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The importance of informal professional networks in developing a proactive organizational culture: a public value perspective

Yvonne Brunetto, Matthew Xerri, Ben Farr-Wharton and Silvia Nelson

Public value theory was used by the authors to investigate informal professional networks, perceived discretionary power, and the organizational culture that forms in physical asset management organizations. The results, from a structural equation model, indicated that informal professional networks are positively associated with higher discretionary power and a proactive asset maintenance organizational culture. In the absence of public managers promoting public value, professionals use their informal networks as a source of power to be proactive and contribute to asset reliability and public safety (public value).

Keywords: Discretionary power; informal professional networks; physical asset management; proactive organizational culture; public value theory.

This paper uses public value theory (PVT) as a lens for examining the role of informal professional networks in shaping organizational decisions that deliver public value. PVT has emerged as a viable theory for explaining outcomes and/or processes in public organizations. Bryson *et al.* (2014, p. 445) suggest that PVT is ‘a response to the challenges of a networked, multi-sector, no-one-wholly-in-charge world and to the shortcomings of previous public administration approaches’. Some argue that PVT addresses the shortcoming of previous public administrative approaches, such as new public management, by adding a new focus on creating public value (Bryson *et al.*, 2014; Denhardt and Denhardt, 2015). This paper uses the ‘creating public value’ perspective of PVT that focuses on examining whether ‘how’ and ‘what’ is being delivered to society is of value to the public (Benington and Moore, 2011a; 2011b). In addition, for efficiently and effectively operated public sector organizations, it is important to examine whether such operations are delivering value to the public. There is an entire body of knowledge devoted to defining ‘value’. However, in this paper, we adhere to the definition of ‘public value’ as delivering benefits

to society in a just way (Moore, 1995). Within the context of critical infrastructure asset management amid widespread publicity about the role of poor management in asset disasters, two public values appear important—public safety and asset longevity (Zuashkiani *et al.*, 2011; Novak *et al.*, 2014).

The process for determining whether public value is being created depends on ensuring that the right stakeholders have the power, legitimacy and vision to ensure public interests are a determinant in deciding how and what is delivered (Meynhardt and Bartholomes, 2011). While much of Moore’s (1995) interpretation of PVT related to public managers taking responsibility to deliver public value as well as efficiency and effectiveness, this paper examines whether informal professional networks have inadvertently adopted the responsibility to ensure that critical infrastructure asset organizations managing and maintaining public utilities (for example power, water, sewage) also deliver public value. We examine the proposition that informal professional networks modify how these essential utilities are delivered to ensure value for, and the safety of, the public. The context of the research is that essential utilities are delivered to the public by

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organizations that are either publicly owned, or operating as a public–private consortia, or undertaken by private contractors on behalf of the government (Brunetto *et al.*, 2014a; Xerri *et al.*, 2014). However, a growing list of disasters resulting from, in part, poor safety management and a ‘cutting corners mentality to ensure high profits/low costs’ (Zuashkiani *et al.*, 2011; Novak *et al.*, 2014), has recently raised the profile and ethical responsibility of professionals (Zuashkiani *et al.*, 2011; Brunetto *et al.*, 2016)

Typically the power based in such organizations reflects that hierarchical management is largely responsible for the mission, direction, resourcing and organizational efficiency and effectiveness. However, we argue that there is another invisible source of power emerging—the power of professionals in influencing the organizational culture within organizations. Professionals can be defined narrowly as employees who have gained specific knowledge, skills and beliefs via education, training and socialization processes, which is controlled by a professional body and government/university body (Farr-Wharton *et al.*, 2011). But they also include those with experience and the expertise of peri-professionals (Boyt *et al.*, 2001). Hence, experienced technical employees (with diplomas and certificates) have similar workplace socialization and are therefore likely to share similar values and beliefs. The body of knowledge held by professionals gives them power and when they unite together, to form informal professional networks, they can potentially change the direction of decision-making in organizations.

