Keywords Dynamic managerial capabilities, Capacity for change, Performance, Attitude towards change, Public organisation, Indonesia

Paper type Research paper

Introduction

For the last two decades, extensive administrative reforms have been executed around the globe. Reforming governmental organisations remains a key concern for legislators, top management executives and high-level public managers (Ritz and Fernandez, 2011).

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However, the current trend has not resulted in a high volume of studies investigating the issue of change management in public organisations.

Research on managing change typically investigates the organisational (macro) level (Homberg *et al.*, 2019). Moreover, the area of managing change research has predominantly examined the “static” attributes of the top executives or individuals and the reactions of the employees towards the change. However, it is not clear in the literature what the role of the middle manager is as a “mediator” in the management of change between the top management level and the lower employees in public agencies undergoing the change process. In addition, a consensus on what underlying capabilities a manager should possess to overcome the resistance to change in their team and to simultaneously build up the capability for change in the organisation does not exist in the literature.

The idea of dynamic capability theory provides a dynamic perspective of the capabilities required for the organisation (e.g. the manager) to perform. They should be agile when leading the change process. Dynamic capability theory was mainly developed using the research studies of Nelson (1991), Kogut and Zander (1992), Amit and Schoemaker (1993), Henderson and Cockburn (1994) and Teece *et al.* (1997). The research suggests that a manager requires dynamic managerial capabilities (DMCs) to manage change successfully in both public and private organisations (O'Reilly and Tushman, 2008; Snell and Morris, 2014; Fischbacher-Smith, 2017). A public organisation manager needs to figure out how the employees' behaviour patterns, beliefs, attitudes, opinions and motives cause them to behave in the change process (Paarlberg and Lavigna, 2010; Frynas and Mellahi, 2015). DMC consists of three underlying factors: managerial cognition, social capital and human capital (Adner and Helfat, 2003; Helfat and Martin, 2015; Correa *et al.*, 2018). Although dynamic capabilities act as a pivotal factor for the organisation to use to deal with the change process, very few studies have investigated the role of the dynamic capabilities of the middle manager in the change process and its link to organisational performance (Andreeva and Ritala, 2016). In the present study, we argue that a high level of DMC is associated with the middle managers exploring opportunities in the changing environment (Adner and Helfat, 2003; Snell and Morris, 2014; Helfat and Peteraf, 2015) such as building networks to implement strategy changes (Carrión *et al.*, 2018), increasing the ability to adapt in a changing environment (Zhao and Goodman, 2018) and learning and obtaining a high level of performance (Gatenby *et al.*, 2014; Tseng and Lee, 2014; Giaque, 2016; Pick and Teo, 2016; Quinn *et al.*, 2019).

In addition to DMC, organisational capacity for change (OCC) plays a critical role in an organisation managing change. OCC is the source of long-term organisational dynamism or generic capability dynamism (Winter, 2003; Klarner *et al.*, 2008; Andreeva and Ritala, 2016) in which the employees encounter a changing environment by shifting their old capabilities to new capabilities (Judge and Elenkov, 2005; Judge and Douglas, 2009; Heckmann *et al.*, 2016; Holbeche, 2018). We suggest that OCC will thrive if the middle manager has a high level of DMC (Klarner *et al.*, 2008; Soparnot, 2011) in order to link with the organisational performance (Judge and Elenkov, 2005; Judge *et al.*, 2009; Ramus, 2012). We propose, therefore, that OCC mediates the relationship between DMC and organisational performance.

Furthermore, managers are those who are most likely to have to deal with the various hurdles that exist during the change process. A critical factor in organisational change is the attitude towards change or resistance to change (Pardo del Val and Martinez, 2003; Erwin and Garman, 2010; Smollan, 2011). Attitude towards change (ATC) has become a very important issue in public organisations lately (Ford and D'Amelio, 2008; Pieterse *et al.*, 2012; Srivastava and Agrawal, 2020) and includes the affective, behavioural and cognitive components (Oreg, 2006). We argue that attitude towards change acts as a boundary condition for the link between OCC and organisational performance.

The current study makes a number of contributions. First, we extend DMC theory by examining its relationship with organisational performance. Fainshmidt *et al.* (2016) found

that higher order dynamic capabilities are mediated by lower order dynamic capabilities in the context of achieving performance. Moreover, Helfat and Martin (2015) stated that DMC does not directly affect performance and further research is needed to determine the mediation present between DMC and performance. This study is unique since it focuses on examining how the lower level of DMC, i.e. that of the middle managers, has an important role in aligning and executing strategy. In contrast, the previous studies have predominantly investigated DMC at the top management level (Ambrosini and Altintas, 2019). In addition, this study focuses on examining how the middle manager's dynamic capabilities are needed in the organisation change process, particularly in public organisations where the study of dynamic capabilities and change capability is underexplored. Second, we propose that OCC has a role as a mediating mechanism in terms of the link between DMC and organisational performance. This is scantily proposed in the management and organisation literature. It has, thus, far mainly been conducted in the context of profit-oriented companies (Judge and Elenkov, 2005; Judge *et al.*, 2009), service companies (Judge and Douglas, 2009; Heckmann *et al.*, 2016) and non-profit oriented companies in the health sector (Klarner *et al.*, 2008; Zhao and Goodman, 2018). Lastly, there is a lack of previous studies in terms of examining how the attitude towards change acts as boundary condition of the organisational capacity for change in order to elevate organisational performance. This study was written in the following order. First is the review of the literature. Second is the development of the hypotheses and the research model, followed by the research method. Fourth, we present the results and research discussion, and finally, we discuss the limitations and proposals for further research.

