Antecedents and Consequences of Ambidexterity in Public Sector Organisations

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ABSTRACT

Organisational ambidexterity – the ability to be adaptable and innovative as well as aligned and efficient – is important to governments. This article examines its antecedents in public organisations, and its relationship to organisational performance. Data was collected from 56 New Zealand public sector agencies, including 2123 supervisory and 9688 non-supervisory employees. In a partial least squares analysis, ambidexterity mediated between organisational systems and performance. Ambidexterity, however, did not mediate between high involvement work systems (HIWS) and performance. HIWS, did, however, mediate between organisational systems and performance. These findings present possibilities for organisations to respond better to complex demands.

Key words: ambidexterity, high involvement work systems, innovation, collaboration, performance

This paper uses the theoretical lens of organisational ambidexterity to examine organisation performance in the public sector. Organisational ambidexterity, the ability to manage the tensions between being “aligned and efficient in … today’s business … while [being] simultaneously adaptive to changes in the environment” (Raisch & Birkinshaw 2008, p. 375), resonates with the pressures on public servants to do more with less. Employees are squeezed between rising and more complex demands, a less certain environment, more diverse stakeholders and funding shortfalls. Agencies that have focussed on producing standard quantitatively-measured outputs are now expected to produce complex, tailored outcomes for more demanding stakeholders (Gill et al. 2011). In many public sector organisations, a range of managerial reforms have been introduced, such as a strategic approach to human resource management (HRM) and other initiatives. However both the quality of implementation and impact can be weak and uncertain (e.g., Rodwell & Teo 2008). Despite good intentions, conceptions of change management and human factors are sometimes poorly understood and prone to unintended side-effects (Hood & Peters 2004; Ryan 2012).

This paper argues that public sector agencies globally are in a classic ambidexterity dilemma, trying to balance adaptability and alignment. That is, they are expected to be both adaptable to changing demands from stakeholders and internally aligned so they use existing resources efficiently.
Hence this paper proposes that a focus on organisational systems and HRM to build ambidexterity might be more effective than traditional, visible and performative tools such as restructuring.

Although earlier writings considered the dilemma between alignment and adaptability to be unsolvable, recent researchers have been more optimistic, defining ambidexterity as concerning “organisations that are simultaneously exploiting existing competencies and exploring new opportunities” (Raisch et al. 2009, p.685). Not surprisingly, organisational ambidexterity is usually associated positively with organisational performance.

There are several pathways to organisational ambidexterity including differentiated, temporal and contextual strategies. Differential strategies concern assigning different teams to be more oriented more to one aspect than the other. Temporal; strategies concern emphasising either adaptability or alignment at different times. However, ambidexterity may often lie inherently within the organisational and job context where individuals manage the tension in the daily conduct of their jobs.

Gibson and Birkinshaw (2004) describe contextual ambidexterity as the “behavioural capacity to simultaneously demonstrate alignment and adaptability across an entire business unit” (p.209) that can be achieved in a context that “encourages individuals to make their own judgements as to how best to divide their time between the conflicting demands of alignment and adaptability” (p.211). This seems particularly suitable for government workers who explicitly operate in areas of market failure. Officials must often balance legal compliance and rights against exploring new ways of changing behaviour for diverse clients, such as in a public health, welfare or housing programme. It is therefore not surprising that government work is characterised by “multiple, conflicting goals, as well as the presence of procedural constraints on employee action” (Wright 2004, p. 62). In housing for instance, a residential program for high needs clients must be capable of exploring and adapting programmes at the design level, but also at the individual level to respond to clients diverse needs. It must, however, do this efficiently and thus deploy programmes across a number of residences. Good work and HRM systems are likely to allow this adaptability to be deployed at scale. Bad systems that are for instance controlling, or unclear and wasteful are likely to be inefficient and inhibit adaptability.

Contextual ambidexterity may also be particularly relevant to government because of the co-produced nature of many services. In such organisations, workers focus on both delivering value to
customers and looking out for changes in the environment (Turner, Swart, & Maylor 2013; Raisch and Birkinshaw 2008). Ambidexterity occurs by creating a context within organisations, through carefully crafted systems and processes, which allows “the meta-capabilities of alignment and adaptability to simultaneously flourish” (Gibson & Birkinshaw 2004, p. 210).

