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# HOW AUSTRALIAN CONSTRUCTION CONTRACTORS RESPONDED TO THE ECONOMIC DOWNTURN

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**ABSTRACT.** The Global Financial Crisis (GFC) in 2008 had a significant impact on the world economy and the construction industry was no exception. This study investigates the major impacts of the 2008 GFC on the Australian construction industry and, in particular how the Australian construction contractors responded to the economic downturn. A total of 35 senior managers from the Top 100 Australian construction companies were interviewed. The findings indicate that construction companies, particularly the large ones were not affected in any significant way but are expecting some difficult financial times over the next few years and are taking actions to minimize the upcoming adverse impacts. The most common strategy adopted by Australian construction contractors is to concentrate on core business while avoiding aimless bidding. Similarly, great focus is placed on retaining human resources in order to maintain the skill set so that the company can respond quickly when market conditions improves. The research findings will provide construction contractors with insights on how to establish and sustain competitive advantages during economic slowdown and become more resilient in the future.

**KEYWORDS:** Economic downturn; GFC; Construction contractors; Actions; Australia

## 1. INTRODUCTION

There has been significant discussion and debate about the causes and consequences of the global financial crisis. According to Crotty (2009), the global financial crisis is deeply rooted, and is particularly attributed to the structural flaws associated with the financial system. The acceleration of deregulation is arguably one of factors associated with the financial crisis (Gendron 2013). There are other causes of global financial crisis such as the exchange rate regime, current account, trading partner growth, housing price fluctuation, credit tightening, global imbalance and international reserves (Rose, Spiegel 2011; Kamin, DeMarco 2012; Chor, Manova 2012; Corden 2012; Agarwal *et al.* 2013). Lin and Treichel (2012) argued that the root cause of the global financial crisis is the global imbalance as a result of excess demand in the United States, rather than economic policies of East Asian countries.

The 2008 Global Financial Crisis has had a significant effect on world economies. It has exerted significant effects on global portfolio capital flows, moving from emerging market economies to advanced economies (Fratzscher 2012). The year 2009 witnessed a negative growth of most economies, with a –0.8% decreased rate of world output (IMF 2010). The International Labour Office (ILO) predicted that 20 million people would lose their jobs as a consequence of the global financial crisis

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(ILO 2008). This presented a critical challenge for the construction industry as it is one of the key sectors that provide significant employment opportunities.

Since 2009 there have been a number of efforts promulgated by governments in an effort to minimise the negative impacts of the GFC with the most popular approach being to increase public sector spending on infrastructure projects. In Australia, the Federal Government released a number of fiscal stimulus packages: for instance, the $42 billion Nation Building and Jobs plan of February 2009. This stimulus package was aimed at funding 49,000 building and construction projects between 2009 and 2012, including A$14 billion in school infrastructure and A$1.9 billion in road and rail infrastructure (http://www.economicstimulusplan.gov.au). This package was instrumental in pushing retail trade turnover to a level 4.8% higher than that its pre-stimulus level by April 2009 (Kennedy 2009). As a result, the GFC does not appear to have had the same level of negative impact on the Australian economy as it has in other economies and the nation managed to achieve a GDP growth of 1.4% and 2.2% in 2009 and 2010 respectively (ABS 2011a).

The Australian construction industry however is not immune to the global economic downturn as indicated by the declining trend of the value of building approvals (see Fig. 1). The construction industry plays a critical role in the Australian national economy by contributing 7% of its gross domestic product and 9% of its workforce. Similarly, it is closely aligned with other industries on an iterative support basis. Despite this importance of the industry to Australia there are limited studies on the strategies that contractors used to counteract the GFC's impacts, particularly in the Australian context and there is a need to fill this lack of knowledge to assist the construction industry of the future.

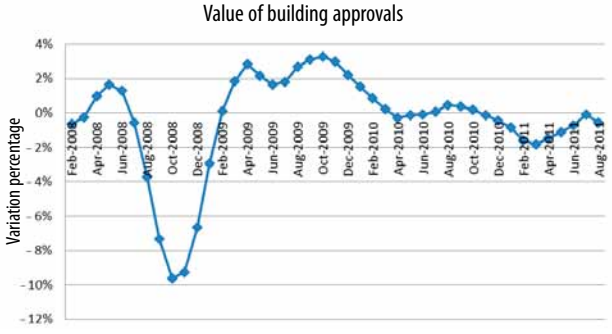


Fig. 1. Value of building approvals, monthly variation percentages (ABS 2011b)

This research investigates the strategies and actions taken by major Australian construction companies in order to counteract the effects of the economic downturn. A literature review on strategies adopted by construction contractors, especially during periods of economic downturn was undertaken. This was followed by a series of semi-structured interviews with 35 senior managers from a group of the Top100 construction companies in order to solicit their opinions about the challenges posed by the external environment and the strategies they would employ to cope with the situation. The findings will provide construction contractors with insights on how to establish and sustain competitive advantages and become more resilient during future periods of economic downturn.

The rest of this paper unfolds as below. The specific strategies adopted in the construction industry are reviewed in the next section, which is followed by the research design. Results are then presented and findings are discussed. Finally conclusions are drawn, providing both theoretical and practical implications.