Networks are defined by Kapucu *et al.* (2014, p. 4) as a ‘set of nodes or actors and relationships between these nodes’. Their power to challenge managerial power arises from the informal networks ‘cut[ting] across traditional organizational structures...and therefore generally are not included in formal reporting procedures’ (Binz-Scharf *et al.*, 2012, p. 3). Unlike bureaucratic administrative managerial structures, informal professional networks ‘provide flexible structures that are inclusive, information rich and outside the scope of direct bureaucratic control’ (Isett *et al.*, 2011, p. 1159). We believe that organizational members use their informal professional networks to shape organizational outcomes, which deliver public value.

Delivering public value is complex because it confronts the issue of competing agendas. Governments and the public expect their public managers, or private contractors to deliver a

service efficiently and effectively. However, O’Flynn (2007) argues that is not enough and as a consequence, structures within organizations have to work towards delivering public value more broadly. Within organizations, such as critical infrastructure asset organizations, professionals holding hierarchical management positions face a dilemma in decision-making when their professional norms and values collide with organizational directives (Brunetto *et al.*, 2016). On the one hand, their task is simple; they are expected to make management decisions that deliver a service efficiently and effectively so as to deliver the lowest cost/highest profit possible.

However, professionals are also bound by the professional norms that inform their work practices (via specific codes of practice) and hence, they are different from other employees (Evetts, 2002; Farr-Wharton *et al.*, 2011). The dichotomy forces them into a position of having to choose which values will be dominant (Stewart, 2006). Such choices often result in an employee’s internal conflict between professional values and the values/goals of the organization (Kippist and Fitzgerald, 2009). One way for professionals to espouse their professional values based on their discipline-specific knowledge, beliefs and socialization processes, is to develop a specialized type of bounded informal network (called ‘communities of peers’) (Binz-Scharf *et al.*, 2012) that has specific codes of practice informing the important values on which work practices should be based. As a consequence, engineers, for example, are likely to share similar beliefs and values about the importance of upholding public value in everyday work practices and these values are likely to shape how they undertake engineering work. Hence, we argue that informal professional networks are a source of power that can be used to shape organizational culture, which may be required to maintain public safety and the delivery of public value, irrespective of the directives outlined by a hierarchical management agenda.

This paper empirically examines the impact of informal professional networks on the culture and outcomes in critical infrastructure asset organizations delivering essential utilities. Benington (2009) argues that informal professional networks will be instrumental in ensuring public value for society. However, the public administration literature does not appear to explore how they work. Isett *et al.* (2011, p. 1165) argue that there is a great need to understand how informal networks work and that ‘understanding relational dynamics is one

step toward understanding the effectiveness of informal networks’.

The findings from this paper contribute to the body of knowledge about the role of informal professional networks in shaping employee outcomes in such a way as to ensure the safety of society and hence deliver greater public value.

Background

The role of professionals to deliver public value

According to Noordegraaf (2007), being a professional is about having a specific body of knowledge that gives the power to make decisions and the ethical responsibility to ensure that decisions made are in accordance with specific professional values. Friedman (2001) argues that there is a further responsibility for professionals in senior positions to mentor new members so that socialization of specific value carries on over time. However, their power base increases significantly when professionals unite as communities of peers, to develop a specialized type of bounded informal network (Binz-Scharf *et al.*, 2012). It is their knowledge base that gives them greater power and legitimacy to make decisions both individually and as a group and it is their codes of practice that gives them the impetus to ensure a proactive approach to keep colleagues and the public safe (Meynhardt and Bartholomes, 2011).

Bryson *et al.* (2014) argues that it was unrealistic of Moore (1995) to consider that the public manager’s responsibility is to deliver public value because it would involve overstepping their authority in the present democratic structure. While Stoker (2006) suggests that public value management may be an appropriate framework for examining networked governance, the idea has received criticism because of a lack of clarity in conceptualizing how it would work (Bryson *et al.*, 2014). Benington (2009) argues that more research is required to understand the link between public value management and informal professional networks. We argue that the link between informal networks and public value is important because professionals have influence allowing them ‘to manage public problems by leveraging expertise held outside its [the organization’s] scope of authority’ (Isett *et al.*, 2011, p. 1159). In particular, Benington (2009) argues that as more and more public goods are delivered outside of the traditional public bureaucracies, the responsibility increasingly falls on formal and informal leadership, such as informal professional networks to ensure public value (for example

public safety).

