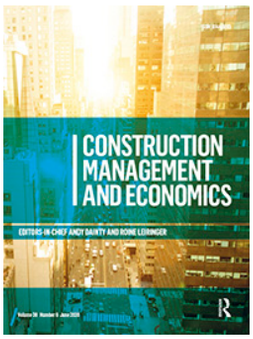

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ARTICLE

The risks of and barriers to social procurement in construction: a supply chain perspective

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ABSTRACT

Social procurement policies place new requirements on subcontractors to create employment opportunities for people suffering disadvantage. However, the subcontractor's voice is largely absent from the social procurement debate, despite employing the majority of people in the construction industry. Addressing this gap in social procurement research, a survey of seventy Australian subcontractors was undertaken to explore perceived barriers to integrating six disadvantaged groups targeted by social procurement policies into the construction workforce (Indigenous people, people suffering disability, women, disengaged youth, migrants and refugees, ex-offenders). Results indicate that rather than reducing disadvantage for the most marginalised groups in society, satisficing behaviour in complying with emerging social procurement policies could have the opposite effect. Subcontractors see significant business risks associated with safety, productivity and costs with disengaged youth being perceived as the highest risk cohort, followed by migrants and refugees, people suffering disability, ex-offenders, women and Indigenous workers and employment priorities reflect these perceptions. Perceived barriers to employment vary significantly across these groups with smaller and younger firms perceiving the greatest barriers – particularly for women and Indigenous workers. Practically, the results highlight the potential risks which social procurement policies present to vulnerable people if they are introduced without sufficient support and regard for an industry's culture, structure and capacity to deliver. Conceptually, taking this research forward, the results highlight the potential value of cross-sector collaboration and intersectionality as theoretical frameworks to better understand how these groups experience working in the construction sector.

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Diversity; employment; gender; Indigenous; social procurement; social value

Introduction

Social procurement is re-emerging as a popular public policy mechanism in many parts of the world for governments to address growing social disadvantage and inequity (Barraket *et al.* 2016) In its simplest terms, social procurement is "the acquisition of a range of assets and services, with the aim of intentionally creating social outcomes (both directly and indirectly)" (Furneaux and Barraket, 2014, p. 269)." At the heart of social procurement is the creation of 'social value' which remains under-conceptualised and poorly defined in construction. Nevertheless, in its simplest form Raiden *et al.* (2019) define social value as the net difference a construction project makes to the lives of the people in the communities in which it is built. Due to its size and multiplier effect into the wider economy, the construction industry is widely seen by governments as a focus for newly emerging social procurement policies. As Loosemore (2016) notes, by leveraging their construction and infrastructure spending, governments can unleash significant untapped social value potential from their existing procurement spending, by requiring construction firms to give back to the communities in which they build.

While social value can be created in many different ways, the most common mechanism used in emerging social procurement policies is the requirement for construction supply chains to create employment and training opportunities for people suffering disadvantage (McNeill 2017). While these groups vary from policy-to-policy and from project-to-project depending on community needs, common groups targeted by emerging social procurement policies include: Indigenous peoples; people suffering disability; youth at risk; long-term unemployed; migrants and refugees; and women at risk (see for example Victoria State Government 2018).

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Despite an emerging body of work in construction social procurement in recent years, the construction industry is under-represented in the broader social procurement debate. As Troje and Gluch (2019, p. 3) point out, the project management challenges faced by the new employment requirements being imposed by new social procurement policies are poorly understood and under-researched and the field of social procurement both within and outside the field of construction "suffers from weak theorization, conceptualisation and empirical investigation."

Mobilising Furneaux and Barraket's (2014) typology of social procurement, Loosemore and Reid (2018) concluded that to engage effectively with these new policy requirements, the construction industry should give immediate priority to building existing subcontractor capacity to deliver social value, so that it becomes the norm in the industry rather than the responsibility of the small number of social benefit organisations (such as social enterprises) that have become the focus of much social procurement policy and research. Ironically however, subcontractor perspectives are almost entirely absent from the current social procurement debate with existing social procurement research in construction focussing on third sector organisations (Loosemore 2015, 2016, Barraket and Loosemore 2018), principal contractors (Farag *et al.* 2016), clients (Burke and King 2015) and policy-makers (Denny-Smith and Loosemore 2017, Troje 2018, Troje and Gluch 2019). The lack of voice given to subcontractors in the emerging social procurement debate is an important gap to address because in countries like the UK and Australia, where the subcontracting model of organising construction is prevalent, it is subcontractors that will ultimately bear the main responsibility for delivering on these new contractual requirements, as social procurement risks are passed down the contractual chain by principal contractors in back-to-back contracts, as they do with other types of risk (Loosemore and Higgon 2015). As Raiden *et al.* (2019) warn, without considering the capacity of the existing supply chain to deliver social value, there is a danger that social procurement policy will run ahead of social procurement practice and the industry's capacity to deliver and fail to achieve its increasingly ambitious goals.

Answering Loosemore and Reid's (2018) call to better understand the existing supply chain's capacity to deliver social value and addressing the neglect of subcontractors' voice in the social procurement debate, the aim of this paper is to investigate the barriers that subcontractors perceive to exist in complying with new social procurement employment requirements. More specifically, this paper addresses four main research questions:

a. What are the priorities that subcontractors attach to hiring individuals from disadvantaged groups targeted by social procurement policies (Indigenous, Disabled, Women, Disengaged Youth, Migrants & Refugees, Ex-Offenders)?
b. What is the past and current representation of these disadvantaged groups in the subcontractor supply chain?
c. What are subcontractor perceptions about the barriers to employment which disadvantaged groups face in the construction industry?
d. How do these perceptions vary across the construction supply chain?

Answering these questions is important to provide a more balanced social procurement debate which reflects the structure of the construction industry and a more nuanced understanding of the challenges involved in implementing new social procurement requirements for both principal contractors and government policy makers. As Dainty *et al.* (2007, p. 11) caution in their critical review of people and culture in construction, legislation to bring about change must consider that "Attempts to impose cultural change usually results in resistance unless they take account of the structural landscape within which the industry's culture is manifested".

Social procurement in construction

The concept of social procurement has a long history going back to the mid-19th century (McCrudden 2004) but has re-emerged recently in many countries as an innovative and somewhat controversial policy response to address growing unemployment, social inequity and disadvantage in society. In a public policy and management context, social procurement is a product of emerging trends in 'New Public Governance', which see governments moving from 'providers' to 'enablers' of social welfare services through new cross-sector partnerships with the private, third and community organisations (Varghese 2015, Barraket *et al.* 2016). Motivated by falling welfare budgets and the widespread failure of traditional government interventions to address social disadvantage, governments are looking to social procurement to provide innovative solutions to intransigent social problems such as unemployment, although there is as

yet little evidence that social procurement produces better solutions than traditional government interventions (Barraket *et al.* 2016). Furthermore, there is a lack of sector-specific research in social procurement and while industries like construction offer enormous potential opportunities to help address social challenges through employment and training, there are numerous challenges to overcome in implementing such policies. For example, Barraket and Loosemore's (2018) interviews with various members of the construction social value chain, found that cross-sector collaboration with social enterprises in the construction industry is problematic, is largely driven by commercial and institutional imperatives and is constrained by the construction industry's established governance, management, leadership, organisational arrangements, systems, structures and competencies.