## 2. SPECIFIC STRATEGIES IN THE CONSTRUCTION INDUSTRY

Strategy is an ancient concept derived from a military context and refers to a plan of action designed to achieve a particular goal (Ghemawat 2002). According to Betts and Ofori (1992), most business organizations should develop effective strategies for long term survival in a turbulent and competitive environment. Although having a variety of definitions during different historical periods, strategic management essentially involves the process of identifying, evaluating and implementing strategies in order to meet the organisational objectives (Aragón-Correa *et al.* 2008). Strategy is an important aspect for all organisations because it provides a structured process of analysis, using tools and frameworks to study both the external and internal environment and provides a logical approach to strategic decision-making.

In the construction industry, the literature review revealed a variety of general strategies that construction contractors worldwide have used to maintain competiveness. According to Chinowsky and Meredith (2000), strategies in the construction industry are derived from the following seven areas namely: (1) vision, mission and goals, (2) core competencies, (3) knowledge resources, (4) education, (5) finance, (6) markets, and (7) competition. These seven areas provide construction contractors

Table 1. Strategies construction contractors have taken in the construction industry

| Actions and strategies | General strategic management in construction industry | | | | | | | | Strategic management during recession period | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Manase (2010) | Bassioni *et al.* (2008) | Chan *et al.* (2005) | Ofori and Chan (2000) | Ling and Lim (2010) | Carrillo and Heavey (2000) | Ng *et al.* (2009) | Oo *et al.* (2008) | Jung *et al.* (2011) | Lim *et al.* (2010) | Bakar *et al.* (2011) |
| | UK | UK | HK | Singapore | China | UK | Australia, UK, Korea, Japan, Singapore | HK and Singapore | Korea | Singapore | Malaysia |
| Biding rationally | | | √ | | | | | √ | | √ | |
| Diversifying into new businesses/ market | √ | | √ | √ | √ | | √ | | √ | √ | √ |
| Form joint venture with other construction contractors | | | √ | √ | | | √ | | √ | √ | |
| Form partnership with clients | | √ | | | √ | | √ | | | √ | |
| Form partnership with subcontractors and suppliers | | √ | | | √ | | √ | | | √ | |
| Merger and acquisition | | | | | | √ | | | | √ | √ |
| Control human resource related cost | √ | √ | √ | | √ | | | | √ | √ | |
| Strict project cost control | √ | √ | √ | | √ | | | | √ | √ | |
| Invest in R&D | | | | | | | √ | | | √ | |
| Strict company financial measures | | | | | | | | | √ | √ | |
| Improve the company image (reputation) | √ | | √ | | | | | | | | |
| Financing resources management (improve the financial capacity) | √ | √ | | | √ | | √ | | | √ | |
| Concentrate on core business (specialisation) | √ | | √ | | √ | | | | | √ | |
| Encourage innovation by means of technology advancement, knowledge management and organizational learning | | √ | | | | | | | | | √ |
| Managing human resources (e.g. motivation, engaging employees, providing trainings to employees) | | √ | | | | | √ | | | √ | |
| Form strategic alliance with other companies | | | | √ | | √ | √ | | √ | | |
| Offer more comprehensive, better quality services | | | | √ | | | | | | | √ |
| Partner with universities | | | | | | | √ | | | | |

with an overall structure of strategic concepts. Generally diversifying into new markets is one of the most frequently used strategies in the construction industry (Ofori, Chan 2000; Chan *et al.* 2005; Ling, Lim 2010). This approach helps contractors achieve sufficient turnover when construction demand is limited in the traditional market. Similarly, forming partnerships with other parties such as architects, clients and subcontractors is another common strategy used to share the risks and reduce costs (Ofori, Chan 2000; Bassioni *et al.* 2008; Ng *et al.* 2009; Ling, Lim 2010). Additionally, given the fierce competition in the construction industry, a strategy involving strict cost control is regarded as one of the most effective to obtain competitive advantages in the market. The summary of the general strategies in the construction industry is shown in Table 1.

In addition to the general strategies in the construction industry, contractors need to adopt strategies to address the significant cyclical fluctuations within the unstable global economy. In particular, contractors should develop specific strategies in response to a recession so as to ensure their continued existence. Studies on contractors' responses to recessions have been carried out in different countries. Lim *et al.* (2010) investigated the strategies adopted by Singapore contractors during the recession period (1997–2005), and grouped them into three categories, i.e. cost control, improving financial capacity and appropriate contracting arrangements. Jung *et al.* (2011) examined the strategies of Korean contractors in the international market and found that regional diversification and joint ventures with other international contractors were more effective. The similar findings were reported by Horta *et al.* (2012) that it is a common approach adopted by Portuguese construction firms to diversify to other regions or sectors (e.g. renewable energy) (see also Lu *et al.* 2014). Bakar *et al.* (2011) investigated the survival strategies of construction companies in Malaysia during two periods of recession i.e. 1978 to 1984 and during the Asian economic crisis of 1997–1998. Twelve strategies adopted during the two economic crises were identified with management style, market penetration and quality improvement ranked as the most important strategies. The summary of the specific strategies during the recession periods is demonstrated in Table 1.

The literature review revealed that generally there are a limited number of studies that concentrate on effective strategies adopted by contractors during the economic downturn. Additionally, different countries have different priorities and adopt different measures for crisis management in the construction industry. Those strategies that are deemed to be effective cannot be simply copied from one context to another. As a result, contractors in different countries have different interpretation about economic status, market conditions and resource constraints; and adopt different strategies in response to recession periods. This study will focus on examining the impacts of the global economic downturn on major Australian contractors and their corresponding strategies.