Theoretical framework

Dynamic managerial capabilities (DMC)

The value of change is part of the organisational context as the shared belief of the employees concerning the importance of the changes that affect their behaviour, decisions and the implementation of the change itself (Klarner *et al.*, 2008; Zhao and Goodman, 2018). An organisation needs evolving dynamic managerial capabilities to be held by the manager in order to become agile in a changing environment. Adner and Helfat (2003) defined DMC as the ability to build, integrate and configure competencies and resources. The research by Helfat and Martin (2015) and Snehvrat and Dutta (2018) shows that DMC as a whole is a beneficial capability for a manager to use when adapting to the change process. Below we will explain how the aspects of DMC, namely managerial cognition, social capital and human capital, link to the manager's actions and how decision-making is interrelated (Helfat and Martin, 2015).

The managerial cognition capability enables the manager to have a high level of analytical skill in order to better face competitive situations. It allows a manager to optimise, coordinate and manage collaborations to produce anticipatory actions in order to respond to environmental changes (Helfat and Martin, 2015; Levine *et al.*, 2017). Moreover, managerial cognition can link to the manager's perception when assessing the current organisational condition and the decisions taken (Adner and Helfat, 2003). Managers who have cognitive capabilities will deliver appropriate strategies based on a comprehensive analysis conducted in the process of problem-solving (Caughron *et al.*, 2013; Partlow *et al.*, 2015). This ability allows the managers to make the right decisions and to find solutions that lead to a higher level of subordinate trust (Sirmon and Hitt, 2009; Heyden *et al.*, 2017).

Managerial social capital triggers bonds between the individuals within an organisation that allow trust and hope to flourish (Ugaddan and Park, 2017). Social capital is defined as the good intentions of individuals or groups where the social relations have a collective structure and content (Adler and Kwon, 2002). It creates the advantage of having access to information on the network (Adler and Kwon, 2002), and it facilitates the process of knowledge transfer (Guo *et al.*, 2016). Managers with the social capital ability encourage a process of change that

is built collectively through negotiation and discussions with all members of the organisation (Zhang *et al.*, 2017). Relationships and networks will be formed that facilitate the exchange of resources and the transfer of knowledge from and between the network members (Kim *et al.*, 2016; Liu, 2017). The social capital of the managers encourages knowledge management that directly or indirectly facilitates knowledge management (Zhang *et al.*, 2017). The members of the organisation will understand the importance of change and build a collective initiation of change to achieve sustainable development (Woodward and Henry, 2004).

In addition to cognitive and other abilities, human capital is a prominent factor in a manager succeeding in the workplace (Helfat and Martin, 2015). Human capital is a managerial ability derived from education, experience and training (Adner and Helfat, 2003) that allows the managers to make routine changes through systematic experimentation. This encourages the development of high-level competencies (Bendig *et al.*, 2018). This ability refers to the skills and knowledge learnt and developed by individuals through their previous experience, training and education as well as the psychological attributes of the cognitive abilities (general intelligence) and other abilities (personality, values and interests) of individuals (Helfat and Martin, 2015). We argue human capital “as a unit-level resource that is created from the emergence of individuals’ knowledge, skills, abilities, or other characteristics” that can contribute to competitive advantage (Ployhart and Moliterno, 2011, p. 1). A manager who has a high level of the human capital ability can combine the information and knowledge that they possess so as to transform their value-added resources and to gain new knowledge (Bontis and Fitz, 2002). Human capital enables an individual manager to obtain new knowledge (Becker, 1964; March, 1991) in order to generate and execute the appropriate concepts which eventually will allow the firm to change its resource base (Snell and Dean, 1992; Subramaniam and Youndt, 2005). The experience of individuals is particularly necessary when discovering technological and market-based opportunities that help firms stay innovative (Hill and Rothaermel, 2003). A high level of human capital enables employees to change their routine, which can initiate higher order competences at the organisational level (Nohria and Gulati, 1997; King and Tucci, 2002). Firms who possess a high level of human capital will benefit from the novel marketing and innovative ideas provided by their educated functional employees (Krasnikov and Jayachandran, 2008). In addition, the more competent their employees are, the more likely it is that they will thoroughly gain, absorb and use expertise from both internal and external sources (Cohen and Levinthal, 1990). Several scholars argue that human capital is a cornerstone of dynamic capability development, as it facilitates rapid learning among the employees (Tripsas, 1997; Zollo and Winter, 2002; Bruni and Verona, 2009; Makela *et al.*, 2012).

Dynamic managerial capabilities and organisational performance

Through the trending research on dynamic capabilities, the majority of the research focuses on strategic areas and few studies have examined the link between dynamic managerial capabilities and organisational performance in the context of change. The dynamic capabilities of managerial cognition, social capital and human capital will lead to a high level of organisational performance (Snell and Morris, 2014; Snehvrat and Dutta, 2018). The study by Adner and Helfat (2003) revealed that managerial cognition is the managerial belief and mental model that is used as the basis for decision-making. This ability comes from the knowledge structure owned by the managers (Helfat and Martin, 2015) and the managers’ ability to perceive and take advantage of opportunities through environmental scanning, eliciting decision-based choices and influencing the managers’ investment decisions in the business (Helfat and Peteraf, 2015). Several studies have found that managerial cognition will support the process of change and strategic renewal in order to achieve a high level of organisational performance (Eggers and Kaplan, 2009; Laamanen and Wallin, 2009; Gary *et al.*, 2012).

In addition to managerial cognition, managers who have social capital will improve the knowledge management processes related to the company's ability to create value in terms of innovation and performance (Hoffman *et al.*, 2005). Furthermore, social capital is linked to trust (Sukoco *et al.*, 2018) and networking (Burt, 1992; Davidsson and Honig, 2003) as well as strengthening the relationships with both their internal and external stakeholders. This allows them to obtain useful information (Adler and Kwon, 2002; Helfat and Martin, 2015). A manager with a high level of social capital capability will create a supportive environment where sharing information and transferring the knowledge between the organisation members occurs genuinely (Nakauchi *et al.*, 2017). Consequently, this elicits a positive employee attitude towards change. They are motivated to support the organisation's new direction (Acquaah, 2007).