While recent research by Petersen (2018) and Troje and Gluch (2019) is throwing light on the general institutional changes new employment requirements imposed by emerging social procurement policies may require, less is known about the specific barriers to employment faced by the disadvantaged groups being targeted. These cohorts vary from one social procurement policy context to the next in response to community needs and government priorities. For example, in the US there has been a long-term focus on providing employment and training opportunities for people suffering disability and other minority groups such as migrants (McCrudden 2004), while in countries like Australia, Canada and South Africa there has been a long-term focus on Indigenous people (see for example the Australian Indigenous Procurement Policy 2015). The social procurement policy landscape is increasingly complex and in countries like Australia there are many overlapping federal, state and local government policies which target a wide range of disadvantaged groups creating potential confusion and supply problems in the construction supply chain I complying with these increasingly demanding employment requirements. For example, the recently released Victorian Social Procurement Framework in Australia (Victoria State Government 2018) requires all Victorian Government departments and agencies to consider employment and job readiness targets for Indigenous people, disabled people, women, long-term unemployed, disengaged youth, single parents, migrants and refugees, and workers in transition. This is producing a complex, overlapping and potentially overwhelming kaleidoscope of new employment requirements on a construction industry that has little experience in this area, which has a very strong view about what an ideal construction worker looks like and which has typically seen the community as a risk rather than an asset (Raiden *et al.* 2009). As Ormerod and Newton (2013, p. 933) point out in the context of UK construction, there is a stereotype image of what the ideal construction worker looks like "one of a macho, blockey, big muscly able-bodied person, and that this person would probably be a man". Yet the implications for non-compliance in countries such as Australia, Canada and South Africa with targeted mandatory policies, are significant with construction firms having to provide evidence of compliance against specific targets and being potentially struck off tender lists with government agencies if they cannot (see for example the Australian Indigenous Procurement Policy 2015).

Understanding this new employment risk is increasingly important and the following section provides an overview of the extant construction literature regarding the employment of disadvantaged groups targeted by new social procurement policies.

Barriers to employment for disadvanatged groups targeted by social procurement policies

Indigenous people

Many countries have Indigenous people in their populations who suffer significant social disadvantage and some countries such as Canada, South Africa, and Australia have developed social procurement policies to help address this problem (Adams 1997, Mah 2014, Denny-Smith and Loosemore 2017). The construction industry has become a major focus for such policies since it provides a relatively large number of opportunities for Indigenous people. For example, a recent report by Construction Skills Queensland (2018) in Australia found that Indigenous workers are 30% more likely to work in construction than in other industries, which amounts to 13% of the state's overall Aboriginal and Torres Strait Islander workforce. While there has been some research into the capacity and performance of Indigenous contractors in countries like Australia, Nigeria and Papua New Guinea (Adams 1997, Wasi and Skitmore 2001, Dania *et al.* 2014, Denny-Smith and Loosemore 2017) there has been no research into barriers to employment of Indigenous people in construction.

Disabled people

Research into the barriers which people suffering disability face in construction has also been scant with

the limited research showing that people with disabilities face significant wage differentials, stigmatisation and discrimination by employers (Newton and Ormerod 2005, Clarke and Gribling 2008, Shier *et al.* 2009, Clarke *et al.* 2009, Ormerod and Newton 2013, Quaigrain *et al.* 2014, Quaigrain and Issa 2018). This research also shows that construction industry recruitment largely relies on traditional sources of labour (able bodied men) and informal social networks rather than the formal channels which disabled people rely on to secure a job. People suffering disability are widely seen as a safety risk and incapable of working on construction sites due to the harsh physical conditions. Furthermore, the relatively few disabled people working in construction tend to occupy administrative and office-based roles which preclude them from the sorts of career opportunities which able-bodied employees enjoy.

Disengaged youth

Despite the Australian construction industry being a large employer of youth (the largest youth employer of any Australian industry – ABS 2016), there has been precious little research into their employment experiences in construction. Yet in many countries, youth unemployment and under employment remain at high levels. As Bodsworth (2012) notes, many disengaged young people face significant barriers to finding and maintaining employment due to an increasingly casualised workforce, lack of entry-level employment opportunities, negative employer attitudes, poverty, homelessness, low levels of formal education, poor literacy and numeracy, complex health needs and family breakdowns. These barriers are exacerbated in construction due to historical reductions in apprenticeships and training, increasing workplace casualisation and the lack of capacity to carry unproductive youngsters as they learn their trade due to high time and cost pressures on projects (Chan and McCabe 2010).

Migrants and refugees

In Australia, as in many other developed countries, refugees and immigrants are over represented in the informal economy and the ranks of the unemployed, under employed and precariously employed, suffering low wages, exploitative work conditions, increased work hours and lack of job security (Karlsen 2017, Kosny *et al.* 2017, Mansour-ille 2018). Although there has been no research into the plight of refugees trying to secure work in the construction industry, the large number of immigrants (often illegal) who find their way into construction (many in the informal economy) has led to some limited research which shows that poor language skills, discrimination, a lack of locally recognised qualifications and perceived safety and productivity risks are common barriers to employment (Loosemore *et al.* 2011, Khatleli 2015, Hammond *et al.* 2016, Sveikauskas, *et al.* 2016).

Ex-offenders

Ex-offenders (people with a criminal record) represent another under-researched group in construction, despite research which highlights the many opportunities that exist in construction for ex-offenders (see for example National Association for the Care and Resettlement of Offenders 2018). Nevertheless, research outside of construction highlights a range of employment barriers for ex-offenders which include: lack of employer education; negative stigmatisation, stereotypes and discrimination; fear of re-offending; adverse impacts on customers and other employees; safety, security and productivity risks; poor education, training and skills and the need to manage ongoing interpersonal challenges (physical, psychological, substance use, education and skills) (Brewer 2017). Official UK government statistics (UK Government 2018) show that 50% of employers in the UK would not consider employing an ex-offender, regardless of the offence or sentence received and a recent report in the UK shows that only 32% of ex-offenders are in employment and that 68% of offenders are reconvicted within two years of release (Parry and Green 2017).

Women

Of all the disadvantaged groups targeted by new social procurement policies, women represent the most well researched group in construction, although the focus has been on professionals rather tradeswomen and women at risk. Nevertheless, this large body of research has identified a range of barriers to employment for women which include: the macho culture of the industry; stereotype images of women not being able to work in construction; long work hours and presenteeism; sexism, harassment and discrimination; rigid workplace practices; informal and non-transparent recruitment practices (the old boys network); lack of training, mentoring and role models; poor parental leave practices; poorly designed gender equity and diversity policies which are not enforced

and subconscious bias (Dainty *et al.* 2004, Sang and Powell 2012, Galea *et al.* 2015).

Method

Our literature review, which can only be summarised above, revealed a wide range of barriers which disadvantaged groups targeted by emerging social procurement policies are likely to face in gaining employment in the construction industry. To investigate whether these reflect the barriers that subcontractors perceive to exist in complying with new social procurement employment requirements we conducted an online survey of subcontractors across the construction supply chain in Australia. These subcontractors were accessed using purposive non-probability sampling of project managers working for subcontractors across Australia. Project managers were selected as the target respondents because of their key role in making recruitment decisions on construction projects (Raiden *et al.* 2008) and subcontractors were identified and contacted through publicly available websites and registers of subcontractors to ensure a range of trades and firm sizes were sampled which reflected the diversity of the subcontracting population in Australia. Because we were enquiring about vulnerable groups and about a firm's performance in the context of increasing social procurement requirements which can determine competitive advantage in the construction market-place, an on-line survey was used because it afforded anonymity to our respondents, maximising our response rate and minimising potential social desirability bias which is a recognised problem in research where companies may wish to be seen doing the right thing – especially with vulnerable groups (Loosemore and Lim 2018). Logistically, an on-line approach also allowed us to access subcontractors from a wider geographical spread than would have been possible by hand administration.