## 3. RESEARCH METHDOLOGY

This research study focuses on developing specific strategies for construction contractors to use during economic downturns; this has become particularly important after the 2008 global financial crisis. Considering the explorative nature of this research a qualitative research approach was considered the best way to satisfy the research objectives as outlined in the introduction section of this paper. Semi-structured interviews are suitable for exploring respondents' perceptions and opinions about complex issues where they provide opportunities to probe for further information or clarifications (Bryde, Volm 2009; Teerajetgul, Chareonngam 2008). This loosely structured instrument helps to merge the informants' opinions rather than being constrained by the questions themselves (Dainty *et al.* 2005). This approach ensures that the same set of questions is used for all interviewees and also facilitates interactive discussions (Waara 2008). Given the highly politicized nature of the GFC this semi-structured interview approach was considered to be the most appropriate method to investigate the impacts of 2008 financial crisis on the construction industry.

The semi-structured interviews were conducted with senior managers from the top 100 Australian construction contractors that are listed by the Housing Industry Association (HIA). The HIA publishes the list of the largest 100 contractors (in terms of value of contracts won in the previous year) that work in both the engineering construction and non-residential building sectors (the Construction 100) annually. These 100 contractors dominate the market by taking around 48% of market share (contracts worth A$77.1 billion) in 2009–2010 (HIA 2010).

These 100 construction contractors were initially approached via a telephone call. The authors chose to interview the senior managers (i.e. general managers and managing directors) as it was felt that

they were in the best position to describe the effects of the GFC on the company and the strategies that were used to minimise its effects. The senior manager, for each of the companies, once identified, was sent an email containing the interview protocol and a cover letter explaining the aims of the research. Follow-up telephone calls were made to confirm their willingness and availability to participate in this research. In total 35 senior managers comprising 12 General managers, 9 Commercial managers, 6 Operation managers, 5 Managing directors, 3 Business development managers, were interviewed to solicit their views on these critical issues. These interviewees originated from 35 different firms (see Table 2). All interviews were undertaken between October 2010 and March 2011 and each interview took between 1 to 1.5 hours. The local interviews were conducted on a face to face basis whilst the interstate interviews were carried out via telephone. Although the preference was for a face-to-face meeting, it was simply not always possible mainly because of the busy schedules of the senior executives of these top companies. To ensure consistency and minimise ambiguities and misunderstandings interview transcripts were forwarded to each of the interviewees immediately after the interview. In some instances follow-up interviews were deemed necessary in order to provide clarification about some of the issues raised by the interviewees. Where this was necessary changes were made to the interview transcripts so as to ensure that they reflected the true situation for content analysis. It should be noted that the interviews took place some 2 years after the 2008 GFC hence interviewees had plenty of time to re-think the business strategies they had employed in each of their companies. It is acknowledged that the small number of interviewees poses a limitation to this study. However the 35 senior managers of the largest Australian construction companies did provide valuable insights on how Australia dealt with the GFC.

The purpose of semi-structured interview is to explore the impacts of the global financial crisis on the Australian construction industry and measures adopted by construction contractors to counter act these impacts. The interview questions should fit into the explorative nature of this research. As reviewed in the previous section, there are limited studies focusing on effective strategies for contractors during the economic downturn. Thus interview questions should be open-ended allowing interviewees to provide rich information by relating their professional experience to the theme of interview, i.e. how contractors respond to the recent global financial crisis event. This helps to gain a thorough understanding of how the construction industry was affected and responded to the 2008 GFC. Based on literature review findings, the following interview questions were developed:

a) What are impacts of the global financial crisis on the Australian construction industry?
b) What are current practices adopted by construction contractors to respond to the challenges presented by the global financial crisis? and
c) What are strategies for improving the resilience capacity of the construction industry during the economic downturn?

In particular, interviewees were encouraged to provide reflections about the business operation strategies that they employed during the 2008 GFC. Similarly, the following government policies, statistics and company documents were examined in an effort to triangulate the data collected via the interviews i.e.:

a) The Australian Yearbook 2009–2010, released by the Australian Bureau of Statistics,
b) The Australian Economic Indicators, released by the Australian Bureau of Statistics,
c) The Building Approvals data, released by the Australian Bureau of Statistics,
d) Various Stimulus Package data, e.g. Building Education Revolution (BER) policy and reports, and
e) Company documents such as strategic visions, human resource reports, internal websites, relationship management systems, marketing campaign documents, etc.

Table 2. Demographics of the interviewees

| Positions held by the interviewees | | | | |
|---|---|---|---|---|
| General managers | Commercial managers | Operation managers | Managing directors | Business development managers |
| 12 | 9 | 6 | 5 | 3 |
| Type of Company | | Company ranking | | |
| National companies | Multinational companies | Top quartile | Middle quartile | |
| 15 | 20 | 13 | 22 | |

Analysis of qualitative data is a time consuming process. As Coffey and Atkinson (1999) pointed out, coding is the first step of qualitative data analysis, i.e. identifying common themes and patterns. The qualitative interview data was transcribed into narratives and coded quantitatively via the constant comparative method (Grove 1988; Ryan, Bernard 2000) by using NVivo 8, a common computer-aided qualitative data analysis tool (CAQDAS) used in construction management research (Dainty *et al.* 2000; Blismas, Dainty 2003). NVivo enabled the interview data on common themes and similar semantic meanings to be coded electronically as the same category. Subsequently each category was then compared and, via a process of continuous refinement arrived at a point where each component represents a clear and distinct categorization.