Lastly, a manager who has high level of human capital capability is likely to be more adaptive when encountering problems due to cooperating with people to make decisions (Sirmon and Hitt, 2009; Zhao and Goodman, 2018). Moreover, human capital can utilise information and knowledge to generate new knowledge as a resource when facing change (Bontis and Fitz, 2002). The organisation's value will increase due to the innovation generated from understanding the customer's needs (Zhao and Goodman, 2018). Innovative capabilities are the main determinant of organisational performance (Saunila, 2015). Human capital is related to skills, knowledge, psychology and other abilities such as personality, values and interests (Helfat and Martin, 2015) that are developed through experience, training and education (Becker, 1964).

If the employer initiates a change strategy, the employee will commit to making the change (Herold *et al.*, 2008). This is ultimately linked to organisational performance (Kontoghiorghes *et al.*, 2005). Based on the explication previously mentioned, we formulate the following hypothesis:

- H1. The relationship between the dynamic managerial capabilities (managerial cognitive ability, managerial social capital and managerial human capital) is positively related to organisational performance.

Organisational capacity for change, dynamic managerial capability and organisational performance

The previous literature suggests that OCC has a positive link to organisational performance (Ramus, 2012; Andreeva and Ritala, 2015). OCC is defined as the organisational capacity to achieve the expected shared change target (Soparnot, 2011). OCC consists of three organisational dimensions: context, the change processes and learning (Zhao and Goodman, 2018). Context is a facilitating condition and the characteristics of the organisation when it is striving to achieve the desired change outcomes (Klarner *et al.*, 2008; Zhao and Goodman, 2018). The organisational process is the implementation of change which includes the organisational concepts required during the change itself (Zhao and Goodman, 2018). Learning is the ability of the organisation to improve and enhance the practices facilitating change (Zhao and Goodman, 2018).

In the process of change, we propose that the role of the middle manager is very important. This is because he or she is able to become an intermediary in the communication between the top management and lower level management (Rouleau and Balogun, 2011). The middle managers also act in order to build a shared perception regarding the vision and mission of the organisational members through cross-level communication (Busher and Harris, 1999). As a cascader, they seek to overcome the problems in the implementation stage (Kontoghiorghes *et al.*, 2005). However, very few studies have investigated the suggestion of the mediating role of OCC in the relationship between the DMC of middle managers and organisational performance. The present study illuminates "the black box" of the link

between DMC and organisational performance through OCC as a mediating variable. Below we will explain how each DMC of the middle manager role is associated with OCC and ultimately linked to organisational performance.

Managerial cognition can associate with the manager's perception when assessing a situation and the decisions undertaken (Adner and Helfat, 2003). Managers who have cognitive abilities (i.e. clear vision) will generate appropriate strategies in the process of problem-solving (Caughron *et al.*, 2013; Ramus, 2012). This ability allows the managers to make the right decisions and to find solutions to cope with the problems that arise. This will lead to a high level of subordinate trust (Sirmon and Hitt, 2009; Heyden *et al.*, 2017). If the employer initiates a change strategy, the employee will commit to making the change since trust is a source of OCC (Herold *et al.*, 2008; Zhao and Goodman, 2018). This ultimately affects performance (Kontoghiorghes *et al.*, 2005).

Managers who have the ability to generate social capital are likely to encourage the process of change as a common goal through a process of negotiation and discussion with all members of the organisation (Zhang *et al.*, 2017). Relationships and networks will be formed and facilitate the resource exchange and transfer of knowledge within the network members (Kim *et al.*, 2016; Liu, 2017). The social capital ability of the managers encourages knowledge sharing, which facilitates the change process (Zhang *et al.*, 2017). The members of the organisation will understand the importance of change and build a collective initiation of change to achieve sustainable development (Woodward and Henry, 2004).

In addition to managerial cognition and social capital, human resources are not only about skills and knowledge but also cognition and other abilities (Helfat and Martin, 2015). Managers who have a high level of human capital can combine a variety of information and knowledge sources to produce a transformation resulting in value-added resources and new knowledge (Bontis and Fitz, 2002). This, in turn, enhances their innovative capabilities (Zhao and Goodman, 2018). Innovative organisations will be able to create an innovative business model and new products to deliver the customer's desires (Zhao and Goodman, 2018). Accordingly, innovative capabilities are an important factor in organisational performance (Saunila, 2015). We, therefore, formulate the following hypothesis:

H2. OCC mediates the relationship between DMC and organisational performance.

The moderating attitude towards change

Organisations that initiate positive change are often hindered by individuals or groups in the organisation that are resistant (Oreg, 2003). This causes the benefits of the change process to not always be realised between the organisation and the individual. The perception of the uncertain situation, the feelings of discomfort and an unwillingness to change imbue the resistance to change (Amarantou *et al.*, 2018). Piderit (2000) defines resistance as a tridimensional attitude towards change (ATC) concerning the affective, cognitive and behavioural components. Individual resistance distorts information and results in misinterpretation because individuals tend to defend their ideas and reject information that is not in line with their expectations, thus inhibiting the process of change in the organisation (Barr *et al.*, 1992; Pardo del Val and Martinez, 2003). Sharma (2000) argues that how an organisation effectively overcomes environmental challenges is to look at the threats and opportunities posed by the environment naturally. At the same time, resistance is part of the change that happens naturally (Amarantou *et al.*, 2018).