This paper explores a central research question: does organisational ambidexterity help to explain organisation performance in the public sector? It presents organisational ambidexterity as an important managerial meta-competency and a more effective approach to change in complex environments, and explores its role as a mediator between the antecedents of organisational systems and high involvement work systems (HIWS), and organisational outcomes. Specifically, it explores how formal and informal organisational systems (such as business processes and the social climate for performance) and HIWS, which aim for worker performance through commitment and capability rather than control, would differentially contribute to ambidexterity, and in turn, organisational performance. Business processes address the sequencing and flow of tasks in organisations and so directly serve alignment while creating a framework for adaptability. A good social climate provides the trust and support to try new things but also mechanisms to improve alignment (Gibson & Birkinshaw 2004).

Organisational ambidexterity and public administration

Ambidexterity has received little attention in public administration research despite its apparent fit with many challenges facing governments. In particular, government organisations experience tensions between pressures for greater collaboration and innovation and increased accountability for performance against targets. It is our contention that this is an ambidexterity dilemma, as discussed below.

In public management debates the case for collaboration is that, in light of rising public expectations and new opportunities presented by technology, problems are too complex for one agency and hence cross-unit services are needed (O’Leary & Vij 2012 p.509). However, collaboration requires lateral thinking and inter-disciplinarity (O’Leary & Vij 2012). From an ambidexterity perspective, this could be classified as an adaptability and alignment issue. Indeed the ambidexterity
literature emphasises similar concepts such as the need to manage contradictions and paradoxes (Smith and Tushman 2005), integrate top management teams and ensure unity of effort (Lubatkin et al. 2006).

In public management circles, innovation shares similar imperatives and, like collaboration, has a history of slow progress (Brown & Osborne 2013). Performance management also has a history of disappointing results, including gaming and perverse outcomes (Hood 2006). In summary, collaboration and innovation both rely on the capacity for adaptability or exploration and the systems that support this in organisations, but they also require alignment with goals to enhance organisation performance.

Enabling ambidexterity: organisational systems Good organisational systems involve explicit processes that link tasks and allocate ownership of them within organisations (Garvin 2012). They also concern implicit behavioural processes that include unwritten and unconscious assumptions and patterns of behaviours.

Explicit organisational processes that are efficient and well-designed clarify accountabilities and responsibilities. Such processes enable ambidexterity, and performance directly, by focussing effort toward organisational goals, streamlining processes and reducing conflict by clearly allocating responsibilities and reducing role stress (Häusser et al. 2010). Such processes are also likely to enable ambidexterity by reducing role conflict, providing pathways to solve problems and clarify others’ expectations (Garvin, 2012). These problems are common in government jobs but addressing them provides the means to deploy innovations and adaptations with well-aligned processes (Wright 2004; Chun and Rainey 2005).

Implicit organisational processes are also important. Support and trust, and the extent to which systems enable individual decision-making, risk-taking, goal clarity and rational rather than political decision-making, are important implicit processes that reflect the social climate for performance (Gibson & Birkinshaw 2004). This is likely to be particularly salient in some environments, such as unionised public sector work places, because a sharply managed performance management and reward context may not be realistic and may suffer perverse incentives (Edwards,
Limited budgets, public scrutiny and hard-to-measure performance are further barriers to stretch and discipline in performance management in government (Perry, Engbers and Jun 2009). A social context of trust and support is also likely to directly improve organisational performance by enhancing social exchange between employees and the organisation (Rhoades and Eisenberger 2002).

**H1. Organisational systems that include explicit processes and implicit social systems of trust and support will be positively associated with ambidexterity.**

**H2. Organisational systems that include explicit processes and implicit social systems of trust and support will be positively associated with organisational performance.**

Although there are many models and names for what can generally be termed high involvement work systems (HIWS), they tend to share an emphasis on raising workers’ ability, motivation and opportunity to do their jobs and hence be more motivated and competent, both individually and as a group. These models usually permeate beyond individual capability to better group and organisational-level decision-making and behaviours (Wright and Nishii 2007).