## 4. RESULTS AND FINDINGS

### 4.1. External environment analysis – impacts of the GFC on the construction market

The external environment affects a firm's strategic behaviour and the analysis of that environment can provide important inputs to strategy formulation. Interviewees made a lot of comments on how this recent economic downturn has affected their own company as well as the whole construction industry. Following the qualitative data analysis process described in the previous section, the major impacts of the 2008 global financial crisis from the interviewees' perspectives are shown in Table 3. Firstly each individual impact of GFC is coded which is followed by counting of frequencies in terms of been nominated by interviewees. Consequently, percentage of each impact is calculated by dividing the total number of nominations by the total number of interviewees (i.e. 35). This percentage reflects the relative degree of significance of each impact of GFC on Australian construction contractors.

Table 3. Major impacts of the 2008 GFC

| Impacts | Frequency | Percentage |
|---|---|---|
| Lagged impacts | 35 | 100% |
| Shrinking market | 35 | 100% |
| Tight margins | 35 | 100% |
| Fierce competition | 35 | 100% |
| Hard to secure finance | 33 | 94% |
| Employee turnover | 30 | 86% |
| Escalation of trade costs | 28 | 80% |

**Lagged impacts**

The common theme amongst interviewees was that the 2008 global financial crises had an effect on the construction industry across Australia; particularly on contractors. An interesting observation made by the interviewees was that the impacts of the GFC were actually delayed due mainly to the boom in the resources industry across the country that created a pent up demand for a large number of projects and expenditure. Similarly the Australian Federal Government's response to the GFC, the capital expenditure The Government stimulus package, also created a large number of jobs within the construction industry (McGrath-Champ, Rosewarne 2009). This Government stimulus strategy, in particular the Building Education Revolution (BER) package, was highlighted by the interviewees as the main reason why the 2008 GFC impact was not that significant in Australia when compared to most other parts of the world.

Almost all interviewees were pessimistic about the future prospects of the industry as they observed that government funding has been scaled back, with the stimulus spending has finished and the private sector was responding slowly. This is in line with the official statistics. The value of engineering construction works done shows a constantly increasing pattern whereas the value of building works done generally increased until May 2009 but then began to flatten and eventually began to decline from the middle of 2010 (ABS 2011b) (see Fig. 2). This indicated the efforts of the Australian Government to stimulate the national economy by means of injecting money into infrastructure and school projects. However, it is a worrying to note the fluctuations of commenced engineering projects and the declining nature of commenced building works. These are clear indications of the lack of continuous expenditure from both the public and private sectors.

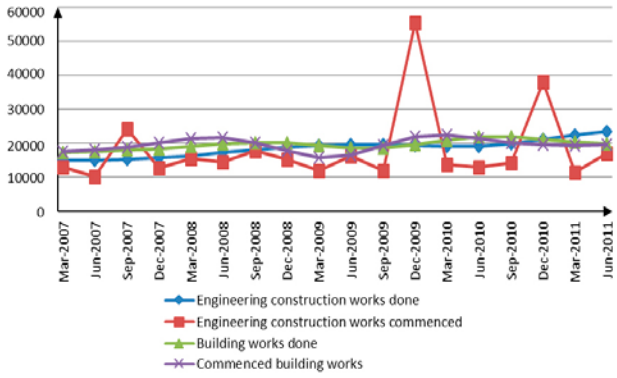


Fig. 2. The value of engineering construction and building construction works, commenced and done (ABS 2011b)

**Fierce competition, tight margins and shrinking markets**

Interviewees reported that the global financial crisis had created very tough market conditions as the market contracted with the disappearing projects. The market could not support many privately funded projects and some projects were stopped or suspended half way through. As one interviewee put it: "Even an apartment project that was half completed and was waiting for settlement suddenly found that it could not settle because the bank lending rate, due to the GFC, had changed from 90% to 80% and this shortfall could not be found thereby preventing settlement. The result was that the company could not receive payment and the developer went into liquidation. This scenario has been displayed throughout Australia".

According to interviewees, the level of competition in the construction industry generally increased post the 2008 GFC as the number of tenderers per job doubled or in some cases even tripled. As an immediate consequence, project margins were greatly reduced across the board. This is compounded by the escalation of trade costs due to the short supply of available resources. Another interviewee noted that; "The effect has been increased workloads and tighter (fewer) resources with a corresponding increase in the cost of suppliers and labour. In a sense, the effect was the opposite of what one might have expected from a GFC". This increase was confirmed by another interviewee who noted that the GFC resulted in a direct cost increase of 15–20%. These findings are generally in line with Lim's *et al.* (2010) study.