Klarner *et al.* (2008) stated that organisational experience needs to be developed in order to strengthen the employees' perception in order to engage in the change, to support the generation of new solutions and to encourage the employees to have a positive attitude to the change, minimising the resistance to the change in turn. Accordingly, the transfer of organisational knowledge to the employees is important in order to promote the change

initiatives, to save time, to avoid resistance to change and to make them eager to pursue the success of the change programs to improve the overall organisational performance (Klarner *et al.*, 2008). Meanwhile, the relationship between organisational capacity for change and organisational performance will weaken if the attitude towards change is strong and vice versa. Employees will thrive when the organisational capacity learning context for the change is high. When OCC is high, the employees will be resourceful since the facilitating conditions exist (context). They know how the change will take place and the direction of the change (change process). When the change process occurs, they will learn how it works and cope with any problems that might arise during the change process. When employees learn about the change process, they will contribute to the higher OCC level.

The relationship between learning about the organisational capacity for change and organisational performance will certainly weaken if there is resistance to change due to the presence of a less effective change-oriented culture in the public organisation. Therefore, even though they possess a relatively high level of OCC, a change in mindset, attitudinal reaction and intended behaviour is not associated with the employees' motivation to create support for the change (Ritz and Fernandez, 2011; Homberg *et al.*, 2019). This affects the participation of the organisational members when they are learning in the process of sharing information internally and externally. This supports the competence of each individual at work (Oreg, 2006) and ultimately affects the overall organisational performance. In addition, the managers' strategy when encouraging the internal support for the change and minimising the resistance to change is an important factor related to the urgency of the change. This requires engaging the employees in such a way that they are the main actor in the process of the change itself (Rho *et al.*, 2020). The absence of organisational knowledge transfer will cause the employees to not be able to carry out the changes due to insufficient knowledge (see Figure 1).

Therefore we formulate the following hypothesis:

H3. Attitude towards change moderates the relationship between OCC and organisational performance.

Method

Participants and the data collection

The research hypotheses were tested using a survey focused on the middle managers and lower level managers across the different work units from a large ministry office in Indonesia. The ministries in Indonesia have been assigned to implement bureaucratic reforms which require a shifting mindset, culture and a new way of operating and behaving in order to fulfil the public service satisfaction with the overall organisation system. The middle managers assigned as the agent of change in the bureaucratic reform should have dynamic capabilities and deal with OCC and ATC in order to boost the level of organisational performance. In the present study, middle managers are the managers who are responsible for reporting to the

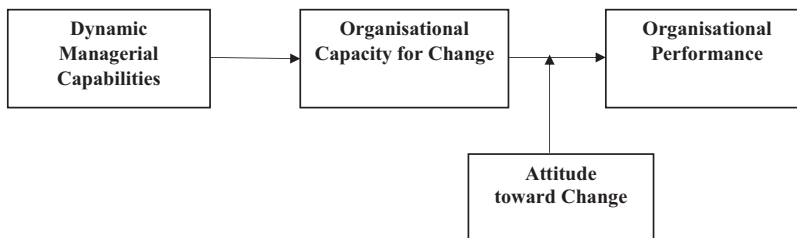


Figure 1.
The proposed
research model

upper or executive managers while supervising their direct lower level manager. Middle managers have a strategic position as the leaders of regional units. They implement the decisions taken by top managers, solve problems in the field and provide input as a basis for the decision-making of the top managers. In addition, middle managers are officially appointed by institutions as the “agents of change” of the bureaucratic reform programmes, resulting from the Indonesian government regulation of the Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia NO. 27 years 2014. We employed two sampling methods: simple random and purposive sampling. We randomly selected respondents (middle managers and their lower level manager) who had already been working for five years and who had spent at least one year in their current managerial position (for the middle manager). Their participation in this survey was on a voluntary basis. We distributed the survey to five members from each work unit, namely the leader (middle manager) and four members (lower level manager). In order to minimise the threat of common method variance (CMV), our study followed the suggestions proposed by [Podsakoff et al. \(2003\)](#) to reduce the potential bias of CMV. First, their study surveyed the respondents anonymously in order to reduce their hesitation and distrust, allowing them to truthfully answer the questions in the questionnaire. The survey participants were assured anonymity and it was confidential, as stated in the cover letter sent through the online survey where a unique code was generated by the survey system ([Baruch and Holtom, 2008](#)). Second, the study gathered the measures for the constructs from different sources (i.e. dynamic managerial capabilities and attitude towards change were measured by the lower level manager while the others were measured by the team leaders) to minimise the threat of CMV (the use of a single and common data source) ([Podsakoff et al., 2012](#)). Fourth, we used Harman’s single factor test to determine that no single factor explains the majority of the variance ([Podsakoff and Organ, 1986](#)). Since the aforementioned precautionary measures were taken together, CMV is unlikely to be a major issue in our study.

Out of the 71 offices in Indonesia, we distributed the survey to 80 middle-level managers and their immediate 250 followers. Of the 80 middle managers, 75 managers participated in the survey (a response rate of 93.75%) and 238 responded from among their followers (a response rate of 95.20%). We randomly selected 5–7 individuals out of a total of 10–15 members from each work unit.

Measures

All of the items were rated on a five-point Likert scale ranging from 1 – strongly disagree to 5 – strongly agree. The DMC and ATC questionnaires were answered by the lower-level managers, while middle-level managers answered the OP and OCC questionnaires (see the [Appendix](#) for the full list of items and statements).