HIWS include practices which emphasise the power (P) (autonomy) to make decisions in one’s job; the information (I), including both upward and downward flow; rewards (R); and knowledge (K), usually in the form of training and development. These practices, known as ‘PIRK’, lead to improved organisational outcomes (Boxall and Macky 2009).

HIWS strongly depend on the quality of management systems. Management characteristics such as trust, development and support are necessary for employees to feel they have discretion to safely make decisions in their job, and to both be informed and inform (Baer and Frese, 2003). This social context for performance is also likely to be necessary for a sense of fair recognition and rewards, and to get and apply the required training. Work processes that clearly define who is responsible for doing things and procedural pathways to resolve issues are also likely to provide the role clarity, information and capability to do one’s job (Garvin, 2012).

**H3. Organisational systems focussed on clear processes and a social context for performance will be directly associated with HIWS.**
HIWS can directly improve organisational performance by saving management costs and enabling speedy problem resolution (Pfeffer 1998). Competent staff with the autonomy to make decisions, who are informed of management goals and purposes and are rewarded and knowledgeable, save costs and improve effectiveness through better use of employees’ skills and abilities. This in turn leads to better quality decision-making. HIWS also increase motivation leading to more effort and lower quit rates (Vandenberg, Richardson, and Eastman 1999).

**H4. HIWS will have a direct and positive association with organisational performance.**

The benefits of HIWS can be both collective and individual. They allow individuals, groups and organisations to perform and collaborate more. Ideas and information can be better shared, solutions found and problems resolved.

Bridging weak ties, generalised norms of reciprocity, shared mental models, role making and organisational citizenship behaviours are some means by which HIWS influence organisational performance (Evans and Davis 2005). These processes are likely to serve both adaptability and alignment, particularly bridging weak ties in the case of the former and shared mental models in the latter.

Upward flows of information in HIWS can also improve exploration and adaptability. Informed top decision-makers are more likely to hear of opportunities and required course corrections. HIWS can also improve exploitation and alignment by allowing problems to be resolved at lower levels, closer to the source (Pfeffer 1998). They are likely to stretch employees by providing goals, autonomy and rewards to push to do more than ‘business as usual’ (Patel, Messersmith, and Lepak 2013). They are also likely to support adaptation by encouraging trust, risk-taking and discretionary behaviours amongst employees. HIWS give staff the ability, motivation and opportunity to balance the paradoxical goals of alignment and adaptability, in contrast to the often rule-bound nature of much public service work (Wright 2004).

**H5. HIWS will have a positive association with ambidexterity.**
Ambidexterity and public sector organisational performance

Ambidexterity is likely to improve organisational performance by enabling organisations to address both short-term challenges through alignment and longer-term challenges through enhanced exploration. It is likely to improve their innovative capacity to scan the environment, explore options and develop them in efficient ways. In contrast, many organisations which over-play alignment are unable to respond to changing threats and opportunities (Raisch et al., 2009). Effective exploration is likely to better balance risk/benefit trade-offs and break free of the ‘hegemony’ of risk aversion (Brown and Osborne 2013). By being more attuned and receptive to external ideas, exploration is also likely to build better organisational, group and individual collaboration. Its multiplicative relationship with alignment will allow it to effectively implement collaboration and co-production rather than be hindered by inefficiencies.

H6. Ambidexterity will have a positive association with organisational performance.

Although organisational and high involvement work systems can directly influence performance, ambidexterity is likely to also mediate their relationships to performance. Strong processes, for instance, can improve performance by lowering costs. But they can also support adaptability as well as alignment by providing a framework in which innovation can take place, and then be deployed, thus raising performance. Social processes of support and trust may be very effective at identifying possible innovations. But unless the wider organisation has the means to align these possible improvements with current resources and ways of working they are unlikely to meaningfully lift performance.