**Hard to secure finance**

One of the major challenges to the business development of the construction contractor is the financial institutions' "conservative attitudes towards construction loan applications" (Chiang, Cheng 2011: 137). This became even more so during the GFC. A study commissioned by the Chartered Institute of Building (CIOB) indicated that one of the critical impacts of the GFC was the loss of confidence suffered by an organisation, e.g. in the United Kingdom more than half of the firms were refused access to capital (CIOB 2009). This was confirmed by interviewees suggesting that the banks and financial institutions had become more risk sensitive as a direct consequence of the GFC. Any sense of uncertainty about the feasibility of a project resulted in projects being put on hold. Interestingly, some interviewees reported that since the GFC it had actually become easier for quality construction companies to get better deals from banks and financial institutions in terms of (bank) fees and insurance guarantees. As one interviewee stated, "…Banks are looking for safer development plans and opportunities and in this environment the higher quality contractors (conscientious and more diligent) can access finance easier than the lower tier contractors". Another interviewee supported this view by stating that, "…People start looking at the capacity of builders and their ability to generate a good bottom line balance sheet. In this regard clients tend to choose a builder with a good balance sheet rather than one who simply has a good cash flow".

**Employee turnover**

Economic downturns also trigger an increase in employee turnover, which has a detrimental effect on knowledge and knowledge retention generally in construction companies (Gibson *et al.* 2003). One interviewee reported that 3% of employees were forced to leave his company as a direct result of the GFC. An example was given by an interviewee who reported that between 15 and 20 (some 8%) employees left the company due to retirements or were made redundant. He went on to suggest that, "Only the best contractors will be able to maintain their staff and field personnel. The market place next year will be tight with diminished returns. We will have to have a very tight approach to business development, estimating, job winning, job delivery and post contract maintenance if we want to keep our teams together". Conversely two other interviewees reported that their companies actually profited from the adverse conditions by, "Picking up key staff that had been made redundant by other companies who had undergone bankruptcy".

### 4.2. Strategies taken by contractors

With a good understanding of the external operating environment and the firm's internal organization, firms can formulate and implement strategies accordingly to mitigate negative impacts. This is indicated in Table 4, which highlights that the actions taken by Australian construction contractors are mainly related to human resource management, cost control, sustainability, and business models according to the qualitative data analysis process outlined in the research methodology section. These themes emerged when interview notes were screened which was supplemented by the review of company documents such as strategic visions, human resource reports, and internal websites. Similarly, frequency of each

Table 4. Actions taken by large Australian construction contractors to counteract the impacts of the 2008 GFC

| Actions | Frequency | Percentage |
|---|---|---|
| *Human resource management* | | |
| Formal engagement of employees | 32 | 91% |
| Invest in employees in terms of training and tertiary education | 32 | 91% |
| Internal transfer of staff to better performing areas | 30 | 86% |
| Flexible working arrangements | 28 | 80% |
| Employing more mature and experienced staff members | 21 | 60% |
| Employing technical staff (engineers) from overseas | 15 | 43% |
| Reducing the number of graduate employee positions | 18 | 51% |
| Lay off employees | 10 | 29% |
| *Cost control* | | |
| Keeping a cap on salaries and wages | 33 | 94% |
| Reducing turnover | 31 | 89% |
| Slowing down capital spending | 25 | 71% |
| Aiming for Negative or zero margin in work bids | 18 | 51% |
| *Sustainability implementation* | | |
| Introducing sustainability initiatives | 28 | 80% |
| Maintain socially responsible practices | 25 | 71% |
| *Business models* | | |
| Concentrate on core business | 35 | 100% |
| Explore new markets and offer more diverse services to clients | 32 | 91% |
| Review the company's business operating models | 31 | 89% |
| Partnering with consultant such as architects | 30 | 86% |
| Improving the financial capacity of the company | 30 | 86% |
| Partnering with subcontractors and suppliers | 28 | 80% |
| Bidding at to generate a reasonable profit margin | 25 | 71% |
| Forming Joint ventures with other contractors | 21 | 60% |
| Partnering with clients | 18 | 51% |
| Exploring niche markets | 16 | 46% |
| Merging with or and acquiring other organisations | 12 | 34% |
| Collaborating with Universities and TAFEs | 10 | 29% |

strategy is counted in the first instance, followed by the calculation of percentage which reflects the relative degree of significance of each strategy taken by Australian construction contractors to mitigate impacts of GFC.

### Human resource management related actions

Human resource management has become a critical component of strategic management for construction contractors due to the skill shortage issues (Brandenburg *et al.* 2006; Kazaz, Ulubeyli 2009). According to interviewees, this issue has become even more critical as one of the most important considerations during an economic downturn is to *retain key staff members*. As one interviewee stated, "Good staff are crucial for our companies as they form part of the critical assets list regardless of the state of the economy or the GFC". Another interviewee added that, "Skills shortage will be a critical issue post GFC. It will be extremely difficult if you have no people to deliver projects when opportunities come up". He further stated that, "It is important to train and up-skill your workforce during the hard times so that the organisation has the capability to build a competitive advantage during these more challenging economic periods". Motivating employees and providing training opportunities are key strategies for contractors to manage human resources (Bassioni *et al.* 2008). A large number (91%) of interviewees reported that their company invested in good quality employees by enrolling them in specific courses or tertiary education (cf. Ng *et al.* 2009). Another interviewee emphasized the critical role of *maintaining good communications*, "… A one on one meeting is a good way to engage employees; We try to maintain transparency wherever possible and keep our people informed about future opportunities and projects that we are bidding for" (cf. Loosemore

*et al*. 2003). Oyedele (2012) suggests that downsizing could be one of actions taken by construction firms during the economic downturn however is likely causing issue such as job insecurity which subsequently leads to high level of stress and demotivation amongst employees.