This study adopted the following measurement items for DMC: seven items for cognitive creative capital from [Cools and Van Den Broeck \(2007\)](#), six items for social capital from [Pastorisa and Arino \(2013\)](#) and five items for human capital from [Bendig et al. \(2018\)](#). In the case of OCC, we operationalised it based on the items developed by [Zhao and Goodman \(2018\)](#); learning capacity had four items, process capacity had four items and context capacity consisted of eight items. Attitude towards change was operationalised using three items for the cognitive attitude towards change as drawn from the work of [Oreg \(2006\)](#). The cognitive dimension was used because, from a conceptual perspective, the behaviours that emerge are sometimes inconsistent with employee cognition, especially when related to the importance of the effects of the change on the company ([Piderit, 2000](#)). This is related to the culture of Indonesia, which tends to hide any attitudes suggesting non-compliance with the leadership and organisational policies. This restricts the employees from taking action openly ([Aridhona et al., 2015](#)). The previous research shows that cognitive stiffness has an inverse relationship pattern with the expression of attitude towards change ([Oreg, 2003](#)). Finally, organisational

performance was adapted according to the items from the work of Zhang *et al.* (2017) consisting of four items. This study further reduced the effect of self-generated validity based on Podsakoff *et al.*'s (2003) procedures. This involved counterbalancing the question order, i.e. randomly sequenced survey questions.

We employed factor analysis prior to further analysing and testing the model. We only selected items above 0.30 and then tested the model using SmartPLS along with all of the other items to make sure that the items were valid and eligible enough to test the model.

Dynamic managerial capabilities (DMCs). The results showed the measurement items for the DMC variable were good. The cognitive dimension adopted three items from the seven items of cognitive creative capital by Cools and Van Den Broeck (2007) based on a factor analysis of the magnitude of the variance that can be explained by 78.942%. This increased to 92.029 after item reduction took place. We only used three out of the seven items of social capital by Linuesa-Langreo *et al.* (2018) based on a factor analysis of the magnitude of the variance that can be explained, which is 69.636–70.492% after the item reduction where we excluded items below the cut-off (less than 0.30). We used five items of human capital from the work of Bendig *et al.* (2018). A sample item for each dimension of the cognitive capital, social capital and human capital includes: “My direct supervisor likes to contribute to innovative solutions”, “My direct supervisor sees themselves as a partner when mapping the direction of the organisation”, “My direct supervisor has a high skill level”. The composite reliability value for the scale cognitive capital, social capital and human capital was 0.848, 0.881 and 0.950, respectively.

Organisational capacity for change (OCC). We used 11 dimensions from Judge and Douglas (2009) and then adjusted to three dimensions based on Klarner *et al.*'s (2008) study. In total, four items were used for process capacity, four items were used for context capacity and learning capacity used three items. A sample item for each dimension of the process capacity, context capacity and learning capacity includes: “The information flow is effective and always in real time”, “has an organisational culture that provides the resources to experiment with new ideas”, “The change leaders know the importance of institutionalising the change”. The composite reliability value for the scale process capacity, context capacity and learning capacity was 0.948, 0.942 and 0.944, respectively.

Attitude towards change (ATC). The 10 items for attitude to change were developed by Oreg (2006) and used to measure the attitudes to change of the employees. A sample item for ATC includes: “If possible, I try to work outside the office as much as I can”. The composite reliability value for the scale was 0.868.

Organisational performance (OP). Environmental changes will impact on any organisational changes, which affect how the organisation determines its performance through a self-organising set of order-generating rules. The organisational performance in the Indonesian public government agency studied here was measured using the following aspects: management quality, employee competence and public service satisfaction. First, the Quality Management Index was used to determine whether there was an increase or decrease in the previous performance using ISO: 9001. The quality management in each office unit across the country has a certain standard to meet when providing state wealth services, such as asset utilisation, providing state revenues and asset revaluation, which increases the equity value stated on the state's balance sheet. Second, the job has requirements to meet and a set of specific competencies to implement efficiently. The employees need to adapt to the competencies associated with their job. Competent employees are the primary resource that organisations use to improve organisational performance. The organisation has a standard of competency that must be fulfilled by the employees, who will be appointed to carry out certain duties to improve the organisational performance. Finally, in terms of the bureaucratic reform itself, public service satisfaction is the main goal. Customer satisfaction surveys are conducted by an independent institution to determine the quality of the service and its relationship with customer satisfaction, which is a measure used when trying to improve organisational

performance. Public managers engage in performance evaluation processes where they compare the actual organisational performance (service quality, client satisfaction and regulatory endorsements) with their goals (Piening, 2013). We developed a three-item scale in order to measure the change performance of the organisation based on the bureaucratic reform agenda of the Indonesian government. Derived from the previous research, the scale contained items on the quality of the management, the public satisfaction index and employee competence. A sample item includes: “*The percentage of officials who meet the job competency standards has increased*”. The composite reliability value for the scale was 0.869. The respondents were asked to rate their organisation’s performance on a five-point Likert scale vis-à-vis past previous performance. The study further reduced the effect of self-generated validity based on the procedure used by Podsakoff *et al.* (2003). This involved balancing the order of the questions and the survey questions were sorted randomly.

Results

Descriptive statistics

Table 1 shows the descriptive nature of statistics, i.e. the mean, SD (SD) and inter-correlation, among of variables of the study.

This study used partial least square (PLS) (Henseler *et al.*, 2009; Henseler *et al.*, 2016) to assess the data. This is because it can measure complex models with many latent variables and indicators (Henseler *et al.*, 2009) and is suitable for testing the effects of interactions (Mitchell *et al.*, 2008). In addition, we used the bootstrapping method to estimate the significance of the path coefficients (Bollen and Stine, 1992). This shows that the data are coherent with the factor model used as a representation of the confirmatory factor analysis (Henseler *et al.*, 2016).

PLS-Graph 3.0 allows for the explicit estimation of the latent variable scores. The bootstrapping resampling method was used to test the proposed model (Chin, 1998). This procedure entailed generating 300 case sub-samples that were randomly selected, with replacements, from the original data. Path coefficients were then generated for each randomly selected sub-sample. The *t*-statistics were calculated for all of the coefficients based on their stability across the sub-samples, indicating which links were statistically significant as a result.