Informal professional network

Critical infrastructure asset organizations delivering essential utilities are similar to other organizations, such as hospitals, that require professionals like doctors to undertake work. Professionals are positioned throughout the organization and at every level of the hierarchy. Rhodes and March (1994) argue that professional networks differ from others because they can maintain their power and can insulate themselves from traditional hierarchical organizational power. Within the management discipline, informal networks have been conceptualized using either a social capital or a social exchange theoretical framework arguing that effective workplace relationships build mutual reciprocity that delivers benefits to all stakeholders (Sparrowe *et al.*, 2001; Adler and Kwon, 2002; Oh *et al.*, 2004).

Previous research conceptualizes informal professional networks as a product of the socialization process associated with being a professional (for example undertaking approved training attending professional meetings, discussing, developing and implementing codes of practice) (Farr-Wharton *et al.*, 2011; Brunetto *et al.*, 2016). In the workplace, professional employees (some of whom are managers) unite (because they share similar values) to form a new intangible resource that has the power to *influence* organizational outcomes in line with professional values. This paper examines the informal relationship that forms between an employee and their non-line manager. In this case, we propose that a non-line manager is a leader that is positioned higher up the organizational hierarchy than the typical line manager (supervisor). Past research has identified that professionals share similar socialization activities but inside and outside of the organizations (see Boyt *et al.*, 2001). Hence, the informal relationship between an employee and their non-line manager–leader associate could potentially involve both inter-organizational interactions (for example, within-work meetings, site visits etc.) and socialization outside of a work setting. To test whether informal relationship between an employee and their non-line manager–leader impact on work outcomes, we examine whether informal professional networks positively influence the discretionary power of employees, so as to embed a proactive asset maintenance organizational culture (Proactive culture), which we argue could be at odds with

an organizational goal of maximizing short-term profits/reducing costs, but consistent with professional codes of practice and for delivering public value (i.e. it is the safest option and the strategy likely to promote asset longevity).

Discretionary power

Discretionary power refers to the autonomy of employees to make decisions about what and how they undertake tasks at work. After three decades of reform, professionals now have more accountability and in doing so, they now have reduced power (Diefenbach, 2009). Bryson *et al.* (2014) argues that the nature of discretion has changed and that while professionals still have discretionary power because of their knowledge and skills, their accountability is more related to professional standards, legal requirements and political and community expectations.

On the other hand, the power of informal professional networks (Binz-Scharf *et al.*, 2012; Kapucu *et al.*, 2014) means that if an engineer has a good idea that is consistent with professional standards, then it is likely that other engineers will support the idea. In addition, because some of those engineers are in senior management positions, the informal professional network is a vehicle for empowering individuals to achieve outcomes aligned with professional values and public value. Therefore, we expect satisfaction with informal professional networks is likely to lead to higher employee perceptions of discretionary power:

Hypothesis 1: Informal professional networks positively correlate with discretionary power.

Proactive organizational culture (asset maintenance)

Past research argues that organizational culture predicts employee outcomes (Lok and Crawford, 2004; Shelton *et al.*, 2011). Every organization comprises one dominant organizational culture and many subcultures depending on the type of employees. Professional organizational culture has specific values and beliefs, which in turn informs their work practices and this may be different from the culture of administrative employees (Martins and Treblanche, 2003; Jung *et al.*, 2009).