Another common human resource management related action involves the *internal transfers to other parts of the same organisation*. As one interviewee revealed, "(we) transfer people to those areas where there is more work and that may include moving to a different State for example transferring people from New South Wales to South Australia or to Northern Brisbane where the company has more projects. Alternatively we transfer people from one industry sector to another or across sectors to the Defence area". Other interviewees reported that staff was moved between disciplines, most notably in the building and engineering areas where the engineering sector remained comparatively strong during the GFC. The significant benefits from this include: a balance between the sectors and assists with the corporate strategy to develop the capability of each individual employee by promoting flexibility and mobility. This helps a continuous up-skilling of staff members. Indeed, investment in knowledge management system helps to retain the knowledge asset of construction firms so that they can improve their business performance and survive from the economic downturn (Chen, Fong 2012). This includes a better understanding of customers in a specific sector (Holt, Edwards 2013).

More than half the interviewees (19) expressed concern about the *reduction in training budgets* that came about as a result of the GFC when many organisations cut back on the number of new employees e.g. taking on 1 or 2 fewer graduate engineers etc. To compensate for this lack of staff some companies turned to employing more mature skilled people because they required less training. Similarly, another interviewee noted that many construction contractors preferred short term (e.g. part time and casual) rather than long term recruitment as a consequence of the GFC. He felt that more *flexible working arrangements* such as a 2–3 day working week, reduced working hours or taking a few months off were becoming more popular amongst construction contractors.

It is interesting to note that 23 interviewees indicated that they did not consider human resources to be a big issue as their companies "kept winning jobs and have been able to pick up staff that were made redundant by other companies as a result of the GFC". Interestingly only ten interviewees (29%) reported that their company laid off employees and even that was at a fairly low rate i.e. about 5%.

**Cost control related actions**

Similar to other previous studies (cf. Ling, Lim 2010; Manase 2010), a number of actions were suggested by the interviewees as a way of controlling costs. The two most common measure *were; keeping a cap (freeze) on salaries* as opposed to reducing them and *stopping wage rises* for senior and middle managers. One interviewee revealed that more and more construction contractors were starting to look overseas for technical staff such as engineering consultants (cf. McGrath-Champ, Rosewarne 2009).

Other interviewees reported actions such as; *less capital expenditure capital* (e.g. civil equipment, manufacturing plant); *reducing profit margins*, and *spending less money on non-business activities* such as entertainment and charitable causes. One interviewee in particular highlighted that his company used to contribute a certain proportion of total profits to charity however the changed economic circumstances meant that the company had to cut this contribution. Lim *et al*. (2010) suggested that actions needed to be taken on project cost control. It is interesting to note that a majority of interviewees indicated that these cost related actions mainly occurred at the corporate level.

**Sustainability related actions**

It was surprising to note that sustainability practices were highlighted as a key strategy to maintain the competitiveness of contractors and to help them to survive the economic downturn even though clients had demonstrated some reluctance to invest extra on sustainability features. As one interview put it, "GFC or not; contractors need to embrace environmental sustainability and there has certainly been awareness of this in the last two years". Sustainability actions reported by interviewees include the *engagement of a dedicated sustainability manager, the measurement of energy consumption of both existing buildings and new projects, and the establishment of a national prize to recognize sustainability achievements at project level*. Indeed, Lu's *et al*. study (2013) suggested that construction companies will benefit from embedding sustainability measures, as evidenced by their better financial performance during the economic downturn. Interestingly a number of interviewees highlighted the *increasing attention to the social dimension of sustainability*. One interviewee reported

that his company had a policy to conduct a community project with a zero margin and zero profit. This approach could only accommodate one such community project at a time because the company did not have the resources to do more than that. Another interviewee reported that his company engaged an indigenous relations manager to ensure that their projects were in line with indigenous beliefs and culture i.e. to be culturally sensitive and aware. Other actions included, *the funding of community projects, encouraging staff to take part in community projects and the more traditional giving of donations to community activities*.

An intangible benefit of *commitment to sustainability* is to maintain the contractor's competitiveness (Korkmaz, Messner 2008). All interviewees agreed with this and generally viewed this commitment as a good long term investment rather than one that provided an instant payback. Interviewees suggested that it is more about *reputation and branding*. As one interviewee stated "Sustainability initiatives help to retain good staff, provide a link to charity organisations, can enhance the organisation's reputation (brand) and increase the organisation's exposure so that it becomes an organisation of choice for current and future employees".

**Business model related actions**

Interviewees suggested that it was imperative to conduct a major review of the organisation's business models in order to ensure *flexibility and versatility*. Some specific actions that resulted from those reviews include: *deciding to concentrate on core business and diversifying and expanding the level and type of services that the organisation provides to its clients*. These actions are consistent with previous studies (cf. Manase 2010; Ofori, Chan 2000; Ng *et al.* 2009). This is similar to findings of Holt and Edwards's (2012) study which suggested that business plans need to be revisited for consideration of new business models. Their study found that those construction-related firms not revising their business plans suffered more from the economic downturn.