The on-line survey comprised two sections. The first section required respondents to provide general demographic information about the nature, employment size, turnover of their company and age of their company. The second part of the survey utilised a mixture of five-point Likert Scales, interval and categorical scales across a range of questions covering: the priorities that subcontractors attach to hiring individuals from disadvantaged groups (Indigenous, Disabled, Women, Disengaged Youth, Migrants & Refugees, Ex-Offenders); the past and current representation of disadvantaged groups in the subcontractor supply chain; and the specific barriers to employment which subcontractors perceive to exist for these in the construction industry. The survey included twenty items (see Tables 8 and 9) derived from a synthesis of barriers to employment uncovered by previous research as summarised above.

The questionnaire was pretested and validated using a pilot study and due to the potential sensitivity of the research being focussed on vulnerable groups, all respondents were provided with a formal invitation to participate, evidence of ethics clearance, an explanatory letter outlining the research objectives and offering an opportunity to withdraw their data at any time and a guarantee of anonymity.

A total of 100 sub-contracting businesses were invited to participate and 70 usable responses were received, as illustrated in Table 1. This response rate is very strong for studies which address potentially sensitive areas (Marszalek *et al.* 2011), especially given the highly dispersed and transient nature of our respondents' work sites and the time pressures subcontractors are exposed to.

Data was analysed using a variety of descriptive and inferential non-parametric tests, following pretesting for Kurtosis and Skewness which showed that the data was not normally distributed. A Kolmogorov–Smirnov (KS) (Kruskal and Wallis, 1952) test was also conducted to re-affirm the non-normal distribution nature of our data. A Relative Importance Indexing (RII) method was used to rank the responses of respondents against the various disadvantaged cohorts. This was chosen over the arithmetic average method because it can derive relative indices within the range of 0–1 for each variable enabling us to undertake relative comparisons of items in our survey. This cannot be achieved by directly comparing the arithmetic averages (i.e., mean) of variables as variables could have different maximum mean values (Holt 2014). RII has been widely used by researchers in construction management, including in a CSR context (Enshassi *et al.* 2015, Loosemore and Lim 2016).

Equation (1) shows the formula for calculating the Relative Importance Index (RII) of each item (Holt 2014).

$$RII = \frac{\sum W}{A \times N} \tag{1}$$

where

RII refers to a value ranging from 0–1. In this study, a higher RII indicates that a criterion is more important than criteria with relatively lower RIIs.

W refers to the response, on a scale of 1–5, to a criterion by each respondent.

Table 1. Sample structure.

Characteristics	Frequency	Percentage %
Industry experience		
0–5 years	5	7.1
6–10 years	19	27.1
11–15 years	20	28.6
15 and over years	26	37.1
Trade		
Service trade (ST)	26	37.1
Electrical	8	
Plumbing	8	
Gas fitting	3	
Air conditioning	2	
Elevator and lifts	5	
Structural trade (STT)	27	38.6
Bricklaying	4	
Carpentry	5	
Glazier	1	
Roofing	2	
Concreting	4	
Scaffolding	4	
Steel fixing	1	
Excavation	2	
Welding	2	
Bricklaying	2	
Other	17	24.3
Landscaping	3	
Painting and Decoration	3	
Building insulation	2	
Crane and hoisting	2	
Transportation	2	
Traffic Control	5	
Annual turnover		
0–1 million AU$	17	24.3
1–5 million AU$	29	41.4
5–10 million AU$	17	24.3
Over 10 million AU$	7	10.0
Company size		
0–10	11	15.7
10–50	43	61.4
50–100	14	20.0
over 100	2	2.9

A is the maximum value given to a specific criterion, in this case 5.

N refers to the total number of respondents in this study, in this case 70.

In this study, a higher RII indicates that an item is more prevalent than other items with relatively lower RIIs.

A Kruskal–Wallis H (KH) (Kruskal and Wallis, 1952) test (the non-parametric equivalent of the one-way ANOVA) (Field, 2009) was also conducted to determine if there were significant differences across various dimensions of the sample (company age, trade, turnover, employee numbers) regarding our dependent variables (priorities, employment record and perceived barriers). Pairwise comparisons were performed using Dunn's procedure with a Bonferroni correction for multiple comparisons. The adopted significance level was 5% for all analyses Further to this, an attempt was made to explore if those perceived barriers vary across different trades of subcontractors, i.e., Services trades, Structural trades, Other trades (see Table 1). For this, a data binning exercise was undertaken to categorise subcontractors based on the nature of their businesses so as to create more meaningful and manageable sub-groups for comparative analysis.

Table 2. Mean, RII and rank of priority given to hiring from targeted disadvantage groups.

	Mean	RII	Overall rank
Indigenous	4.77	0.95	1
Women	4.23	0.85	2
Migrants & refugees	3.49	0.70	3
Disengaged youth	2.61	0.52	4
Disabled	2.50	0.50	5
Ex-offenders	1.41	0.28	6

Results

Table 2 illustrates the results regarding priority given to hiring from the target social procurement groups in our survey and Table 3 illustrates the results of the KH tests and pairwise comparison tests across the different elements of the sample. Each quadrant in Table 3 represents a different independent variable – time in business, trade classification, turnover and company size.

Table 2 shows that the order of priority for hiring from disadvantaged groups in our sample was: Indigenous, Women, Migrants & Refugees, Disengaged Youth, Disabled and Ex-Offenders. The difference in the RII scores (0.28 ex-offenders v 0.95 Indigenous) indicates that some groups are much higher priority than others. There is also some variation in responses when the sample is divided into different independent variables (Table 3). For example, the top left quadrant of Table 3 shows that while time in business does not seem to influence priority given to hiring disabled, women, disengaged youth, migrants and refugees and ex-offenders (with KH test values ranging from 2.203 to 7.33, significant at $p < 0.05$), it does seem to influence priority given to the hiring of Indigenous people. A pairwise comparison (with the corresponding significant X^2 values of −18.812) shows that this is particularly the case for companies less than 5 years old which give by far the lowest priority to Indigenous employment, while companies over 15 years seem to be by far the most receptive. Employment priorities are not influenced by trade classification or company turnover, but that company size (in terms of the number of employees) does affect priorities, especially for Indigenous people (with the corresponding significant X^2 values of −15.818). As in company age, it is the smallest companies (less than 10 employees) that give by far the lowest priority to employing Indigenous

Table 3. Priority in hiring disadvantage groups according to subcontractors' time in business; classification; annual turnover; and company size (** significant at $p < 0.05$).