In the case of technical and engineering employees, the culture involves designing, building and maintaining assets (Murphy, 2008; Zuashkiani *et al.*, 2011). This means that achieving a proactive asset maintenance

organizational culture is consistent with engineering values that align with concern for public safety. Moreover, the alignment is derived from beliefs and codes of practice, that is, essential utilities are costly assets and they are expensive to replace. Hence, as stated earlier, asset longevity is a public value as it reduces the severity of outcomes associated with potential accidents/disasters (Zuashkiani *et al.*, 2011). A proactive culture is significantly different from a reactive culture that only fixes something when it is 'broken' because it is more costly in the short-term and therefore not a strategy to be used when aiming for maximizing short-term profit/cost-cutting goals. It is however, consistent with the public values of achieving asset longevity/public safety. We expect that the more satisfied employees are with informal professional networks, the greater will be the acceptance of proactive asset maintenance organizational culture—see Hypothesis 3). Additionally, the higher the discretionary power of employees, the more they are likely to support a proactive organizational culture—see Hypothesis 2:

Hypothesis 2: Discretionary power positively correlates with a proactive asset maintenance organizational culture.

Hypothesis 3: Informal professional networks positively correlate with a proactive asset maintenance organizational culture.

A review of extant literature revealed no studies that have examined the mediating role of discretionary power between informal professional networks and a proactive culture. However, the notions of PVT can be used to justify why it is expected that discretionary power will play a mediating role. In particular, changes associated with public sector reform, implemented in an attempt to improve public sector efficiencies, have increased accountability and decreased the high levels of discretionary power once shared by public sector professionals (Diefenbach, 2009). The result is often a conflict between professional values to deliver public value and organizational goals to improve profitability (Kippist and Fitzgerald, 2009). To maintain public value, we propose that public sector professionals use their community of peers—informal professional networks—to regain the discretionary power often required to make decisions that contribute to upholding their commitment to delivering public value. By regaining some discretionary power through informal networks, this provides

professionals in physical asset organizations with additional resources (such as a time allocation for proactively maintaining assets) as well as with the flexibility to be proactive and uphold the public value associated with maintaining assets. As such, we propose that informal professional networks will positively contribute to the development of a proactive culture, though such a relationship will also be partially dependent on the discretionary power of professionals—see Hypothesis 4:

Hypothesis 4: Discretionary power mediates the relationship between informal professional networks and a proactive asset maintenance organizational culture.

Methods

Data and sample

Pure Profile (www.pureprofile.com.au), an Australian market research company, was employed to collect the data. The sample consisted of employees working within Australian physical asset management organizations, otherwise referred to as ‘engineering asset management’ (Reid and Xerri, 2013). ‘Physical asset management’ is better term because, using Cagle’s (2003) descriptions, the organizations examined manage engineered assets (for example inventories, equipment, land and buildings) and infrastructure (for example roads, bridges, tunnels, drainage systems, water and sewer systems, dams and lighting systems). So, the term ‘engineering asset management’ could be confused with only referring to engineered assets. The data collection resulted in a sample of 272 physical asset management employees: 122 asset managers, 73 asset engineers, 49 asset maintenance workers and 28 other asset management employees (see table 1 for further demographic descriptions).

Taking into consideration the different groups of asset management employees examined and the fact employees were from the private and public sectors, two ANOVAs were undertaken to determine if there were any statistically significant differences between employee groups and between the public and private sectors. The results (see table 2) did not show any statistically significant differences between the public and private sectors for all of the constructs being tested. As such, the two samples were combined to test the hypotheses. However, table 2 depicts significant differences between those identifying themselves as ‘managers’ and the remainder (engineers and maintenance/ technical/other employees

examined and therefore a dummy coded control variable entitled—‘employee type’ was added—to test the hypotheses

