

## **Weak Links in 'Partnering' Supply Chains?**

Consultants' and Subcontractors' Views on Project Partnering

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### **Abstract**

Many previous studies on partnering have focused on the attitudes and concerns of clients and main contractors. This paper aims at examining the views of consultants and subcontractors and investigating the ways in which they can affect the success of partnering arrangements. An initial questionnaire survey was conducted to compare and contrast the criteria and contributory factors for partnering success, together with the associated benefits, as perceived by different parties with experience in public housing projects in Hong Kong. The findings were supplemented by a partnering case study on a specific project. A project-based questionnaire survey of the participants was conducted, in parallel with interviews with the partnering 'champions' on this project. Preliminary suggestions are formulated based on the clustered consultant-specific and subcontractor-specific viewpoints on partnering. These initially suggested strategies, which need to be tested further, aim to enhance partnering success by integrating the consultants and subcontractors more closely into the envisaged client-main contractor partnership team. It is proposed that more attention is needed on these aspects, in order to fill any critical gaps and weak links in the 'partnering chain', that can otherwise reduce the potential benefits from partnering in construction projects.

### **Keywords**

Partnering, consultants, subcontractors, supply chain

### **1. Introduction and Background**

The construction industry has long been rifted by ubiquitous claims and litigation between functionally differentiated groups- clients, consultants, main contractors, subcontractors and suppliers (Slater 1998). To mitigate this culture of project team fragmentation, intra-team relationship improvement has been called for (e.g. Dissanayaka & Kumaraswamy, 1999). The ultimate objective is to form an integrated supply chain, in which counterproductive friction between stakeholders can be eliminated and synergy for better project delivery can be achieved. As an alternative management style that works towards this objective, 'partnering' emphasizes the uniformity of attitude, which is reflected in a harmonious working style, and focuses on behavioral aspects in the process of pursuing common goals (Carroll 1998).

Intensive research has been conducted worldwide on various aspects of partnering, extending and enriching the growing knowledge on this managerial approach. However, most of the literature

focuses on client-main contractor relationships (e.g. Drexler & Larson, 2000; Soetanto & Proverbs, 2002; Ruff *et al.*, 1996), or reviewed partnering from the perspectives of client and main contractor (e.g. Baxendale & Pugh, 2002). Perspectives of other parties are also required, so as to develop a more holistic picture of project partnering. For example, consultants mainly carry out advisory and supervisory duties, at an arms-length distance from the site operations, whilst subcontractors perform a major portion of the site works. The latter can be regarded as frontline project team members. The commitment of both groups to partnering should be sought to form a truly integrated supply chain, whereas overlooking their perspectives and concerns may lead to weak links in such a chain. This paper therefore aims at exploring the viewpoints of these two key stakeholders. Based on the findings, preliminary recommendations are proposed to enhance their ‘buy-in’ to partnering in order to form an effectively partnered team.

## 2. Summarized Research Methodology

An initial industry-wide survey (S1) elicited various general viewpoints of diverse stakeholders on partnering. The responses from consultants (23 responses) and subcontractors (13 responses) were specifically extracted and analyzed for this paper.

These subcontractors’ and consultants’ views on partnering were supplemented by inputs from a case study on a housing project. A second questionnaire survey (S2) specifically targeted participants in the case study. The advantage of such an investigation strategy is that true and realistic (case-based) experiences are usually more plausible (Soetanto & Proverbs, 2002). The total number of responses from consultants and subcontractors were 15 and 19 respectively, representing a response rate of 68.2% and 31.1% in these specific groups. The statistical analysis of responses to S1 and S2 are outlined in section 3. Respondent demographics are omitted in this paper due to space limitation, but it may be stated that a reasonable representation was obtained.

In parallel, interviews with representatives from all parties unveiled more details of their concerns. Those relevant to consultants and subcontractors are presented in section 4. Appropriate suggestions/recommendations are made throughout sections 3 and 4.

## 3. Relevant Results of Questionnaire Surveys

Table 1 compares the basic profiles of the two questionnaire surveys (S1 and S2) discussed in this paper, whereas Tables 2 and 3 summarize the relevant results gathered from S1 and S2 respectively.