Disadvantaged groups	Operating as subcontractor (time in business)					Trade classification (Service trades, structural trades, Others)					
	Mean rank					Mean rank					
0–5 years	6–10 years	11–15 years	Over 15 years	KH (test statistic)	Pairwise comparison	ST	STT	Other	KH (test statistic)	Pairwise comparison	
Indigenous	21.9	31.08	36.33	40.71	10.647**	0–5 years-Over 15 years $x^2 = -18.812$**	31.19	38.04	38.06	4.054	
Disabled	32.1	39.42	36.93	32.19	2.203		29.38	37.52	41.65	5.628	
Women	19.2	36.39	40.2	34.37	5.112		31.77	36.39	39.79	1.958	
Disengaged youth	36.2	29.5	35.18	40	3.958		40	29.85	37.59	4.763	
Migrants & refugees	45.9	26.32	37.55	38.63	7.33		36.62	33.06	37.68	0.809	
Ex-offenders	31.2	37.84	40.48	30.79	4.215		31.33	34.28	43.82	5.551	

Disadvantaged groups	Subcontractor annual turnover						Number of employees (company size)					
	Mean Rank						Mean Rank					
	0–1 million dollars	1–5 million dollars	5–10 million dollars	Over 10 million dollars	KH (test statistic-)	Pairwise comparison	0–10	10–50	50–100	over 100	KH (test statistic-)	Pairwise comparison
Indigenous	29.41	36	38.06	42	5.516		26.18	35.47	42	42	8.615**	0-10-50-100 ($x^2 = -15.818$)
Disabled	32.97	39.21	34.32	29.14	2.655		27.68	38.34	33.29	33	3.588	
Women	32.62	39.05	30.26	40.5	3.227		24.5	38.86	30.96	55.5	8.164	
Disengaged youth	31.79	35.64	36.85	40.64	1.467		32.23	34.58	39.25	47	2.005	
Migrants & refugees	35.88	30.83	38.97	45.5	4.547		36.77	34.19	35.07	59.75	3.751	
Ex-offenders	34.5	38.16	33.68	31.36	1.323		32.18	37.55	31.36	38.75	1.869	

Table 4. Mean, RII and rank of perceived barriers to employment of targeted disadvantage groups.

	Mean	RII	Overall rank
Ex-offenders	4.97	0.99	1
Disabled	4.90	0.98	2
Disengaged youth	4.91	0.98	2
Migrants & refugees	4.74	0.95	3
Women	3.70	0.74	4
Indigenous	2.93	0.59	5

people, while the largest give the highest priority. Results in Tables 8 and 9 discussed later suggest this may be related to the perceived lack of support provided to employers of this group and the lower capacity of small businesses to absorb any unproductive employees into their small workforces without major business disruption.

Table 4 illustrates the results regarding the perceived extent to which barriers exist for the target social procurement groups in our sample and Table 5 illustrates the results of the KH tests and pairwise comparison tests across the different elements of the sample.

Table 4 shows that the highest perceived barriers to employment in the construction supply chain are faced by ex-offenders followed by disabled, disengaged youth, migrants and refugees, women and then Indigenous people. It is interesting that Table 4 results (perceived barriers) are directly the reverse of results in Table 2 (prioritisation) which is almost the same order as Table 6 (employment records). This is quite revealing of the attitudes of respondents and indicates that people who recruit prioritise those they perceive to have the lowest barriers. This suggests that firms are engaging in satisficing rather than optimising behaviour (Simon 1955) in the context of the social outcomes of their decisions, operating within the bounded rationality imposed by their lack of experience and lack of support in this new contractual requirement. Ironically, this decision-making response could inadvertently perpetuate discriminatory behaviours towards the most marginalised in society, proving important empirical evidence that social procurement policies which aim to reverse this tendency could have the opposite affect if implemented without due regard for the industry's culture, organisational characteristics and capacity to deliver. Table 5 shows that company size (bottom right hand quadrant) and company turnover (bottom left hand quadrant) do not influence perceived barriers to employment. This is interesting because company size did matter in determining employment priorities in Table 3 for indigenous and women. This indicates that priorities given to employing certain groups like

Table 5. Perceived extent of barriers to the employment of disadvantage groups according to subcontractors' time in business; classification; annual turnover; and company size (** significant at $p < 0.05$).

	Operating as subcontractor (time in business)						Trade classification (Service trades, structural trades, Others)					
	Mean Rank						Mean Rank					
Disadvantaged groups	0–5 years	6–10 years	11–15 years	Over 15 years	KH (test statistic)	Pairwise comparison	ST	STT	Other	KH (test statistic)	Pairwise comparison	
Indigenous	29.8	33.34	33.85	39.44	2.156		40.44	33.43	31.24	3.222		
Disabled	29.9	37	35.3	35.63	3.938		35.63	34.43	37	1.37		
Women	21.6	37.47	32.75	38.85	4.174		34.6	41.65	27.12	6.297**	Other- STT $x^2 = 2.49$	
Disengaged youth	30.2	35.68	35.78	36.17	2.304		34.77	36.22	35.47	0.418		
Migrants & refugees	10.4	38.53	35.4	38.19	18.52**	0–5 years–6–10 years $x^2 = -4.063$ 0–5 years–11–15 years $x^2 = -3.63$ 0–5 years–over 15 years $x^2 = -4.132$	36.62	36.44	32.29	1.219		
Ex-offenders	29	36	36	36	13**	0–5 years–6–10 years $x^2 = -3.329$ 0–5 years–11–15 years $x^2 = -3.347$ 0–5 years–over 15 years $x^2 = -3.427$	34.65	36	36	1.692		

	Subcontractor annual turnover						Number of employees (company size)					
	Mean Rank						Mean Rank					
Disadvantaged groups	0–1 million dollars	1–5 million dollars	5–10 million dollars	Over 10 million dollars	KH (test statistic-)	Pairwise comparison	0–10	10–50	50–100	Over 100	KH (test statistic-)	Pairwise comparison
Indigenous	33.5	37.17	32.68	40.29	1.352		39.95	35.06	30.68	54.25	3.814	
Disabled	32.91	37	37	31.93	6.013		30.68	36.17	37	37	6.097	
Women	30.03	38.03	36.65	35.5	2.02		28.68	37.94	32.61	40.75	2.647	
Disengaged youth	31.29	36.31	37.5	37.5	6.205		34.18	35.09	37.5	37.5	1.347	
Migrants & refugees	31.82	34.76	37.76	42	3.314		29.27	35.58	39.21	42	3.714	
Ex-offenders	33.94	36	36	36	3.118		32.82	36	36	36	5.364	

women and indigenous people are influenced by factors other than perceived barriers to employment. Given that these two groups are the two most regulated and legislated groups in Australia, this result indicates that in removing perceived barriers to employment, targeted legislation and regulation might work in implementing social procurement policy. Table 5 also shows that trade classification has little impact on perceived barriers to employment. This is surprising since certain trades present higher risks for some of our target groups than others. In terms of 'time in business', Table 5 shows that this has no influence on perceived barriers to employment apart for migrants and refugees and ex-offenders (with KH test values of 18.52 and 13, significant at $p < 0.05$). Here the results show that very young businesses (0–5 years) see by far the lowest barriers to employment for these groups (with the corresponding significant X^2 values ranging from −3.427 to −4.132) - perhaps because small businesses are largely comprised of these groups. However, Table 3 shows that company age does not affect the employment priority given to these groups. In other words, although they see low barriers to entry for these groups, it does not affect their employment decisions.