Although high involvement work systems can directly contribute to organisational performance, they are likely to be particularly effective if aligned systems efficiently enable staff to exercise discretion, as well as adapt programs to meet individual client needs. Ambidexterity is likely to accentuate the performance gain from good systems at both organisational and contextual job levels.

H7. Ambidexterity will mediate the association between:
a) Organisational systems and organisational performance

b) HIWS and organisational performance

The proposed research model is in figure 1.

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Insert Figure 1 about here

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METHODS

Research Design

The data for this study was collected as part of the New Zealand Public Service Association Workplace Dynamics survey during 2013. The response rate for the survey was approximately 32%. Additional detail on the data collection process is available from the authors. Questionnaire data was collected from 2,123 supervisory and 9,688 non-supervisory employees employed by 56 New Zealand public sector organisations, which had greater than 40 participants. The smallest organisation employed 211 staff, the largest 9,567 (M=2,621, SD 2,562). Employee size data was unavailable for 10 organisations. The mean of non-supervisory respondents per organisation was 169.6 (SD=237.9), ranging from a minimum of 27 and maximum of 1,451 while the mean of those with supervisory responsibilities was 37.91 (SD=50.44), ranging from a minimum of 4 to a maximum of 218.

Measurement

All of the scales have been previously used in the literature (sample scale items and associated reliability coefficients are reported in Appendix A). The data was collected at the individual level and subsequently aggregated into the organisational level. Prior to aggregating the individual level data, we computed the $r_{WG}$ index (James, Demaree, and Wolf, 1993) to check for within-group agreement for each organisation. ICC(2) scores were calculated and varied from .70 to .96, which are good to excellent in Cicchetti’s (1994) heuristic rating for ICC scores.

Employee level data

The scales which were operationalised using employee level data were: organisational systems, comprising organisational processes scale (Langford 2009, $\alpha$: .82, $r_{WG}$: .96), and social
climate for performance (Gibson and Birkinshaw 2004, $\alpha: .92$, $r_{WG}: .83$). HIWS was operationalised as a second order latent variable, computed from four sub-scales, following Boxall and Macky (2009) and Vandenberg et al. (1999). This scale has internal reliability coefficients ranging from .91 to .93 and $r_{WG}$ of .77. Average variance estimates for these two second order factors indicate reasonable discriminant validity (Hulland 1999).

**Supervisor and manager level data**

Reasoning that those in supervisory and manager positions have a more informed view of organisational capability and performance, and to minimize the potential risk of common method bias, we relied on data collected from 2,123 employees who held supervisory responsibility to provide information relating to ambidexterity and organisational performance. Following Gibson and Birkinshaw (2004), the ambidexterity construct was operationalized as the product term of organisational adaptability ($\alpha: .81$, $r_{WG}: 0.72$) and alignment ($\alpha: .66$, $r_{WG}: .86$), as it is the capacity to integrate these two competencies in mutually reinforcing rather than additive ways that constitutes ambidexterity. Organisational performance was collected from individuals holding supervisory responsibilities and was measured using the same scale as Gibson and Birkinshaw (2004; $\alpha: .82$, $r_{WG}: .88$). This latter scale was validated by comparing a different sample of results from the same survey, against evaluations of government agencies that had been appraised by the New Zealand State Services Commission using its Performance Improvement Framework (PIF). This identified a Spearman’s correlation of .65 rho (p=.038) between ratings of performance and PIF evaluations. In addition, subjective organisational performance scales have been found to be valid across a broad range of research (de Waal 2010). In sum, ICC(2), $r_{WG}$ and average variance estimates were within commonly used rules of thumb (Cicchetti, 1994; Hulland, 1999; LeBreton and Senter, 2008).

In addition to matching employee level data with supervisors’ perception of strategic data, common method bias was also checked by using Harman’s one factor test (see Podsakoff et al 2003).

**FINDINGS**

Descriptive statistics and inter-correlations are reported in Table 1.
After a series of tests to determine the need to control for organisational sector and size, these variables were excluded from future analysis. Firm size was, however, significantly related to worse HIWS experiences.