**Table 1 Profiles of questionnaire surveys**

Attributes	Questionnaire Survey 1 (S1)	Questionnaire Survey 2 (S2)
Respondents	Industry-wide practitioners	Project team of a specific project
Objectives	<ul style="list-style-type: none"> <li>To compare the general differences in perceptions on partnering of different groups</li> <li>To compare expectations and perceived benefits from partnering for each group</li> </ul>	<ul style="list-style-type: none"> <li>To understand from field data, how a specific partnering arrangement was viewed by various parties, shortly after experiencing one real project scenario</li> </ul>
Investigated partnering dimensions	<ul style="list-style-type: none"> <li>Partnering success criteria / objectives</li> <li>General perceived benefits of partnered projects over non-partnered ones</li> </ul>	<ul style="list-style-type: none"> <li>Perceived partnering benefits (project-specific)</li> <li>Perceived partnering barriers (project-specific)</li> </ul>
Analysis methodology	A 5-point Likert scale (from 1 =strongly disagree to 5= strongly agree) was used to rate their agreements on items listed within the investigated partnering dimensions. In each group, the mean scores ( $\bar{x}_{CT}$ for consultants; $s_C$ for subcontractors) were ranked to show their relative importance to the group considered.	

Some key observations drawn from Table 2 are as follows:

- The consultant group rated most of the perceived benefits below or close to 3.0. Some consultants are not convinced of the effectiveness of partnering to enhance project success in aspects such as reduction of variation orders and cost claims. This may be because variation orders and cost claims were mainly functions of other variables such as the quality of preliminary designs and extent of changes in the client’s requirements. Partnering is therefore, not perceived as effective in eliminating many real problems. Although partnering is not a panacea, both groups ranked its impact on relationship enhancement as the most probable partnering benefit.

- ‘Time control’ was ranked 2<sup>nd</sup> by the subcontractors among potential partnering success criteria. ‘Shorter project duration’ was however not considered as a significant partnering benefit (ranked 9<sup>th</sup> out of 10). It is suggested that further ‘shortening of project duration’ may not necessarily be in their interests, and is thus not significant. For a project where fast tracking is important, the current relationship-based partnership should be strengthened by some incentive schemes for expediting subcontractor trades that are critical to the overall project time.
- ‘Project cost control’ was lowest in consultants’ priorities in assessing partnering success. This may be because consultants mainly provide technical support and services; and overall project savings are unlikely to increase their own profitability. By contrast, the subcontractors set ‘project cost control’ as the top success criterion since they probably recognize a more direct positive relationship between the project savings and their own savings. Subcontractors placed ‘improved technical performance’ as the least important partnering success criterion, and they did not value ‘increased quality of products’ and ‘better health and safety records’ as significant benefits from partnering.

**Table 2: Consultants’ and subcontractors’ success criteria & benefits (general perspectives)**

<b>Success criteria (S1)</b>	CT	Rank	SC	Rank	<b>Perceived benefits (S1)</b>	CT	Rank	SC	Rank
Better relationships for avoidance of disputes and better dispute resolutions	4.04	1	3.85	3	Enhanced relationships for smooth project running	3.63	1	4.00	1
					Decreased number of cost claims	2.96	5	3.31	5
					Decreased value of cost claims	2.75	9	3.31	5
Meeting of customers' needs	3.83	2	3.85	3	Increased customers' satisfactions	3.04	3	3.69	4
Time control	3.75	3	4.15	2	Shorter project durations	3.13	2	3.15	9
Improved technical performance	3.75	3	3.69	5	Increased product quality	3.04	3	3.23	8
					Better health and safety records	2.83	7	3.15	9
					Decreased number of variation orders	2.67	10	3.31	5
Project cost control	3.58	5	4.23	1	Likelihood of own cost savings	2.92	6	3.85	2
					Increased amount of own cost savings	2.83	7	3.77	3