Table 6 illustrates the results regarding the employment records of our respondents for each of these groups and Table 7 illustrates the results of the KH tests and pairwise comparison tests across the different elements of the sample.

Table 6 shows that the respondents' record of employing the target groups is: Indigenous; Disabled; Women; Disengaged Youth; Migrants & Refugees; and Ex-Offenders. This is the same order as the employment priorities listed in Table 5 (apart from migrants and refugees and disengaged youth which swapped places). In other words, in most cases, employment records reflect priorities given to those groups which indicates that if policy makers can influence priorities then this is likely to translate into actual numbers employed. Table 7 also shows that the numbers of people employed in these groups is not affected by trade classification, company size or turnover. This is interesting since in Table 3, priorities were influenced

Table 6. Mean, RII and rank of employment records of participants.

Disadvantage groups	Mean	RII	Rank
Indigenous	4.96	0.99	1
Women	4.63	0.93	2
Disengaged youth	2.67	0.53	2
Migrants & refugees	4.10	0.82	3
Disabled	2.31	0.46	4
Ex-offenders	1.70	0.34	5

Table 7. Perceived extent of the employment of disadvantage groups according to subcontractors' time in business; classification; annual turnover; and company size.

	Operating as subcontractor (time in business)						Trade classification (service trades, structural trades, others)					
	Mean Rank						Mean Rank					
Disadvantaged groups	0–5 years	6–10 years	11–15 years	Over 15 years	KH (test statistic)	Pairwise comparison	ST	STT	Other	KH (test statistic)	Pairwise comparison
Indigenous	29.4	34.68	36.5	36.5	7.093		33.81	36.5	36.5	3.434	
Disabled	22.5	37.97	36.25	35.62	2.938		33.15	35.98	38.32	0.86	
Women	14	37.79	36.4	37.27	9.984**	0–5 years–6–10 years $x^2 = -2.986$	34.12	34.41	39.35	1.331	
						0–5 years–11–15 years $x^2 = -3.006$					
						0–5 years–over 15 years $x^2 = -2.826$					
Disengaged youth	23.7	38.95	32.6	37.48	4.27		31.9	37.31	38.12	1.94	
Migrants & refugees	40.6	27.63	33.55	41.77	6.575		36	35.96	34	0.138	
Ex-offenders	26.6	38.05	36.2	34.81	1.811		30.88	35.67	42.29	4.474	

	Subcontractor annual turnover						Number of employees (company size)					
	Mean Rank						Mean Rank					
Disadvantaged groups	0–1 million dollars	1–5 million dollars	5–10 million dollars	Over 10 million dollars	KH (test statistic-)	Pairwise comparison	0–10	10–50	50–100	Over 100	KH (test statistic-)	Pairwise comparison
Indigenous	32.38	36.5	36.5	36.5	6.326		33.27	35.7	36.5	36.5	2.094	
Disabled	26.44	38.12	38.32	39.79	5.612		21.68	37.66	39	40.5	7.619	
Women	31.41	38.07	33.18	40.43	2.935		27.73	37.14	35.21	45	3.828	
Disengaged youth	33.53	36.76	35.5	35.07	0.406		32.82	35.87	34.96	46	1.109	
Migrants & refugees	34.71	30.93	38.29	49.57	5.838		40.09	32.63	37.64	57	4.308	
Ex-offenders	36.29	36.45	34.35	32.43	0.418		28.45	37.23	34.07	47	3.234	

by company size for Indigenous and women cohorts. It seems that the targeting of these two groups as the main focus of social procurement policy, might have the effect of giving them higher priority in hiring practices but not in terms of actual employment numbers – perhaps because the supply of people these groups is not yet matching demand. The only area in Table 7 which appears to have any bearing on actual employment of these groups is time in business (top left hand quadrant) and the only group this impacts is women – with subcontractors less than 5 years having a markedly smaller record of employing women in their businesses (with mean rank of 41.65, and corresponding significant X^2 value ranging from −2.826 to −3.006).

Table 8 shows the perceived barriers to employment for each group in rank order. Overall lack of government support ranks as the highest barrier to the employment of these groups which suggests that social procurement legislation is not being accompanied by the necessary support structures. Reading horizontally across each row, this is the biggest barrier for disengaged youth and ex-offenders with women coming a close second. Interestingly, this is the least problem for indigenous and disabled people since the Australian government has put significant resources into these areas. Nevertheless, the inclusion of women is a surprise given the enormous focus on gender diversity in Australia. Table 8 also shows that subcontractors are concerned about the costs of complying with these new social procurement requirements which is not surprising given the high geared nature of most subcontractors and the highly price-competitive nature of the construction. Looking across the various groups in Table 8, cost is a major issue for disabled people (100% of the sample ticked this box), followed by disengaged youth and migrants and refugees. The third greatest barrier in Table 8 is the inability of these cohorts to fit in to the traditional construction workforce with women, migrant refugees and then disabled people suffering the most. There is a significant body of work which shows that construction has traditionally excluded these groups from the workforce and it would seem that these people are still seen as outsiders in the industry. Other prominent barriers include: lack of technical skills (disengaged youth, migrants and refugees, disabled); inability to work long hours (disabled, women and disengaged youth); cost of supervision (disabled and disengaged youth); low work productivity (ex-offenders and refugees and migrants); untrustworthiness, (disengaged youth and ex-offenders); lack of commitment

Table 8. Perceived barriers to the employment compared across disadvantage groups.

	Overall			Indigenous			Disabled			Women			Disengaged youth			Migrants & refugees			Ex-offenders		
Barriers	∑	%	Rank	*F*	%	Rank	*F*	%	Rank	*F*	%	Rank	*F*	%	Rank	*F*	%	Rank	*F*	%	Rank
Lack of support	360	85.7	1	48	68.5	5	49	70	4	68	97.14	2	69	98.57	1	57	81.43	3	69	98.57	1
Cost of training	319	75.9	2	33	47.1	6	7	100	1	43	61.4	4	68	97.1	2	65	92.8	3	40	57.1	5
Inability to fit in	226	53.8	3	3	4.29	6	50	71.4	3	59	84.2	1	19	27.1	5	57	81.4	2	38	54.2	4
Low technical skills	207	49.2	4	3	4.29	6	51	72.8	3	34	48.5	4	55	78.5	1	52	74.2	2	12	17.1	5
Cant work long hours	207	49.2	4	0	0	6	69	98.5	1	68	97.1	2	67	95.7	3	1	1.43	5	2	2.86	4
Cost of supervision	205	48.8	5	8	11.4	6	69	98.5	1	12	17.1	5	67	95.7	2	30	42.8	3	19	27.1	4
Poor productivity	200	47.6	6	2	2.86	5	5	7.14	4	8	11.4	3	47	67.1	2	69	98.5	1	69	98.5	1
Untrustworthy	185	44.0	7	38	54.2	3	0	0.00	5	0	0.00	5	64	91.4	1	26	37.1	4	57	81.4	2
Work commitment	182	43.3	8	0	0	5	57	81.4	2	40	57.1	3	70	100	1	0	0	5	15	21.4	4
Cause of conflict	179	42.6	9	39	55.7	3	0	0	5	0	0	5	65	92.8	1	11	15.7	4	64	91.4	2
Lack qualifications	170	40.4	10	39	55.7	3	3	4.29	5	0	0	6	50	71.4	2	70	100	1	8	11.4	4
Risk to reputation	168	40.0	11	24	34.2	3	0	0	5	0	0	5	66	94.2	2	8	11.4	4	70	100	1
Literacy/numeracy	166	39.5	12	29	41.4	3	5	7.14	4	0	0	6	63	90	2	67	95.71	1	2	2.86	5
Poor education	164	39.0	13	30	42.8	3	3	4.29	4	0	0	6	60	85.7	2	70	100	1	1	1.43	5
Cultural differences	138	32.8	14	62	88.5	2	0	0.00	5	6	8.57	3	1	1.43	4	69	98.5	1	0	0.00	5
Unreliability	131	31.1	15	0	0	5	49	70	2	6	8.57	3	69	98.5	1	1	1.43	4	6	8.57	3
Poor communication	118	28.1	16	8	11.4	3	0	0.00	4	0	0.00	4	39	55.7	2	70	100	1	1	1.43	3
Modifying workplace	115	27.3	17	0	0	3	70	100	1	45	64.2	2	0	0	3	0	0	3	0	0	3
Health needs	113	26.9	18	1	1.43	3	70	100	1	42	60	2	0	0	4	0	0	4	0	0	4
Poor work quality	108	25.7	19	0	0	5	37	52.8	2	2	2.86	3	68	97.1	1	0	0	5	1	1.43	4

