Resilient ORGANISATIONS
A collaboration between research & industry

Resourcing the Canterbury rebuild

Emerging issues facing subcontracting businesses

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1. Introduction

This study reports key emerging issues facing subcontracting businesses in late 2014. Following previous resourcing case studies of construction organisations in Christchurch (Chang-Richards et al., 2014)[1], this study concentrates on the subcontracting sector. This report is part of the Resilient Organisations' resourcing study of subcontracting businesses in Christchurch following the 2010/11 earthquakes. The research findings with regard to the resourcing strategies adopted by Canterbury rebuild subcontractors were reported in Resilient Organisations Research Report 2015/02 (Chang-Richards et al., 2015)[2]. The case studies, which include interviews from a range of subcontracting businesses, also provide insight into emerging issues facing subcontracting sector, which are presented in this report. The summary of case studies is provided in the Appendix.

2. Emerging issues during the rebuild and future expectations

Looking forward, case study subcontractors identified the following emerging issues concerning their businesses in the 2015/2016 period.

2.1 Increased mobility of workforce

Workers in the construction industry are generally mobile, responding to major developments and infrastructure projects across the country. In the medium term, several case study subcontractors expected increased competition for construction employees from infrastructure investment and housing developments. Subcontractors reported that the mobility of the workforce is an issue as the turnover rate is increased by increased competition. Several subcontractors reported that labour mobility in the construction industry is rising.

[1] Chang-Richards, Y., Wilkinson, S., Seville, E., & Brunsdon, D. (2014). Workforce behaviour and business responses: Case studies of construction organisations. Resilient Organisations Research Report 2014/03.
[2] Chang-Richards, Y., Wilkinson, S., Seville, E., & Brunsdon, D. (2015). Resourcing the Canterbury Rebuild: Case studies of construction subcontractors - recruitment and retention strategies, April 2015. Resilient Organisations Research Report 2015/02

2.2 Potential shortages of materials

Feedback from case study subcontractors has continued to identify potential issues in the supply of labour and materials for the reconstruction efforts in Canterbury. In the Canterbury region, where the demand for roading materials is increasing as the Government's infrastructure commitment increases, several case study subcontractors reported that they anticipate critical shortages for materials like bitumen and asphalt.

2.3 Potential shortages of workers

Subcontractors identified the vertical rebuild in the central Christchurch facing the most workforce challenges as subcontracting businesses losing resources to business as usual sectors. In particular, repair-related jobs were perceived as having a low margin and more demanding, whereas working on new developments in Canterbury and other parts of New Zealand were seen more attractive.

There are still hot spots for skill shortages (e.g. project managers and general labourers as identified in this study), particularly in Christchurch where unemployment is low and infrastructure and housing developments are progressing. Subcontractors reported that heightened competition for human resources is currently being experienced and is likely to increase.

2.4 Uncertain workflows

Several subcontractors reported that there could be construction jobs created in the anchor projects. However, they were concerned that any change in project timeframe would result in change to the peak levels of projected labour demand. Previous case studies identified potential short-term skills challenges as anchor projects commence, with a likely shortfall in capacity and skills needed to either support construction in the CBD and/or maintain the progress of existing projects managed by SCIRT and the residual projects undertaken by Fletcher EQR (Chang-Richards, Wilkinson, Seville, & Brunsdon, 2014). Case study subcontractors in this report noted

that the size of the shortfall is dependent on the ability of government, project clients and contractors to successfully import and re-deploy new workers (new entrants, apprenticeships, and workers from outside) into Christchurch.

2.5 Required social infrastructure

Significant other challenges reported by subcontractors include the need to provide the necessary structural and social infrastructure, including temporary accommodation and/or housing facilitation, to support the workforces coming from outside Canterbury region. Otherwise, there is a likelihood of increased mobility to work outside the Canterbury region compounding problems.

2.6 Aging workforce

The demanding physical requirement of the majority of jobs in the construction industry means the career span is typically shorter, leading to early retirement and a loss of valuable knowledge and skills from industry. Subcontractors were worried about their aging workforce and retirements. Expertise and knowledge of senior workers are gradually lost as they retire from the industry. Several subcontractors suggested that much of skills, knowledge and experience which workers gained from being working on the infrastructure repairs and rebuild could also be potentially lost as there seemed to be no mechanism in the industry to capture knowledge.

2.7 Skills development and training

Across the case studies, there is a perception the subcontracting sector lacks a long term career focus. This deters candidates from considering the industry as a potential career choice. Subcontractors grapple with the requirements to train staff on limited budgets and mostly use informal training mechanisms rather than externally offered courses.

2.8 Poaching of staff

Several subcontractors raised the issue that efforts made to train up a worker put them at greater risk of having their employees poached by other companies who seek workers with higher levels of skills. There are some concerns among case study subcontractors about the problem of retraining workers from horizontal to vertical reconstruction.