There was consensus among interviewees that it was crucial to maintain *a focus on the key market* that the company really understands, i.e. its core business. For instance, several interviewees revealed that their companies chose to focus more on construction projects for the government sector rather than the private sector; as was highlighted by the BER Schools packages and increased civil infrastructure spending. A number of interviewees expressed concern about a possible loss of their organisation's business focus during the unreasonable bidding practices that were arising as a result of the GFC. For instance, one interviewee stated: "One big mistake a contractor may make is to be panicked into bidding for unsuitable projects e.g. engage in overseas projects with no local knowledge". To this end some interviewees made a number of recommendations e.g. "don't rush into bidding for projects and don't bid for clients who you know may not pay you". Another interviewee revealed that his company had established a quality client pool in order to identify honourable and professional clients.

At the same time the interviewees were adamant that it was important to *diversify* into other sectors in order to minimize business risks (cf. Lim *et al.* 2010; Horta *et al.* 2012; Jin *et al.* 2013). One interviewee revealed that his company had placed a lot of efforts into the transport sector during the boom but he now felt ready to explore new markets such as the water sector. This feeling was endorsed by another interviewee, "even though we increased our focus on government sector projects, we also made concerted attempts to identify non-government opportunities so that the business focus did not become unbalanced by its reliance on government work that can stop as fast as it began." Other interviewees reported an expansion of business into different geographic areas. This is in agreement with Jung's *et al.* (2011) findings about outperforming Korean contractors and their diversification into other areas.

Almost all interviewees (35) noticed the *changing procurement approaches* coming into the industry. For example, an increasing number of projects utilized negotiated design-and-construct approaches and management contracts. One interviewee revealed that his company had developed its design and construct capacity in response to the government's BER programme and as a consequence had been awarded several contracts in South Australia and Queensland. According to interviewees, collaborative types of procurement approaches, such as alliancing and Early Contractor Involvement (ECI) will be used in more projects in the future. In one case a company had adopted a plan to achieve a 50–50 ratio of hard money contracts and collaborative contracts.

The *maintenance of good relationships with clients, consultants, subcontractors and suppliers* was highlighted as a key action to counteract the impacts of the GFC (cf. Lim *et al.* 2010). One interviewee reported that his company developed a relationship management system which included, inter alia, a client rating, contacts, current projects

and record of communication. Another interviewee revealed that his company had provided safety and green star rating tools trainings to selected suppliers and subcontractors during the GFC; in this way they achieved a training certificate and formed part of the tendering team. He felt that being in partnership with qualified subcontractors and suppliers would assist his company to secure a competitive cost advantage.

Some companies chose merger and acquisition approaches as an opportunity to restructure the organization's business. For instance, one interviewee reported that his company, A, merged with another company, B, and the business was restructured. The merged company has been successful in bidding for projects that required complementary skills and expertise, i.e. the skill of the company A component for the commercial building work and the skill of the company B component for the civil aspects of the project. Another noticeable event was that Bovis Lend Lease (ranked 10$^{th}$ in the HIA top 100 contractor list 2010) acquired Abigroup (ranked 5$^{th}$) and Baulderstone (ranked 14$^{th}$) in December 2010 as part of an A$960 million deal (The Australian 2010). According to interviewees, this will have significant implications on competition within the Australian construction market. Indeed, it is essential to understand the sophistication associated with the nexus between contracting and construction professional services in the international arena so that proper merger and acquisition strategy is developed (Lu *et al*. 2014).

Sixteen interviewees (46%) noted that there were several *niche markets* that construction contractors could explore. These markets included sustainable commercial buildings (Green Building Council Australia and Leadership in Energy and Environmental Design certification), sustainable and affordable housing and international markets such as Russia, China and India. One interviewee in particular highlighted the action taken by his company whilst it was securing Federal Safety Commissioner Accreditation (FSC); a compulsory requirement to undertake government projects. His company made the decision to secure Federal safety Commissioner Accreditation as early as possible and, as a result the company was invited to bid for a number of public projects.

## 5. DISCUSSION

The results indicated that the GFC has impacted on the Australian construction industry even though this impact was alleviated and lagged due predominantly to the increased government funding and the backlog of resource sector projects. However the industry is increasingly experiencing economic stress as public expenditure diminishes and the resource demands from emerging economies reduces. Accordingly this study is timely as it can assist contractors to better prepare themselves to face the toughening economic conditions that are appearing on the horizon.

The most common strategy used by Australian contractors is to *concentrate on core business*, i.e. to stay within company's area of expertise and familiarity. The GFC has resulted in a shrinking construction market in Australia and an increasing level of competition. The resultant pressure has meant that some construction contractors have chosen to reduce their margins/profits expectation during tendering or bidding for all types of projects, regardless of whether or not the project fitted the company's strength (area of expertise) or its long term development strategy. This "cut throat" behaviour is not healthy for the sustainable growth of the industry and caution is required to avoid what amounts to aimless bidding i.e. bidding outside the company's area of expertise or comfort zone (Wong *et al*. 2010). Indeed, "*bidding rationally*" was one of key strategies taken by Singaporean contractors during the economic downturn (Lim *et al*. 2010).