Note: Sum = the frequency of all "Yes" answer by all participants for all disadvantage groups per barrier; F = frequency of "Yes" answer for the barrier by all participants for each disadvantage group; % for overall is the sum divided by (70*6) *100; % for each disadvantage group is the frequency divided by 70.

(disengaged youth, disabled); and cause of workplace conflict (disengaged youth, ex-offenders).

In Table 8, the average 'overall ranking' across all barriers for each cohort is: disengaged youth (2.1); migrants and refugees (2.85); Disabled (3.1); and ex-offenders (3.45); women (3.7); and Indigenous (4.2). This coincides with the overall perceptions in Table 4 apart from the position of ex-offenders which is the most disadvantaged group in Table 4 but the fourth most disadvantaged group above. We discuss this anomaly in our discussion of results.

Table 9 shows the relative barriers to employment in rank order for each cohort, indicating to policy makers and managers the specific barriers that their social procurement strategies should address. It is notable how varied the barriers to employment are across the different disadvantaged cohort.

Discussion

It is important to acknowledge in presenting our findings that the above results are based on the perceptions of those who make recruitment decisions in construction subcontracting firms and may not reflect the actual barriers faced by these groups. Further research is needed from the perspective of the groups themselves to validate and cross-reference our results. Nevertheless, perceptions of employers are important and indicate the types of challenges, behaviours and responses which policy makers are likely to face in implementing social procurement policies.

The prominence of women and Indigenous people as a priority group in our sample was unsurprising given the significant policy focus on this area in Australia. Indigenous people are the main focus of government social procurement Policy in Australia (Australian Government 2015), and there is a very strong focus on gender diversity in the construction industry (See for example Galea *et al.* 2015). Our results suggest the policy focus in Australia is working, although there may be a supply problem into the industry and an opportunity cost for other groups in our sample. Our results also support Loosemore and Lim's (2018) research which found that when it comes to issues of corporate social responsibility, construction is a compliance-based industry which in the most part, responds best to regulatory imperatives rather than voluntary initiatives. There is evidence of satisficing behaviour in complying with these new policies with a perceived lack of support and social procurement requirements being seen as a risk to important traditional key performance indicators (time, cost and

Table 9. Perceived barriers to the employment for each disadvantage group.

	Rank of barriers for each individual disadvantage group					
Barriers	Indigenous	Disabled	Women	disengaged youth	Migrants & refugees	Ex-offenders
Lack of support	2	6	1	2	5	2
Cost of training	5	1	5	3	4	5
Inability to fit in	10	5	2	12	5	6
Low technical skills	10	4	8	9	6	12
Cant work long hours	14	2	1	4	12	9
Cost of supervision	9	2	9	4	7	7
Poor productivity	11	2	3	2	11	10
Untrustworthy	4	10	12	6	8	4
Work commitment	14	3	7	1	13	8
Cause of conflict	3	10	12	5	9	3
Lack qualifications	3	9	12	10	1	10
Risk to reputation	8	10	12	5	10	1
Literacy/numeracy	7	8	12	7	3	12
Poor education	6	9	12	8	1	13
Cultural differences	1	10	10	13	2	14
Unreliability	14	6	10	2	12	11
Poor communication	9	10	12	11	1	13
Modifying workplace	14	1	4	14	13	14
Health needs	13	1	6	14	13	14
Poor work quality	14	7	11	3	13	13

safety). Areas where there is higher perceived risk and less policy focus and regulatory imperative rated lower in our respondent's employment priorities. This raises questions about the relative effectiveness of soft policy responses such as the UK's Public Services (Social Value) Act 2012 (UK Parliament 2012), compared to more targeted initiatives with specific measurable performance indicators such as the Australian Governments Indigenous social procurement Policy (Australian Government 2015). While comparative research into the effectiveness of different types of social procurement policy is not available, our results indicate that more mandatory and targeted initiatives are likely to be more effective. Indeed, even considering unproven counter-arguments about soft instruments providing more room for innovation, recent reviews of the Public Services (Social Value) Act 2012 (Cabinet Office 2015, White 2017) have resulted in a decision by the UK Government to harden UK policy and extend the Act to require all government departments to explicitly evaluate social value when commissioning services.

It was also interesting that young and small businesses give significantly lower priority to women and Indigenous people, suggesting that more support for these groups is needed in such organisations if the industry is to comply with these new requirements. Our findings also indicate that the types of support needed for each group varies significantly, indicating that initiatives like those described by Higgon and Osborne (2019) which are designed to de-risk social procurement for subcontractors, would seem particularly important. The fact that subcontractor trade type did not affect hiring priorities, actual employment or perceived barriers to employment was surprising given the different risk profiles that each trade faces. For example, it might have been reasonable to expect that disabled people may have experienced higher rates of perceived barriers in the structural trades group. More research is needed to verify our results. The relatively strong focus on migrants and refugees as a third priority group perhaps reflects the culturally diverse nature of the construction industry in Australia (and in many other countries) and the availability of job types and support networks which are attractive to many migrant groups (Loosemore *et al.* 2011).

In terms of specific barriers to employment, it is notable that lack of government support ranked highest across all cohorts indicating that governments may need to rethink the support they offer to help industry implement these policies – especially for disengaged youth, ex-offenders and women. Much policy focus is on building-up third sector capacity, whereas our results support Loosemore and Reid's (2018) recommendation that building existing supply chain capacity should also be a priority for governments in supporting the implementation of their new social procurement policies. This is especially important given the many barriers which third sector organisations like social enterprises face in entering the construction supply chain (see Loosemore 2015, Barraket and Loosemore 2018). Our results indicate that monetary support to cover extra training and supervision costs and lower productivity rates would seem to be especially important. However, it is interesting that the perceptions about the extra costs of employing these groups do not reflect recent findings by the Australian Human Rights Commission (2018) which shows that

employers often assume that the costs are greater than they really are in practice. This suggests that support in the form of educational programmes, data about the costs and benefits of employing these people and government wage subsidies may also work to support the implementation of social procurement policies. For example, the Australian government provides financial incentives and wage subsidies to help companies employ certain disadvantaged groups (Jobactive 2019).