Variables

A number of previously validated latent variables were used to measure the informal relationship between employees and non-line managers and employee perceptions of their discretionary power and a proactive asset maintenance organizational culture. The measures were applied using a six-point scale, ranging from ‘1’ = strongly disagree to ‘6’ = strongly agree. The informal relationship between employees and leaders was measured by a seven-item scale developed to measure informal manager-employee relationships (Brunetto *et al.*, 2016) and the results indicated good reliability with an AVE of 0.74 and composite reliability of 0.95. In addition, an initial principal components factor analysis with varimax rotation revealed factor loadings above 0.800 for each of the informal professional network items. A sample informal professional networks question was: ‘Managers within my informal professional network understand my work problems and needs better than my line manager’. The concept of informal professional network was also briefly explained to participants before they completed the survey. Discretionary power was measured using a three-item scale, using the self-determination scale from Spreitzer’s (1995) measure of empowerment, which had a composite reliability of 0.93 and an AVE of 0.81. Proactive

Table 1. **Demographics.**

<i>Gender</i>	<i>Frequency</i>	<i>%</i>
Male	167	61.4
Female	105	38.6
<i>Job title</i>		
Asset manager	122	44.9
Asset engineer	73	26.8
Asset maintenance	49	18
Other asset management worker	28	10.3
<i>Education</i>		
High school	20	7.4
Technical and further education	37	13.6
Diploma	50	18.4
Bachelor	89	32.7
Postgraduate	76	27.9
<i>Organization type</i>		
Public	106	39
Private	166	61
<i>N = 272</i>		

Table 2. ANOVA.

Organization/employee type		Mean	SD	Homogeneity of variances		F	Significance
				Levene statistic	Significance		
Proactive organizational culture	Public	4.36	.96	.819	.366	.070	.792
	Private	4.39	1.01				
Discretionary power	Public	4.74	1.03	3.08	.081	.160	.689
	Private	4.79	.86				
Informal professional networks	Public	3.98	1.19	3.330	.069	1.316	.252
	Private	4.13	1.01				
Proactive organizational culture	Asset/maintenance manager	4.44	.97	.007	.993	2.383	.094
	Engineer	4.17	.99				
	Maintenance/technician/other	4.48	.98				
Discretionary power	Asset/maintenance manager	5.02	.79	4.50	.012	9.342	.000
	Engineer	4.61	.88				
	Maintenance/technician/other	4.51	1.06				
Informal professional networks	Asset/maintenance manager	4.24	1.07	.261	.770	3.766	.024
	Engineer	3.81	1.00				
	Maintenance/technician/other	4.03	1.12				

organizational culture (asset maintenance) was measured using a six-item variable developed and tested by Brunetto *et al.* (2014b) and had good internal consistency with a composite reliability of 0.93 and an AVE of 0.73. The following is a sample item: 'My organization proactively maintains assets based on asset performance data'.

Data analysis and model estimation

Data analysis included the use of the Statistical Package for Social Sciences (SPSS) v.22 and Analysis of Moment Structures (AMOS) v.22 software. The two-step approach by Anderson and Gerbing (1988) was followed. Mediation was tested using the significance of the indirect effects of predictor, mediator and criterion variables, while direct effects were also modelled (MacKinnon *et al.*, 2002) in AMOS. The following fit indices, prescribed by Hu and Bentler (1999) were used to test model fit:

normed chi-square between 1 and 3, CFI \geq 0.95 for a superior fit, RMSEA close to 0.06 and SRMR close to 0.08. However, regarding RMSEA, Browne and Cudeck (1993) propose that 0.08 represents an adequate fit and below 0.05 represents a good fit. Mardia's (1970, 1974) normalized estimate of multivariate kurtosis was 2.39, which is below the cut-off value of 5 (Bentler, 1990).

Confirmatory factor analysis

The model fit of the hypothesized model was reasonably poor (see table 3) (CMIN/DF = 4.418, RMSEA = 0.112, CFI = 0.912 and SRMR = 0.0804). A review of the square multiple correlations revealed that one of the proactive organizational culture items—'The formal maintenance schedule in my organization is based on only fixing broken infrastructure'—was not good reflection of the scale (SMC = 0.031), so the item was dropped

Table 3. Confirmatory factor analysis—examining goodness-of-fit.