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Annex: Profiles of studied subcontractors

Company code	Year established	Ownership structure	No. of Emp	Products/services	Market	BAU Vs. EQ-related	Pinch resources	Resourcing strategies	Business strategies
S1	1999	Family business	7	Commerical machine laid kerb and channel for roading Subdivisions and car parks	Canterbury	80%:20%	• Excavator operator • Kerb & channel machine operator	• Ensuring job security • Recruitment on a permanent basis • Investment in training and offering promotion to identified 'loyal' staff •Good conditions of work	• Strong client oritentation • Expanding client network • Quality improvement of workmanship
S2	1968	Family business	10	Drain laying and maintenance Manhole installation Trench shield work and excavation	Canterbury	100%:0%	Drain layer	• Investment in recruiting and training local young people • Empowering workers to take initiatives • Good benefits	• Strong brand/reputation • Improving company-wide communications
S3	1985	Incoproated	45 (30 in Chch)	Drainage/pipe laying Sheet piling/trench shields Pump stations and manholes Dewatering Pipe bursting and thrusting	Hamilton Christchurch	10%:90%in Christchurch	• Excavator operator • Truck drivers • Civil pipe-layer/drain layer	• Retaining mature staff aged between 30 and 50 • Encouraging knowledge transfers among staff	• Service diversity • Market expansion
S4	1950	Incoporated family	190	Construction, surfacing, bitumen products, transport, quarrying, contract management services	South Island	80%:20%	• Excavator operator • Drain layer • Project manager	• Reduced recruitment and increased retention and skills development • Improved career path • Good conditions of work	• Forming long-term relationship with other subcontractors • Product and service diversifaction • Regular review of business plan
S5	1983	Limited company Family	16	Construction of driveways, vehicle crossings, car parks and small subdivisions Asphalt Laying and excavations	Canterbury	30%:70%	• Drain layer • Excavator operator	• Retaining family-committed staff aged between 25 and 40 • Strong preference for recruiting local people in Christchurch • Fast track of career path • Good pay at the market rate and other benefits	• Maintain the current size of the company • Maximise business stability • Build good reputation • Employee multi-tasking
S6	1984	Limited company Family	50	Drainage, subdivision, traffic management, project management, quantity surveying, road infrastructure and bridge construction	Canterbury	15%:85%	• Truck driver • Excavator operator • Drain layer	• Recruit staff in other newly established services (e.g. electrical services, dairy effluent disposal design and resource consenting application) • Investment in recruiting by using Big Splash and Hayes & Stellar recruitment agency • 2 weeks probationary period	• Reduce rebuild-related work from 85% to 15% by end of 2015 • Expand client base • Diversity services • Instil corporate structure with family values • A possible partnership by joint venture

								• An information sharing policy for knowledge transfer	
S7	1985	Family business	4	Drainage	Canterbury	10%:90%	Drain layer	• Recruting through recrtuiment agencies and 'buy out' good recruits from them • Direct in-house training provided by directors • Prefer to recruit workers aged between 30 and 50	• Joint venture with a local main contractor and be in charge of the drainlaying jobs • Adding Health and Safety into training schemes
S8	1954	Limited company Family – a subsidiary of Fletcher	31 in Chch	River and marine works Engery pipelines, civil structure and foundation work	Auckland Hamilton Wellington Canterbury	55%:45%	• Plant/machine operator	• Having a mentoring and knowledge transfer scheme for new staff • 250 hours of on-job-training before employees are permitted to undertake unsupervised work • Using recruitiment agencies for recruirting temporary staff	• Gradually reducing the rebuild-related work and increase the BAU road contracts from NZTA • Having access to all benefits provided by Fletcher
S9	1998	Incoproated	40	Ground remediation, excavation and other earthworks Driveways and footpaths Foundations, retaining walls Civil construction Truck and excavator hire	Canterbury	70%:30%	• Truck driver • Plant operator • Civil engineer	• Using recruitiment agencies to find skilled engineers and machine/plant operators • Recruitment from Ireland • Encoruaging workers to achieve higher qualifications and participate in Health and Safety training	• Improving relationships and form partnership with other companies • Exploring the potential of recruiting secondary school students
S10	1955	Incoporated family	57 (9 based in chch)	Civil construction in roading, subdivisions, drainage, water reticulation, site works, traffic management, aggregate supply, transporting, landscape supplies	Whanganui Canterbury	0%:100% in Christchurch	• Truck driver • Plant operator	• Relocating staff from Whanganui office • Recruiting people from other cities of NZ and from overseas • Strong perference for employees aged between 25 and 40	• Building presence and reputation in Canterbury • Diversifying client base
S11	1999	Family business	11	Construction, surfacing and maintenance, bridge maintenance and construction, civil construction and commercial works	Canterbury	25%:75%	• Machine operator • Labourer	• Strong perference for recruting locally through 'Word of Mouth' • 'Equal productivity' policy to increase staff morale and reduce animosity • Rapid growth of staff • Relationship building activities between managers and staff	• Expanding client base by including major consturction companies • Strong barnd/reputation • Quality improvement of workmanship
S12	1979	Incoporated family	90 (50 based in chch)	Subdivisions, road works, site clearance, house foundations, drainlaying, landscaping, and forestry work	Canterbury (Timaru and Christchurch)	85%:15%	• Excavator operator • Site worker • Truck driver	• Intensive in-house training other workers to become skilled excavator operators • Strong preference for local recruits • Using recruitiment agencies for recruiting temporary staff	• Christchurch office established after the earthquakes • Relationships formed with large contractors in the SCIRT Alliance team