A perceived lack of technical skills is also something that governments can address through targeted training subsidies for employers. Perry (2017) shows that in Australia, educational disadvantage is a reality faced by many Indigenous people and those from low socio-economic backgrounds. According to Olliff (2010) and Legrain (2017), other useful educational initiatives, for groups such as refugees and migrants include those to enable the upgrading of qualifications to local standards or to have existing qualifications better recognised in a local context.

Of all the groups we explored, it seems that disengaged youth, refugees and migrants and the disabled are the most disadvantaged, followed by ex-offenders, women and Indigenous people.

The high levels of agreement about the barriers face by disengaged youth (the highest ranked group) was somewhat surprising since the Australian construction industry is the largest employer of youth in Australia (ABS 2016). However, they are a relatively hidden group compared to other groups and like ex-offenders and they cut across all other groups, potentially inflating respondent perceptions. For example, Burns *et al*. (2008) show that disengaged youth are more likely to be indigenous, culturally and linguistically diverse; ex-offenders and disabled. This makes them hard to support as a specific group. Like ex-offenders, there is also a lot less guidance on how to manage this group compared to those with the lowest perceived barriers to entry (women and Indigenous). Nevertheless, the research that does exist indicates effective employment strategies for young disengaged people include: those that develop social networks, relationships and support structures missing from their lives and programmes which address deficiencies in job readiness, education and skills via work experience rather the traditional classroom teaching (Borland *et al*. 2016). Like Keast and Mandell (2014) they emphasise that such programmes are most likely to succeed where they involve cross-sector collaboration between service providers, governments and employers at a local level.

The prominence of refugees and migrants as the second most disadvantaged group (despite them being a high priority) is perhaps not surprising given research which points to the high level of discrimination and poor management practices suffered by this group in the Australian construction industry (Dunn *et al*. 2011, Loosemore *et al*. 2012, Khatleli 2015). However, refugees and migrants have previously been lumped together in construction research, whereas research outside construction suggests refugees have quite distinct needs which include: mental health and trauma issues; lack of local qualifications, work experience and referees; visa restrictions; lack of knowledge of local workplace culture, practices and systems; and discrimination and harassment in recruitment and the workplace (Olliff 2010, Legrain 2017). Further research is clearly needed into the distinct employment challenges faced by these two groups.

The third ranked group in terms of barriers to employment were disabled people, followed by ex-offenders, women and Indigenous workers. We note however, that there was some contradiction in our data around the positioning of ex-offenders with 'perception' rankings being higher than 'actual' rank against each listed barrier. We believe that this supports other research which shows that ex-offenders suffer significant negative social stigmatisation with most employers labelling them as untrustworthy, dangerous, dishonest, disreputable unreliable and a security and insurance risk (Brewer 2017). Moreover, some of the groups targeted by social procurement policies such as Indigenous people tend to have a high number of ex-offenders which may have therefore inflated responses for this group. For example, in Australia Indigenous people make up 2% of the total population, but 28% of the prison population (Russell and Cunneen 2018).

As noted earlier, compared to the groups discussed above, there is a fairly rich tradition of research into women and Indigenous workers in construction which has produced a growing understanding of the types of barriers to employment they face (see for example, Dainty *et al*. 2004, Quaigrain *et al*. 2014, Galea *et al*. 2015, Denny-Smith and Loosemore 2017). Our findings add to this work by ranking and comparing these barriers and exposing the large variation in barriers which these groups face. Beyond the obvious practical challenges and implications for policy-makers and construction managers this presents, this complexity raises new conceptual questions about the potential value of theories of cross-sector collaboration (Keast and Mandell 2014) and intersectionality (McCall 2005,

Levine-Rasky 2011) as novel frameworks to understand how to successfully implement social procurement policy in practice.

Cross-sector collaboration is founded on the idea that increasingly wicked social problems like unemployment cannot be solved by any one organisation working alone but by the integration of organisations, resources and ideas from different sectors (Keast 2015). While missing from the construction literature, the theoretical development of cross-sector collaboration as a way of resolving complex social problems like those faced by our target groups has grown significantly in the area of public management research with increasing numbers of articles being published in this area across a wide range of policy areas and sectors. As Bromley and Meyer (2017, p. 947) note, "the burgeoning literature on New Public Governance emphasise that the core shift in government is towards a 'plural state' characterised by a blurring of traditional boundaries between non-profit, business and government sectors where multiple interdependent actors contribute to the delivery of public services …". However, Keast (2015) argues that cross-sector collaboration requires a 'different way of thinking, behaving and working' which involves different expectations and strengths of relationships where people share resources, power, knowledge, authority and responsibility for planning, implementation and evaluation, making sacrifices for the collective good and acknowledging their interdependency in solving a particular problem. Such relationships are forged and supported by investing time in relationship building and dialogue to better understand and appreciate 'positions'". As Dean (2013) notes, developing such "holistic or 'joined-up" strategies for tackling social problems, can hard to achieve in practice since ambiguity about roles, inter-organisational conflicts, contested leadership and misaligned institutional mandates and drivers can all interfere with the smooth running of any social alliance. Indeed Caldwell *et al.* (2017) argues that while in theory there is evidence that hybrid organisations made up of organisations from different sectors can outperform any one organisation acting alone, the odds are stacked against success with evidence that they are statistically more likely to fail than succeed. Drawing on 10 years of data on collaborative relationships in a social policy setting, Keast and Mandell (2014) argue that cross-sector collaboration is a distinctive form of higher relational orientation which to work effectively, requires an expanded set of competencies at three main organisational levels to allow synergies to be leveraged: governance, management and leadership; systems and processes; personal relational competencies. Potential risks which can undermine cross-sector collaborations include disparate institutional logics and notions of value, high transaction costs, goals, temporal misalignments, poor communication and differing professional identities, cultures and languages, incentives and management practices. The relatively little work that has been done in the construction industry into how cross-sector collaborations operate also point to construction-specific challenges. For example, as Loosemore (2015, 2016) notes numerous construction industry-specific barriers to cross sector collaboration in delivering social value include: negative perceptions of third sector organisations around price reliability and quality; scepticism of the community as a risk rather than an asset; bad past experiences of third sector organisations; firms not taking their corporate social responsibilities seriously; complex procurement practices and red tape which make it difficult for third sector organisations to work in construction; exclusion of third sector organisations from informal networks needed to get work; resistance from industry incumbents; unintended social consequences of taking work from industry incumbents; complex and strict compliance requirements which create barriers for third sector organisations; and a perceived loss of competitiveness of employing third sector organisations in a highly commercialised price-driven industry. More recently, Barraket and Loosemore (2018) found that cross-sector collaboration in the construction industry is problematic, is largely driven by commercial and institutional imperatives and is constrained by the construction industry's established governance, management, leadership, organisational arrangements, systems, structures and competencies. Petersen's (2018) review of social procurement employment requirements in the Swedish construction industry concluded, effective implementation of social procurement will require significant institutional change in construction, driven by the need to combine commercial and public interest and new blended forms of institutional logics which see the concept of value more broadly than simply economic. As Petersen (2018) notes, when new employment requirements are introduced into a traditional and strongly institutionalised context like the construction industry, new roles and practices will need to be created and existing ones changed to facilitate these new collaborative practices.