	CMIN/DF	CFI	RMSEA	SRMR
Hypothesized measurement model	4.418	0.912	0.112	.0804
Modified measurement model	2.384	0.973	0.071	.0468
Model 1: Discretionary power completely mediates informal professional networks and proactive organizational culture	2.949	0.962	0.085	0.1325
Model 2: No mediation, path from informal professional networks to discretionary power removed	3.045	0.960	0.087	0.1578
Model 3: Full mediation model	2.384	0.973	0.071	0.0468
Model 4: Adds common latent factor to model 3	2.047	0.980	0.062	0.0433

**Common variance was approximately 28%.

from the model. The following informal professional networks items 'I have a good working relationship with process catalysts within this organization' and 'In my experience managers within my informal professional network recognize my potential more than my line managers' had standardized residual covariance's above 1.96 and low squared multiple correlations, so the two items were removed. An error covariance was also estimated between two informal professional network items 'In my experience my process catalysts are willing to help me in their own time' and 'I have enough confidence in my process catalysts that I would defend their decisions in their absence'. 'Process catalyst' is a term that describes non-line managers who have the power to influence organizational decisions related to whether a proactive or reactive maintenance culture is adopted. The re-specifications resulted in a superior model fit (CMIN/DF = 2.384, RMSEA = 0.071, CFI = 0.973 and SRMR = 0.0468).

The findings provide support for reliability and validity of the scales. All standardized factor loadings were less than one and above 0.70 (Kline, 2011) average variances extracted (AVE) were greater than 0.5 and composite reliabilities all exceeded 0.70 (Hair *et al.*, 2010). As depicted in table 4, the square root of each AVE exceeded correlations between the latent variables.

Testing the research model

To test the hypotheses and common method bias, four structural models were constructed. In model 1, discretionary power completely

mediated the relationship between informal professional networks and proactive organizational culture. In model 2, no mediation was examined, so the path from informal professional networks to proactive asset maintenance organizational culture was removed. In model 3, each of the hypothesized parameters were estimated (full mediation model); and in model 4 a common latent factor was added to model 3 to test for common method bias. Model 3 provided a superior fit when compared to models 1 and 2. Also, a chi-square difference test revealed that model 3 was statistically distinct. Model 4 fit the data well and the common variance was approximately 28%. As such, the common method variance is of limited concern in this study.

The results from model 3 supported all of our hypotheses, To examine hypothesis 4, table 5 depicts that informal professional networks appear to be positively and significantly related to proactive asset maintenance organizational culture ($\beta = 0.371, p < 0.001$) and there also appears to be a significant indirect effect between informal professional networks and proactive organizational culture through discretionary power ($\beta = 0.154, p < 0.01$).

The findings for the mediation hypotheses depict that informal professional networks is positively and significantly correlated with proactive asset maintenance organizational culture and perceived discretionary power partially mediates the relationship between informal professional networks and proactive organizational culture.

Table 4. Correlations.

	Mean	SD	1	2	3	4	5
1. Proactive organizational culture	4.38	0.99	0.492**	(0.855)			
2. Discretionary power	4.77	0.93	.643**	0.477**	(0.898)		
3. Informal professional networks	4.07	1.08	0.432**	0.494**	.361**	0.102	0.454**
4. Education			0.012	-0.014	0.034	0.040	-0.001
5. Organization type (public or private)			0.050	0.016	.024	0.049	0.087

*Correlation is significant at the 0.05 level (two-tailed). **Correlation is significant at the 0.01 level (2-tailed). $N = 272$. Note: Square root of AVE in parentheses.

Table 5. Testing mediation.

Relationship	Total effect	Direct effect	Indirect effects
H4: Discretionary power mediates informal professional networks → proactive organizational culture	$\beta = 0.525$ $p < 0.001$	$\beta = 0.371$ $p < 0.001$	$\beta = 0.154$ $p < 0.004$

Discussion

This paper uses PVT as a lens for examining the role of informal professional networks, in Australian physical asset management organizations, in shaping organizational decisions that deliver public value. While PVT, from Moore's (1995) perspective, should be delivered by public managers, we argue that it is informal professional networks—comprising both professionals (engineers/technical staff) and managers (also engineers/technical staff)—who because of their professional beliefs and values accept the responsibility to deliver public value—in this case asset reliability and employee and public safety.