									• Increase the workloads from new subdivisions in Christchurch
S13	2008	Incoproated	20	Pipe and drainage	Auckland Christchurch	0%:100%	Drain layer	• 90 day trial for new recruits • Strong preference for candidates with interpersonal skills • Increasing organisational capacity to attract local people	• Semi-alliances with Christchurch subcontractors • Investment in building company capacity (premises, facilities) • Increasing the subdivision work by end of 2014

Note: BAU denotes business as usual; EQ denotes earthquake; Emp denotes employment

About the case studies

The cases were selected in consultation with Christchurch employers organisations such as the Canterbury chapters of the Specialist Trade Contractors Federation and the New Zealand Building Subcontractors' Federation. A sample of 30 subcontracting businesses was drawn. The initial list was then reduced, based primarily on whether the company is involved in civil works for the infrastructure rebuild in Christchurch and the company's willingness to be interviewed in depth. However, other considerations such as the diversity of companies in terms of size, type of business, years in business and form of labour were also taken into account. In total, 13 subcontracting business were studied (Table 1).

Table 1: Basic profile of case study subcontractors

Case study subcontractors	Number	Organisational coding
Business ownership category		
Family business	4	S1, S2, S7, S11
Incorporated	3	S3, S9, S13
Incorporated family	3	S4, S10, S12
Limited company family	3	S5, S6, S8
Organisational size		
Micro-sized (Ep≤10)	3	S1, S2, S7
Small-sized (Ep≤50)	7	S3, S5, S6, S8, S9, S11, S13
Medium-sized (50 <Ep≤100)	2	S10, S12
Large-sized (Ep>100)	1	S4
Years in business		
Less than 10 years	1	S13
10-20 years	3	S1, S9, S11
21-30years	3	S3, S6, S7
31-40 years	2	S5, S12
More than 40 years	4	S2, S4, S8, S10

Note: Emp denotes the number of employees

The companies are all located in the construction subcontracting sector. Companies who were engaged in civil works for the infrastructure rebuild were chosen. Organisations with between 1 and 200 employees were selected, with most case study organisations having less than 50 employees. Face-to-face interviews with 13 subcontractors were conducted in Christchurch. Respondents were asked to describe any emerging issues they felt they were facing.

About the Resilient Organisations Research Programme

"Building more resilient organisations, able to survive and thrive in a world of uncertainty, through research and practice"

We live in an increasingly complex world dealing with a broad spectrum of crises arising from both natural and man-made causes. Resilient organisations are those that are able to survive and thrive in this world of uncertainty.

Who we are:

The Resilient Organisations Research Group (ResOrgs) is a multi-disciplinary team of over thirty researchers and practitioners that is New Zealand based and with global reach. A collaboration between top New Zealand research Universities and key industry players, including the University of Canterbury and the University of Auckland, ResOrgs is funded by the Ministry of Business, Innovation and Employment through the Natural Hazards Research Platform and supported by a diverse group of industry partners and advisors. The research group represents a synthesis of engineering disciplines and business leadership aimed at transforming organisations into those that both survive major events and thrive in the aftermath.

We are committed to making organisations more resilient in the face of major hazards in the natural, built and economic environments. Resilient organisations are able to rebound from disaster and find opportunity in times of distress. They are better employers, contribute to community resilience and foster a culture of self-reliance and effective collaboration.

What we do:

The ResOrgs programme of public good research is aimed at effective capability building through research activities with significant impacts on policy and practice. Activities and outputs of the group, in existence since 2004, include informing and focusing debate in areas such as Civil Defence Emergency Management, post-disaster recovery, and the resilience of critical infrastructure sectors, in addition to core activities in relation to organisational resilience capability building and benchmarking. We have produced practical frameworks and guides and helped organisations to develop and implement practical resilience strategies suitable to their environment.

Why we do it:

In an increasingly volatile and uncertain world, one of the greatest assets an organisation can have is the agility to survive unexpected crisis and to find opportunity to thrive in the face of potentially terminal events. We believe such resilience makes the most of the human capital that characterises the modern organisation and offers one of the greatest prospects for differentiating the successful organisation on the world stage. This resilience is typified by 20/20 situation awareness, effective vulnerability management, agile adaptive capacity and world class organisational culture and leadership. More resilient organisations lead to more resilient communities and provide the honed human capital to address some of our most intractable societal challenges.

For more information see our website: www.resorgs.org.nz