**Table 3: Perceived partnering achievements and challenges (case-based perspectives)**

<b>Achieved benefits (S2)</b>	CT	Rank	SC	Rank	<b>Challenges (S2)</b>	CT	Rank	SC	Rank
More resources sharing	3.80	1	3.38	3	Not enough mutual trust	3.80	1	3.47	3
Relationships improvement	3.80	1	3.25	9	Incompetence of some parties	3.73	2	3.20	12
More information interflow	3.67	3	3.31	7	Organizational benefits conflicts	3.67	3	3.53	2
Open discussion	3.67	3	3.19	13	Inadequate dedications of some parties	3.67	3	3.40	5
Better environmental protection	3.60	5	3.40	2	Lack of partnering experience	3.67	3	3.33	6
Mutual trust promotion	3.53	6	3.25	9	Divergence in expectations	3.67	3	3.29	8
Innovative ideas arising	3.53	6	3.20	12	Organizational culture difference	3.53	7	3.67	1
Better safety records	3.47	8	3.73	1	Traditional class struggle	3.53	7	3.47	3
Faster dispute resolution	3.47	8	3.38	3	No fair share of risk	3.47	9	3.27	9
Self initiative towards project	3.47	8	3.33	6	Tight schedule	3.40	10	3.33	6
Timely decision making	3.47	8	3.25	9	Key personnel not compatible	3.40	10	3.27	9
More equal status	3.47	8	3.00	16	No motivations to champions	3.33	12	2.93	14
Less abortive works	3.33	13	3.38	3	Not proactive enough	3.20	13	2.87	16
Less conflicts and claims	3.33	13	3.13	14	Fear of anti-corruption ordinance	3.07	14	2.93	14
Less paper works	3.20	16	3.13	14	Loose coordinations	2.93	15	3.20	12
Precise and efficient decision	3.33	13	3.31	7	Support from top management not enough	2.87	16	3.27	9

NOTES: (1) Rankings highlighted in ‘bold’ are discussed in this paper; (2)  $\bar{x}_{CT}$  &  $\bar{x}_{SC}$  are explained in Table 1.

Rankings of the perceived benefits in S2 do not relate closely to those in S1 because every construction project is unique and would differ from the general ‘average’ scenario. As the respondents were focusing on the same recent project, their divergence of their perceptions of ‘achievements’ and ‘challenges’ might reflect their dissimilar project focus and/or the different pervasiveness of partnering impacts to different levels and operation interfaces of the project. Each real case could well be shaped by a hybrid of the above two contributors. For example, from Table 3, it may be observed and asserted that:

- ‘Better safety records’, ‘better environmental protection’ and ‘less abortive works’ were ranked as the top three achieved benefits by subcontractors, being the benefits most noticeable on site. This suggests that if site level improvements are highlighted under partnering, subcontractors can benefit more and eventually ‘buy in’ and settle more into the partnered working approach (Love, 1997).
- The top three challenges perceived by subcontractors were found to be ‘organizational culture difference’, ‘organizational benefits conflicts’ and ‘not enough mutual trust’. These are indicative of the conflicting features of the traditional confrontational relationships between different groups in a

project team. Items such as ‘less conflict and claims’, ‘open discussion’ and ‘more equal status’, were some of the benefits that were ranked lowest by the subcontractors. During interviews, this was confirmed to be a direct consequence of subcontractors’ not experiencing relationship improvements despite the ‘project partnering’. In fact, some subcontractors perceived a persistence of the traditional ‘master-servant’ relationships, indicating that partnering had not penetrated throughout the project team.

- Significant ranking differences between consultants and subcontractors were found on items such as ‘open discussion’ and ‘site safety’. Of course, perceptions of ‘open’ and ‘safe’ can be abstract and relative. Different parties might well have different experiences and/or perceptions on the ‘openness’ of even the same discussion. Similarly, one party may assess ‘safety’ by accident statistics alone, whereas the other may also consider management commitment, site behavior, worker awareness and protective measures. This leads to an important recommendation for partnering charter formulators – while the participants set common objectives in the workshops, they should communicate more specifically in order to reconcile their underlying expectations at the outset.

#### **4. Perceptions of Subcontractors and Consultants from Interviews**

Interviews and extensive conversations with key project participants and partnering ‘champions’ in the case study reinforced the above findings. Further subcontractor-specific and consultant-specific partnering concerns and suggestions were extracted, as discussed in the following sub-sections.

##### **4.1 Subcontractor partnering concerns and suggestions**

###### **4.1.1 Work arrangements as specific barriers**

It was noted that the characteristics of subcontractor work arrangements could impose specific partnering barriers on subcontractors. Some subcontractor contracts had relatively short contract periods (e.g. a few months) and some felt that the timeframe was not sufficient for both developing mutual trust through daily operations and reaping the associated benefits of a properly partnered project. They felt comfortable with the old way of operating, and did not bother with extra efforts to explore new ways of working. What they wanted was to work, and then to pick up a paycheck.