The SEM results appear to show that each path was significant and informal professional networks accounted for almost a fifth of employees' discretionary power. Together, informal professional networks and discretionary power accounted for over a third of the proactive asset maintenance organizational culture that resulted. The findings suggest that, in physical asset management organizations, a quality informal professional relationship between employees at different levels of the hierarchy is important for fostering the empowerment of employees. This relationship promotes the development of a proactive asset maintenance organizational culture. More specifically, quality informal professional relationships lead to employees feeling autonomous in the workplace and with such discretionary power and support from the informal relationships, they feel equipped to be proactive in the workplace—leading to a proactive asset maintenance organizational culture.

A proactive asset maintenance organizational culture is necessary for detecting potential issues in critical physical assets (Xerri *et al.*, 2015; Brunetto *et al.*, 2016). Past research and intense media exposure about the implications of recent asset disasters have led to debate about the importance of two public values—in particular public safety and asset longevity (Zuashkiani *et al.*, 2011; Nova *et al.*, 2014). This paper identifies the important role of informal professional networks in promoting these public values, because they are consistent with professional codes of practice. Managers are employed by organizations to manage effectively and, while the cost of supporting a proactive asset maintenance culture may be more resource intensive initially, it is more cost-effective longer term because the asset lasts longer and the community is safe. Hence all stakeholders are likely to benefit when

managers consider professional codes of practice related to safety when making organizational decisions. If the problems are addressed before asset disasters occur, the benefit for society is that the asset has a greater chance of achieving longevity, which reduces the cost to taxpayers of having to replace highly capital-intensive critical assets such as water and sewage plants, power stations, bridges, transport systems. Also, past critical asset disasters have caused water/air pollution, displaced citizens and in some cases, death. Therefore, ensuring a proactive organizational culture is an important mechanism by which professionals promote behaviours consistent with ensuring public value.

Only self-report surveys have been used in this study, which is a limitation that has the potential to cause common method bias. However, self-reporting is considered valid for gathering information about employees' perceptions; as long as deductive research is undertaken involving an extensive literature review and then pattern-matching is used to support interpretation of the emerging themes. In addition, the common latent factor approach was used and it was determined that common method bias was negligible in this study (Podsakoff *et al.*, 2003). Another limitation is that only one professional group was examined, hence, the results could be an aberration. Further research examining other professionals is required to ensure the generalizability of the findings. Owing to the significance levels present in the results, future research warrants an expansion of the variables used in this study, to include measures related to the quality of management and the orientation towards public value. Refinement in sampling could also examine in more depth the profile of private, public and not-for-profit asset management organizations in order to determine if their modality of work influences their proactive organizational culture.

Conclusion

This paper found that informal professional networks are being used to ensure that physical asset management organizations managing utilities (for example power, water, sewage, transport) also deliver public value in the form of proactively maintaining assets, which has been linked to improved public safety and asset reliability (Morimoto, 2010). The professional networks provide access to resources and empower professionals to shape an organizational culture to ensure essential utilities are delivered safely to the public by

publicly owned organizations, public-private partnerships, or a private contractor on behalf of the government (Brunetto *et al.*, 2014a; Xerri *et al.*, 2014). Hence, PVT provided an insightful lens for examining how professional groups may shape management decisions. As such, it addresses a call by Isett *et al.* (2011) for empirical research to examine how new forms of governance occur in networked structures.

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Within the context of a growing number of asset management disasters negatively impacting the health and wellbeing of communities and the surrounding environment, policy-makers are concerned with who is ensuring public safety and the longevity of assets. In the absence of effective legislative frameworks and capable leadership, the findings from this study show that informal professional networks (in this case, engineering networks) have the power, legitimacy and vision required to take responsibility for ensuring that critical infrastructure assets (such as power plants and water and sewage systems) are managed and maintained effectively to deliver public value.

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