Another top priority for Australian contractors during the GFC was to *retain key staff members*. During periods of economic downturn, it has been common practice for contractors to lay off staff as a way of controlling human resources and reducing costs (cf. Jung *et al*. 2011; Lim *et al*. 2010; Oyedele 2012). This study has found that this was not the approach used by major Australian contractors and the redundancy rate during the GFC was quite low. However, interviewees have reported that employees are now under more scrutiny in terms of performance and there is a lower threshold of tolerance for poor performing staff due to the uncertainty associated with the market condition. The (substantial) market volatility post the global financial crisis indicates that construction contractors are suffering from continuous uncertainties (MBA 2010). Internal transfers between sectors and regions, flexible working arrangements and providing training opportunities have become common approaches used by Australian contractors in an effort to retain key staff.

Similarly, it is interesting to note that sustainability initiatives are highlighted in this study as another key strategy for Australian contractors to

maintain their competitiveness during the GFC even though there is some reluctance from clients to invest in this field. Previous studies have indicated that strict cost control is a preferred approach by contractors during periods of economic downturn (cf. Jung *et al*. 2011) however embedding sustainability measures is beneficial to construction firms (Lu *et al*. 2013). This study suggests that major Australian contractors regard the extra commitment to sustainability as a long term investment for intangible benefits such as enhancing the company's reputation and thereby attracting more talented staff. Given that the operation of contractors is constrained by the availability of resources, SMEs may not always be able to afford to invest extra resources on sustainability initiatives. Accordingly, future research is required to validate the feasibility and effectiveness of this strategy for small to medium contractors.

It is vital that construction contractors take a systematic approach to the development of survival strategies as no one was immune to the impacts of the global financial crisis. The research findings support the notion that contractors should make efforts to develop good relationships with other parties in the industry such as, competent consultants, subcontractors and suppliers or to form joint ventures with other contractors with complementary skill sets and resources so as to build collective strength and expertise. This is consistent the work of other researchers (cf. Lim *et al*. 2010; Bassioni *et al*. 2008; Lu *et al*. 2014). This study highlighted that major Australian contractors prefer to partner with consultants and subcontractors and suppliers rather than with other contractors or clients. This may be attributable to the growing demand for integrated delivery approaches such as design-and-construct and alliancing.

It is interesting to note that all interviewees emphasized that all actions taken are at the company level. According to these senior managers, the management of each individual project remains "business as usual". Therefore, mechanisms need to be put in place to ensure that the company level strategies are implemented at the individual project level. It is also striking to note that none of the interviewees suggested that investment in R&D was as a key strategy to respond to the GFC. According to Lim *et al*. (2010), R&D was a key strategy adopted by Singaporean contractors during their recession as it helped them to explore and locate new business opportunities. Interestingly some 70% of interviewees claimed that there were opportunities that came out of the GFC, e.g. reviewing the business model, securing staff that had been made redundant by other contractors etc. The challenge was for the contractors to make the most of the opportunities and to minimise the exposure to the threats presented by the GFC.

## 6. CONCLUSIONS

The 2008 GFC had an immediate and still continuing slow down effect on the global economy. This study aimed to investigate the impacts of the 2008 GFC on the construction industry and the consequential actions taken by Australian firms. The major impacts identified include: a shrinking operating market, difficulties to secure finance, more fierce competition, tighter profit margins and increased employee turnover. It is also interesting to note that many construction contractors take the economic downturn as an opportunity to review their business plans and formulate strategies to improve their resilience capacity.

A number of coping strategies and actions have been reported by Australian construction contractors in an effort to deal with the aforementioned impacts of the GFC. Strategic human resources management is becoming more critical in the context of the GFC than it would be under normal economic circumstances. Therefore, construction contractors are encouraged to retain key staff in order to maintain a proper skill set and to be in a position to respond quickly when project opportunities arise. The GFC has made human resources even more scarce and precious.

Similarly, efforts are required to achieve a balance between the minimisation of unnecessary capital spending and the strategic investment required in inter alia, marketing campaigns, the provision of training for key staff and the adoption of sustainability initiatives. This strategic behaviour will affect the competitiveness of construction contractors in the long term.

To survive and maintain the competitiveness, construction contractors should concentrate on core business whilst developing new business opportunities via a diversification strategy. Specialising in an area which fits with the company's strength is paramount whilst diversifying the services provided to the client minimizes the risks of business failure. Similarly, selective bidding is recommended to avoid aimless commitments and time wasting. Additionally, niche markets, such as sustainable commercial buildings and housing should be explored as they will generate extra rev-

enue for the company. The review of the company business model and revision of the business plan is essential in order to achieve these goals. Similarly, priority needs to be given to the review of systems and procedures that lead to efficiency gains.

This study indicates that governments play a critical role during the recovery process from the economic downturn. The Australian Government's policy to increase capital expenditure in the form of a stimulus packages as a response to the economic downturn has been the main factor carrying the industry forward during the last 2–3 years. However, given the government stimulus package is coming to an end while the private sector is recovering slowly, this presents a new challenge to the construction industry, in particular to contractors who in many ways act as the litmus test for the state of the industry.

The limitation of this research belongs to its explorative nature. The sample of this study is comparatively small, though the in-depth interviews with 35 senior managers in the industry do provide very useful insights. Future research opportunities exist to empirically test the effectiveness of actions identified in this study when such data become available in the future. Similarly, research could be undertaken on how small to medium sized construction contractors respond to this prolonged economic downturn considering the fact that the Australian construction industry predominately consists of SMEs. A longitudinal study helps to explore the time effect on the effectiveness of these strategies during economic downturn.

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