Path analysis

The data has a high goodness of fit with the model as indicated by Tanenbaum et al.’s global goodness of fit index of 71.3 percent. With the exception of hypotheses 2 and 5, the remaining hypotheses were supported (see Table 2).

DISCUSSION

In this study we found that organisational systems that include both explicit processes and implicit systems of support and trust are strongly associated with ambidexterity. Hypothesis 1 is therefore supported. Organisational systems also support performance directly, and are associated with HIWS (H2 and H3). HIWS is related to organisational performance (H4) but is not associated with ambidexterity (H5). Ambidexterity mediates between organisational systems and performance (H7a), but does not do so between HIWS and performance (H7b). Ambidexterity is strongly related to organisational performance (H6).

The results point to two paths to performance. One concerns a strong focus on explicit and implicit systems that enable performance via ambidexterity, the other a strong focus on HIWS that directly aids performance, but which is supported by organisational systems. The lack of a relationship between HIWS and ambidexterity was surprising. It may be that government agencies pursue other paths to ambidexterity such as differentiating between business units that are either adaptable or aligned.
The direct relationship between worker HIWS and supervisor and manager rated performance is consistent with other public administration research linking HR experiences, and trust in management, to organisational performance (Gould-Williams, 2003). Possibly the autonomy, information, rewards and knowledge that comprise HIWS enable something akin to contextual ambidexterity in the daily conduct of jobs, but this does not aggregate to ambidexterity at the organisational level as rated by supervisors/managers. This is supported by a post-hoc analysis of worker ratings of ambidexterity (rather than supervisor/manager) correlated with worker ratings of PIRK (r = .68, p.<.01). It suggests that worker experience of contextual ambidexterity differs from that of supervisor/managers who have a broader view of the organisation. Organisational ambidexterity requires sound implicit and explicit systems that span jobs, rather than just high involvement design features within a job.

Many terms used in public administration reform – such as governance, accountability, innovation and collaboration – are concerned with aspects of organisational ambidexterity as either an antecedent or overlapping construct. The ambidexterity construct helps operationalise some of these concepts which, due to their appeal and vague definition, are in some ways ‘magical’ terms, at risk of circular reasoning (Pollitt and Hupe 2011). The findings point to the need to focus on management fundamentals such as good business processes, HRM systems and a climate of trust and support which are often missing in public organisations (Leggat, Bartram, and Stanton 2011; Wright and Davis 2003). These fundamentals lack the drama of restructuring or the appeal of management fads but seem to be effective. Gibson and Birkinshaw (2004) argued that trust and support, and discipline and stretch were antecedents to contextual ambidexterity. These concepts are consistent with the antecedents used in this study. Organisational processes, for instance, provide discipline through clear accountabilities but also foster support and trust by providing pathways to get things done. Social climate for performance primarily entails support and trust but could also entail group expectations of high performance. A focus on supportive HIWS may have strong exploratory and adaptive capacity but will struggle to deploy at scale without the required organisational systems such as social climate and organisational processes. A higher threshold might be needed for a HIWS ambidexterity link to
be measurable. The low mean for HIWS indicates considerable room for improvement, particularly in
the larger participating organisations.

Rising costs and expectations, and ‘wicked’ problems in hard-to-reach populations make the
tensions between adaptability and alignment very salient. Contextual ambidexterity – or more
specifically the behaviours of individual workers – is likely to be particularly important because of the
co-production embedded in much modern public administration (Pestoff, Brandsen, and Verschuere
2013). For example, although public sector health care markets lack characteristics of dynamic
markets, providers are often in pressured environments (Nembhard et al. 2009; Schott, van Kleef, &
Noordegraaf, 2015). These environments are characterised by unmet demand, changing technology,
public criticism and, at times, resignation and acceptance. Public sector organisations are unlikely to
be compelled to be ambidextrous but their stakeholders may benefit considerably if they are.