In complementing the organisational focus of theories of cross sector collaboration theories of

intersectionality (a branch of feminism which identifies how different aspects of social and political discrimination overlap), offers a potentially valuable analytic framework to explore how interlocking systems of disadvantage and disempowerment can affect those targeted by social procurement policies (see for example, Collins 2015). Originating in the Feminist work of Crenshaw (1991) to explain how race and gender intersect and accumulate as forms of oppression, theories of intersectionality provide a potentially powerful and novel lens, not yet applied in the social procurement literature to acknowledge and understand how the multiple identities of individuals targeted by these policies, might have a compounding effect on the barriers to employment they may face. While critics have noted that theories of intersectionality are ambiguous, lack clear definition and parameters and rely on non-objective concepts, they have been usefully applied in a variety of fields such as politics, education, economics and employment, to understand how people's experiences of these systems differ and intersect according to attributes such as their sexual orientation, nationaility, class, disability and gender (Davis 2008, Cho *et al.* 2013). For example, example Moodley and Graham (2015) show empirically that race, disability and gender intersect to create negative outcomes for black women with disabilities. In one of the few examples of intersectionality applied in the field of construction, Wright (2013) showed how gender and sexuality intersect to show how lesbian women in construction experience different forms of workplace harassment to heterosexual women. In the context of our research which shows that barriers to employment vary significantly from cohort-to-cohort, theories of intersectionality may help to explore whether they compound for people with multiple identities (for example, disable refugee women or Indigenous youth ex-offenders. Theories of intersectionality also raise new questions around the distinct categorisation of marginalised groups within current social procurement policies which might conceal the compounding employment barriers suffered by cohorts at the very margins of society who hold multiple disadvantaged identities. As Bilge (2013) indicates, theories of intersectionality may be valuable for those who wish to contest specific concrete oppressions recognised by current social procurement policies. While there is little data on the nature and extent of these groups in the construction industry, these complex groups are unrecognised in current social procurement policies, potentially muting any positive impacts they may have. Cho *et al.*'s (2013) work indicates that unless policy makers take intersectionality into account, initiatives like social procurement which are designed to address disadvantage will fail to account for the multiple forms of disadvantage suffered by some groups over others. Epistemologically, theories of intersectionality also open up new avenues of qualitative research to investigate the lived experiences of the people targeted by social procurement in the construction workplace. This is because theories of intersectionality suggest that an oppressed person is the best person to judge their experience of disadvantage and marginalisation (Levine-Rasky 2011, Kofi *et al.* 2016).

Conclusion

This paper aimed to investigate the barriers to social procurement employment requirements in the construction subcontractor supply chain. Based on a range of disadvantaged cohorts commonly targeted by social procurement policies in Australia, findings indicate that hiring priorities (Indigenous, women, migrants and refugees, disengaged youth, disabled, ex-offenders), strongly reflects policy focus and the diverse nature of the industry. Younger firms and smaller firms are less likely to hire women and Indigenous groups and hiring priorities appear to be guided by compliance and convenience rather than any strategic interest in the potential benefits claimed around social procurement such as workforce diversification. Subcontractors appear to be more concerned with perceived, safety, productivity and cost risks associated with disadvantaged groups targeted by social procurement policies, although these perceived risks do not always align with evidence. Surprisingly, trade area does not appear to have any impact on responses to social procurement employment requirements given the very different risks involved in different areas of work. In terms of perceived barriers to employment, disengaged youth are the most disadvantaged group followed by migrants and refugees, disabled, ex-offenders, women and Indigenous people. Again this reflects policy focus in this area, although perceived barriers to employment vary significantly across each cohort reflecting the complexity and tailored support needed and the risk for policy makers of imposing requirements across so many groups at the same time on an industry that has little experience of employing these people. Overall across all cohorts, by far the highest perceived barriers are lack of support and cost of compliance – although cost perceptions do not always seem to align with evidence. Our results

indicate a perception that social procurement policies are being implemented without adequate consideration of the construction industry's capacity to deliver and of the support structures needed to do so. While it is clear that in some areas such as women and Indigenous people that support does exist, our results indicate that it is not filtering down the construction supply chain. Furthermore, our results suggest that the current focus of social procurement policy in Australia and many other countries on building third sector capacity (especially social enterprises), should be accompanied by strategies to build existing supply chain capacity to employ these groups. While research indicates that third sector organisation are more equipped to employ and manage marginalised groups effectively, it is in building existing supply chain capacity that the greatest impact can be made.

Overall, our findings indicate that priorities given to employment of the groups being targeted by emerging social procurement policies are largely reactive, pragmatic, compliance-based and non-strategic. Our results indicate that targeted legislation with specific deliverables supported by policies which provide support and remove barriers to employment for each group could be a powerful way for social procurement policy-makers to encourage the employment of disadvantaged groups in the construction supply chain – especially in younger and smaller businesses. Setting targets without an understanding of supply chain capacity to deliver on those targets is likely to be counterproductive and at worst undermine the intend of these policies. It is clear from our research that emerging social procurement policies are imposing an onerous, complex and overlapping set of employment requirements on a construction supply chain which is neither experienced or equipped to meet them. If the barriers we have exposed are not addressed, then there is a real danger that policy will run ahead of practice and that the ambitious targets being set will not be met. In particular, while there are many forms of support which can be provided which should be tailored reflect the distinct barriers faced by each cohort, our findings indicate that in building supply chain capacity policy-makers should focus on three main areas of support: monetary assistance to cover extra costs of employment (where there is evidence to support extra costs are incurred); training employers to change attitudes, highlight opportunities from social procurement and reduce negative stereotypes and misguided perceptions about barriers to employment which are the basis of workplace discrimination; and training for different cohorts to help them fit into the industry (its culture and practices) and help make them productive and safe workers; and support structures in place to facilitate cross-sector collaboration as a mechanism for reduce the risk of employing these groups (for example by ensuring subcontractors can get the support of non-construction industry agencies that specialise in supporting the groups explored in this research). However, in recognising the potential risk of reliance on coercive policies and wage subsidies to support the employment of disadvantaged groups in the construction supply chain, the ultimate aim of any social procurement policy should be to build both capacity and willing acknowledgment of the industry's key role in building a more equitable society as well as physical structures. Social procurement policies must be seen as a means to an end and not an end in themselves.

In conclusion, it is also clear that the complexity of barriers faced cannot be addressed by one party acting alone but by initiatives which bring together diverse actors and organisations from a range of sectors who can address the full range of support which each group needs (government, business, not-for-profits, social businesses, charities and community groups). This raises new unknown challenges for the construction industry and for the other organisations involved since there is little history or experience of collaborating across these barriers. For researchers, our findings also raise new questions around the potential value of theories of cross sector collaboration and Intersectionality in exploring people's actual experiences of working in the industry – particularly those at the margins with complex intersecting identities which may compound their disadvantage in the labour market. Finally, we acknowledge that this paper uses a rationalist perspective on policy which ignores the rich literature and research on policy sociology. This perspective would open up new questions about the motivations and intent of policy-makers in terms of whether the introduction of social procurement policies really reflect a genuine desire for social change or simply compliance with contemporary neoliberal imperatives to reduce the size of government by outsourcing welfare to the private sector or to achieve cost savings to the welfare state. Such an approach would extend this work from a discussion about policy as text to policy as discourse.

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No potential conflict of interest was reported by the authors.

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