The instrument was tested using the procedure used by Kleijnen *et al.* (2007) with reflective indicators present in all constructs. The reliability testing conducted used composite scale reliability (CR) and the average variance was additionally extracted (AVE) (Fornell and Larcker, 1981; Chin, 1998). The results show that the cut-off value of the outer loading is above 0.700, and the AVE is more than the cut-off value of 0.500 (Fornell and Larcker, 1981); all variables have composite reliability above 0.800. Convergent validity was evaluated by examining the standardised loading of the actions in each construct (Chin, 1998). All of the actions were found to indicate standardised loading in excess of 0.500. Discriminant validity was assessed based on the AVE values being greater than the correlation of the latent squared factors between the construct pairs (Fornell and Larcker, 1981). Overall, the calculation of the reliability and validity showed good results (see the Appendix).

Hypothesis testing. Table 2 shows the results of Hypothesis 1 which predicts that the dynamic managerial capabilities (managerial cognitive ability, managerial social capital and managerial human capital) are positively related to organisational performance. To test the hypotheses, we employed Macro Process SPSS (Hayes, 2013). The results show DMC consisting of *cognitive*, *social* and *human capital*, positively and significantly links to OP ($\beta = 0.539, p < 0.05$); therefore, Hypothesis 1 is supported. To test Hypothesis 2, we followed Mackinnon *et al.*’s (2002) procedures to test mediation relationship. Hypothesis 2 states that

Research variables	Mean	S.D.	1	2	3	4	5	6	7	8
DMC cognitive	4.160	0.742	0.653	0.482	0.689	0.557	0.320	0.653	0.034	0.233
DMC social capital	3.995	0.853	0.694**	0.712	0.444	0.694	0.557	0.691	0.014	0.341
DMC human relations	3.845	0.952	0.830	0.666**	0.790	0.592	0.399	0.654	0.098	0.198
OCC learning	4.003	0.848	0.746	0.833	0.769**	0.809	0.518	0.680	0.022	0.461
OCC process	4.070	0.786	0.566	0.746	0.632	0.720**	0.813	0.461	0.085	0.345
OCC context	3.844	0.879	0.808	0.831	0.809	0.825	0.679	0.700	0.064	0.276
Attitude towards change	1.967	0.567	-0.185	-0.121	-0.314	-0.149	-0.292	-0.253	0.520	0.085
OP change	4.111	0.649	0.483	0.584	0.445	0.679	0.587	0.525	-0.292	0.690

Note(s): ** $p \leq 0.01$, * $p \leq 0.05$

Table 1.
Descriptive and
correlation analysis

Table 2.
Regression results for
the interaction and
conditional indirect
effect

Variable	Model 1			Model 2			OP			Model 3			Model 4		
	β	SE	t	B	SE	t	β	SE	t	β	SE	t	β	SE	t
Constant	2.356*	0.327	7.195	2.040	0.294	6.931	2.318*	1.312	1.767	3.138*	1.350	2.323			
DMC	0.539*	0.081	5.465	-0.340	0.166	-1.683				-0.336	0.170	-1.979			
OCC				0.972*	0.166	4.810	0.664	0.318	1.733	0.699*	0.320	2.184			
ATC							-0.108	0.635	-0.218	-0.479	0.646	-0.742			
OCC*ATC							-0.049	0.157	-0.089	0.064	0.158	0.405			
Sobel				5.321	0.151										
R^2					0.463						0.464				
Conditional indirect effect at percentiles of the moderator															
	Boot indirect effect						Boot SE			Boot CI			95%		
-1 SD (Low)	0.709						0.157			0.456			1.080		
Mean (Normal)	0.739						0.145			0.479			1.052		
+1 SD (High)	0.768						0.205			0.387			1.207		
Note(s): DMCs = dynamic managerial capabilities, * $p \leq 0.05$. Bootstrap sample size = 5,000															

OCC mediates the relationship between DMC and organisational performance. The results show DMC to OCC is significant ($\beta = 0.894, p < 0.05$), and the link between OCC to OP is significant ($\beta = 0.972, p < 0.05$), thus [Hypothesis 2](#) is supported. Further, we employed SOBEL test which indicated the significant indirect effect (Sobel Z 5.321, SE 0.151, $p < 0.01$; lower limit 0.451 and the upper limits 1.341 (95% CI). Finally, [Hypothesis 3](#) predicts that attitude towards change (ATC) moderates the link between OCC and OP. The results show that [Hypothesis 3](#) is not supported ($\beta = -0.049, p < ns$).

Discussion

This study had several results. First, DMC relates to OP according to the research by [Eggers and Kaplan \(2009\)](#), [Laamanen and Wallin \(2009\)](#) and [Gary et al. \(2012\)](#). In accordance with [Azorin \(2014\)](#), cognition provides valid information that encourages to innovate and produce strategic choices ([Helfat and Martin, 2015](#)). This information can be easily obtained through networks that have social capital managerial support ([Adler and Kwon, 2002](#)). The right decision related to the strategic choices facilitated by managerial human capital can link to the OP. The social capital support of DMC will form a network of organisational members, both internally and externally, so then the information exchange will be more easily achieved ([Adler and Kwon, 2002](#)). This is in order to build the same perception, so then an agreement can arise between the various parties on the importance of service quality within the application of quality standards for the management of public organisations ([Little and Dean, 2006](#)). Furthermore, given the human capital in DMC, a strategic change decision can be made to increase the organisational innovation ability ([Helfat and Martin, 2015](#)) which, in turn, links to OP ([Saunila, 2015](#)).