This paper earlier discussed how other government reform efforts such as more ‘innovation’,
and accompanying processes such as revised performance management, collaboration and co-
production, have only made partial progress, and that ambidexterity provides a useful lens with which
to analyse public sector reform. It arguably bridges two sets of theories, or polarities, which
emphasise a) intra-organisational behaviour such as leadership versus inter-organisational behaviours
such as collaboration; and b) the hard accountability NPM model versus the soft neo-Weberian or
socio-technical reforms such as transformational leadership, trust and engagement (Hartley, Sørensen,
and Torfing 2013). The agency and output-based accountability embedded in NPM arguably makes
collaboration between agencies difficult, or pointless and risky. The socio-technical dynamics
embedded in the neo-Weberian model underplay the need for interaction with the wider world and
arguably have a naïve view of what motivates public administration elites. The integration of these
sets of theories means ambidexterity may be a precursor to sustained innovation as it requires ability
to deploy as well as create (Hartley, Sørensen, and Torfing 2013). In the housing example referred to
much earlier in this paper, innovations that are both adaptable and aligned could occur through both
high level program design but also likely require contextual ambidexterity much like bricolage, of line
staff juggling the idiosyncratic needs of clients with system restraints and opportunities.
CONCLUSIONS

This study identified the antecedents to organisational performance in public administration. Together with the mediation role played by organisational ambidexterity, the study established empirical evidence that high involvement work systems and organisational systems enhance organisational performance.

Limitations and future research implications

Future study could collect longitudinal data or objective performance outcomes (such as financial data or supervisors’ ratings of employee performance). Further research could distinguish between core and non-core employees.

REFERENCES


Table 1 Descriptive Statistics and Intercorrelations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1. Organisational Size</td>
<td>2.621</td>
<td>2.562</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. HIWS</td>
<td>3.10</td>
<td>.19</td>
<td>-.30*</td>
<td>(.89)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Organisational Systems</td>
<td>3.15</td>
<td>.17</td>
<td>-0.12</td>
<td>.83***</td>
<td>(.86)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ambidexterity (supervisors)</td>
<td>9.28</td>
<td>1.29</td>
<td>-0.07</td>
<td>.52***</td>
<td>.53***</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5. Organisational Performance (supervisors)</td>
<td>2.91</td>
<td>.29</td>
<td>-0.19</td>
<td>.58***</td>
<td>.52***</td>
<td>.77***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: N= 46 organisations as we are unable to obtain the data for 10 organisations.
Discriminant validity is determined by using the Fornell-Larcker criterion by ensuring the square root of the AVE of each construct is greater than the construct’s highest correlation with any other construct in the model (Hair et al., 2014, 111).
*p<.05; ***p<.001

Table 2 Results of Path Analysis

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>coefficient</th>
<th>t-statistic</th>
<th>sig. level</th>
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<tbody>
<tr>
<td>H1. Org Systems  → Ambidexterity</td>
<td>0.54</td>
<td>2.41</td>
<td>**</td>
</tr>
<tr>
<td>H2. Org Systems  → Org Performance</td>
<td>0.32</td>
<td>1.18</td>
<td>ns</td>
</tr>
<tr>
<td>H3. Org Systems  → HIWS</td>
<td>0.88</td>
<td>32.55</td>
<td>***</td>
</tr>
<tr>
<td>H4. HIWS  → Org Performance</td>
<td>0.35</td>
<td>2.62</td>
<td>**</td>
</tr>
<tr>
<td>H5. HIWS  → Ambidexterity</td>
<td>0.09</td>
<td>0.39</td>
<td>ns</td>
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<tr>
<td>H6. Ambidexterity  → Org Performance</td>
<td>0.74</td>
<td>8.84</td>
<td>***</td>
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</table>

Mediation Hypothesis:
H7. Ambidexterity will mediate the associations between:

a) Org systems and Org Performance

\[ b = .69 \text{ 95\% BCa CI (.22, 1.34)} \]

b) HIWS and Org Performance

n.s.

Note: Total sample = 56 organisations, ns: not significant, *p<.05; **p<.01; ***p<.001
Figure 1 Proposed Research Model
Figure 2 Results of Path Analysis at the Organizational Level

Note: Only statistically significant findings are shown
N=56
*p<.05; **p<.01; ***p<.001