Second, the link between DMC and OP through OCC is aligned to the work of [Kraft et al. \(2018\)](#) referring to managerial cognition. This means that the managers take actions that give rise to the trust of their lower level manager. A consensus is formed that speeds up the change process ([Busher and Harris, 1999](#)). The process of negotiation, discussion, information delivery and collective problem-solving ([Nakauchi et al., 2017](#)) will facilitate the adoption of new strategies ([Engle et al., 2016](#)). This is along with the managerial human resources capable of transforming the value-added resources and new knowledge ([Bontis and Fitz, 2002](#)) into innovations and learning. This will affect OP ([Jansen et al., 2006](#)).

Third, OCC to OP is not significantly moderated by ATC. We argue that the employees might believe that he or she could benefit from the change in person and as part of the organisation. This concerns rewards, their job content or another element relevant to their workplace. This type of employee will embrace the change ([Van den Heuvel et al., 2016](#)). Moreover, our research setting is one of the institutions regulated by the government to implement the bureaucratic reform. In other words, the change is initiated by rules. In addition, when the organisation has a high level of OCC, it is more likely that they are open to the change which, in turn, realises their "...capacity to adapt, integrate and reconfigure organisational skills, resources and competences to achieve congruence with a changing environment" ([Klarner et al., 2008](#)). The government rules for change are perceived negatively by the organisation members because they are deemed not to fit the needs of the organisation. This will reduce the level of commitment ([Lines, 2004](#)). Moreover, emergent behaviour is sometimes inconsistent with employee cognition, especially when related to the importance of the effects of change on the company ([Piderit, 2000](#)). This is related to the Indonesian culture which tends to hide any non-compliance with the leadership and organisational policies. This limits the employees from taking action openly ([Aridhona et al., 2015](#)). Previous research has shown that cognitive stiffness has an inverse relationship pattern regarding the expression of the attitude towards change ([Oreg, 2003](#)). This feeling of discrepancy is not seen in the employees' work behaviour due to the remuneration adjustments offered, thus ATC does not moderate in this context.

Theoretical implications

This study contributes to the theory of dynamic capabilities, leadership and organisational change. The present paper illuminates the research gap on how the DMC of the manager interacts with organisational performance (Buil-Fabregà *et al.*, 2017; Martin and Bachrach, 2018). The level of the middle managers has not been previously explored. Leaders who have dynamic capabilities will improve how they execute the strategies chosen in order to make changes in the organisation (Kuipers *et al.*, 2014; Helfat and Peteraf, 2015). In addition, leaders who are able to utilise their cognitive capital, social capital and human capital will find it easier when seeking information to engage in strategy execution. Ultimately, when boosting decisions, they will obtain a better level of organisational performance (Adner and Helfat, 2003).

Furthermore, to the best of our knowledge, this paper is the first empirical study that offers evidence that managerial dynamics play an important role in shaping OCC, which, in turn, improves organisational performance, especially in the context of public organisations. This study expands on the OCC (learning, processing and interaction) construct, whereas the previous studies only discuss this dimension conceptually, as, for example, Klarner *et al.* (2008). Moreover, this study provides a cultural aspect to the public organisation as a country's culture which will link to the people in their management positions (Ralston *et al.*, 1997). This study enriches the research focused on changes in the public sector within the Asian culture.

This study found that the process of organisational change will be successful if the organisation's members are committed to adapting to change. Accordingly, the involvement of all organisational members is an important factor in the change process. This affects organisational performance (Stanley *et al.*, 2005).

Practical implications

The results show that the dynamic capabilities of the managers through cognition, social capital and human capital links to OCC. Middle managers should equip and develop their capabilities in order to embrace change in the organisation through the communication between the different staff levels, uniting the vision and mission with the organisational members (Rouleau and Balogun, 2011). Accordingly, the results will help the organisation to develop the middle manager's role in order for them to possess better dynamic managerial capabilities. This can facilitate and establish transparency in the process of change (Kontoghiorghes *et al.*, 2005). Transparency is a part of OCC that can minimise misinterpretation and the difficulty of translating information across the levels which, in turn, generates the trust needed to increase the employee commitment to participating in the change (Herold *et al.*, 2008). Furthermore, middle managers who have dynamic managerial capabilities can motivate the organisational members to learn and comprehend that change is necessary to improve organisational performance (Zhao and Goodman, 2018).

The present study shows that the DMC of the middle manager, i.e. cognition, social capital and human capital, can be associated with organisational performance through OCC. The organisation should empower the role of the middle managers by increasing their authority and participation in the policy making that is part of the change process (Fryer *et al.*, 2018). Accordingly, the organisation should develop its capability to embrace change by providing training, benchmarking and a success story (Quinn *et al.*, 2019). Moreover, communication in the change process is crucial for the middle manager as they are the mediator between the superior and their lower level manager. This is in order to synchronise the perception of the change process among the members of the organisation (Rouleau and Balogun, 2011). This facilitates and builds transparency for the change strategy adopted, as it is appropriate according to the needs of the change (Kontoghiorghes *et al.*, 2005). In addition, transparency can minimise misinterpretation and the difficulty translating information at all levels, thereby generating trust, which can increase the employees' commitment to participating in

the change process. This ultimately improves organisational performance (Herold *et al.*, 2008; Zhao and Goodman, 2018).

Snell and Morris (2014) stated that the development of dynamic capabilities will allow the employer to overcome the challenges relevant to learning in a dynamic and changing environment. The government agency (employer) could implement certain specific interventions. First, the workplace could implement interventions to optimise the dynamic managerial capabilities held by the middle manager and employees through assessments and mentoring. Second, particular training programmes could be implemented to boost the employees' skills and flexibility, thereby keeping them agile in the context of the changes in the work environment (Heo and Cheon, 2015; Holbeche, 2018).

Limitations and directions for future research

A public organisation is an institution that is formed to help the government carry out its duties in accordance with the established regulations. Any change in the regulations is made in order to adjust the functions and tasks that must be performed accordingly. Carrying out these changes requires the support of the organisational capacity and the managers, who have their own respective dynamic capacity. The aforementioned play an important role in changing the organisational capacity for OCC, which drives the success of a public organisation to change and carry out the tasks and functions in accordance with the new government regulations. The results show that the dynamic capabilities of the managers, through cognition, social capital and human capital, can relate to strategy, decision-making and the actions that shape the organisation's capacity to change. This includes targeted performance. Although the results indicate that the attitude towards change does not moderate the link between OCC and organisational performance, the present study did not particularly investigate whether the change happening in the organisation was good or not. It would be fruitful for future research avenues to investigate the other potential boundary conditions that might be at play in the relationship between OCC and organisational performance. Future research studies should explore other moderating variables, such as employee stress, employee level of trust, the communication climate and the support for organisational change (Vakola and Nikolaou, 2005; Neill *et al.*, 2019; Men *et al.*, 2020).

The results of this study need to be considered while bearing in mind several limitations. The cross-sectional data and the specific context have both been noted. In the future, research can be carried out in different cultural and national contexts in order to increase the evidence of OCC mediation. The role of DMC in the managerial process and their development in OCC may not be well-captured by the survey methods that we have used. We believe that, if the current research framework is carried out through an exploration accompanied by longitudinal quantitative studies, this will provide more comprehensive results. The use of qualitative methods will also increase the depth of the explanation of the OCC formation process and its effect on performance.

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Further reading

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Appendix

Code	Items	Outer loadings	Composite reliability	AVE
Dynamic managerial capabilities – <i>Cognitive capital (CogCap)</i>				
CogCap1	My direct supervisor likes to contribute to innovative solutions	0.865	0.848	0.653
CogCap2	My direct supervisor prefers to find creative solutions	0.651		
CogCap3	My direct supervisor makes a definite commitment and follows it up carefully	0.751		
Dynamic managerial capabilities – <i>Social capital (SocCap)</i>				
SocCap1	There is a common goal among the employees at the DJKN	0.682	0.881	0.712
SocCap2	My direct supervisor sees themselves as a partner when mapping the direction of the organisation	0.695		
SocCap3	My direct supervisor fully agrees with the organisation's vision concerning DJKN	0.717		
Dynamic managerial capabilities – <i>Human capital (HumCap)</i>				
HumCap1	My direct supervisor has a high skill level	0.910	0.950	0.790
HumCap2	My direct supervisor is widely considered to be among the best employees in the Ministry of Finance	0.848		
HumCap3	My direct supervisor is creative and original	0.900		
HumCap4	My direct supervisor is an expert in their duties and functions	0.909		
HumCap5	My direct supervisor is a source of new ideas, new products and innovations	0.876		
Organisational capacity for change – <i>Learning capacity (LeCap)</i>				
LeCap1	The change leaders know the interdependency between the work units in a state of change	0.863	0.944	0.809
LeCap2	The change leaders know the importance of institutionalising the change	0.858		
LeCap3	The change leaders know that there is a need to readjust any incentives according to the desired changes	0.787		
LeCap4	The change leaders know how to assess the causes and not the symptoms of any problems	0.829		

Table A1. Questionnaire items, validity and reliability results

(continued)

Code	Items	Outer loadings	Composite reliability	AVE	DMCs, OCC and organisational performance
<i>Organisational capacity for change– Process capacity (ProCap)</i>					171
ProCap1	The information flow is effective from the Director General to the Echelon IIs, III and IV Officials in all work units	0.865	0.948	0.813	
ProCap2	The information flow is effective and always in real time	0.923			
ProCap3	The information flow is effective across the work units	0.937			
ProCap4	The information flow is effective from the stakeholders to the work units	0.879			
<i>Organisational capacity for change – Context capacity (ConCap)</i>					
ConCap1	DJKN employees open themselves up to considering the changes to RBTK.	0.847	0.942	0.700	
ConCap2	DJKN employees have the opportunity to voice their concerns about the change	0.923			
ConCap3	DJKN employees know how the changes will help DJKN's performance as a whole	0.930			
ConCap4	DJKN employees see the DJKN head office as trustworthy	0.833			
ConCap5	DJKN has an organisational culture that provides value related to innovation and change	0.811			
ConCap7	DJKN has an organisational culture that provides the resources to experiment with new ideas	0.714			
ConCap8	DJKN has an organisational culture that allows people to take risks and sometimes fail	0.714			
<i>Attitude towards change (ATC)</i>					
ATCaff 1	I am worried about what will happen after the change to RBTK.	0.820	0.868	0.520	
ATCaff 2	I am worried about all of the things that need to be done to change to RBTK.	0.891			
ATCaff 3	I try not to think about changing to RBTK to minimise my stress	0.612			
ATCog 1	I never thought that a change to RBTK was needed	0.633			
ATCog 2	My direct manager is better after the change compared to before	0.698			
ATCf 1	If possible, I try to work outside the office as much as I can	0.360			
ATCf 2	I minimise the time I spend in the office (more frequent coffee breaks, etc)	0.482			
ATCW 1	I was disturbed by the changes to RBTK.	0.773			
ATCW 2	Following the change to RBTK, I am not as productive as usual	0.877			
ATCW 3	Following the change to RBTK, I find it difficult to motivate myself to do the things I should	0.865			
<i>Organisational performance – Change performance (CP)</i>					
CP1	The quality management index of the country's wealth services (ISO 9001: 2015) has increased	0.768	0.869	0.690	
CP2	The percentage of officials who meet the job competency standards has increased	0.864			
CP3	The public satisfaction index with the DJKN services has increased	0.856			

Table A1.

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