Different subcontractors contributed to the overall project at different stages. Some who did ‘buy-in’ to partnering concepts, e.g. by being inspired at the workshops, left the site later. Some entered the site later and had no involvement to compile the common objectives stipulated in the partnering charter, and did not have a full picture of the whole process. They were ‘aware of’ the partnering arrangements only when they began to work on site, since there was no prior notifications of the partnering arrangements. It was not surprising to have less partnering commitment from this group of subcontractors. As a recommendation, some orientation and sharing sessions could be scheduled to transfer momentum and get buy-ins from those involved in the later work stages. Insufficient delegation of power to subcontractor site staff was another possible barrier, particularly for those small-sized subcontractor firms where the directors were the only central decision-makers. This reduced the potential efficiency in using partnering to promptly solve daily site operational problems.

###### **4.1.2 Risk-averse approach adopted by subcontractors**

Subcontractor interviewees asserted that subcontractors have little if any, influence on other parties’ future job opportunities, and hence less bargaining powers on issues not covered by contract terms. They conceived that more extra-contractual interactions necessarily connoted additional risks to them. Conservative ways of delivering their commercial commitment according to ‘black-and-white contracts’ could give them a sense of ‘security’. As domestic subcontractors contracted directly with the main contractor alone, they followed exactly what the main contractor had instructed, and performed independently. ‘Adherence to “authority” (of the main contractor) only’ has become an important philosophy adopted by most subcontractor firms with a risk-averse attitude, as recently fortified by the economic downturn. These factors eliminated the potential synergies that could have been achieved through more contributive inter-party interactions.

To maximize partnering benefits, one challenge was therefore to foster open communications and encourage value-added supply-chain-wide interactions. In this context, partnering was found to be successful in enhancing communications among subcontractors. The partnering workshops were reported to be a cornerstone for relationship build-up among subcontractors. In the project, their

increased interactions allowed quicker responses to change in subcontractor-trade schedules, thus supplementing the coordination by the main contractor. This was accomplished without encountering much inertia from subcontractors, probably because immediate benefits could be seen, and they perceived this as not exposing them to more risks.

Other modes of interactions (e.g. direct subcontractor-consultant interactions) were however not mobilized. Two conflicting ideas coexisted in subcontractors' mindsets. They were convinced of the value of 'democratic' discussions (i.e. no hidden agenda, conducted on an 'equal status' regardless of the roles in project and no later victimization due to giving their true viewpoints) to work for the good of the project and balance all parties' interests. A barrier to this was the aforementioned risk-averse attitudes, which led to reduced faith in the practicability of such multi-party discussion scenarios. Since the subcontractors' behaviors are highly related to what the main contractor expects, it is reasonable that such a 'barrier' can be transformed to a partnering 'driver' if the main contractor diligently takes a lead with more positive attitudes towards partnering. The main contractor's willingness to fairly share risks with subcontractors on implementation of innovative items can also trigger value-engineering practices among subcontractors.

#### **4.1.3 Partnering expectations and incentives for subcontractors**

Under the super-competitive industry environment with decreasing number of jobs, subcontractors demanded more financial stability from the project. According to the interviewees, their key objectives to partner, would be to get timely payment (provided that their tasks were satisfactorily completed). Withholding of payment could severely affect their cash flows. In the long run, they expected relationship building and their good performances could favor their future job opportunities and smoothen future project working arrangements. This may work in the private sector, but is more difficult for public projects.

Since the subcontractors worked at the frontline, they could have more incentives if the partnering spirit permeated down deeper to site level, as supported by the S2 results in section 3. At the interviews, some subcontractors stated that with partnering, they would like to achieve improvements in safety and receive timely acknowledgements of design changes to avoid unnecessary rework. They sometimes had to attend long mandatory site meetings in which only several minutes' discussions were directly related to them. They would appreciate more flexible site meeting arrangements and more interactions with the partnered main contractor.

### **4.2 Consultant partnering concerns and suggestions**

#### **4.2.1 Professionalism**

It was agreed by key consultants that communications and discussions should be with an open attitude under partnering arrangements. Yet when some parties rigidly insisted on implementing their own ideas, it would not be practical to keep on debating until all parties were satisfied. To prevent such sluggishly long discussions, the interviewed consultants stated that they would use their discretion to make a decision for the best value of the project. They also felt it was crucial to periodically review the partnering relationships, so that the relationships between them and site staff would not be mistakenly overstressed, and affect their judgments. They stated that this attitude could have disappointed some, who expected more 'soft solutions' to be derived 'in the name of partnering'.

#### **4.2.2 Partnering-enhanced dynamic ways to increase efficiency**

In the project, they reassured the subcontractors that no relationship would be built at the expense of quality. Notwithstanding this, partnering helped to work out a more dynamic way to tackle the quality requirements, and the specifications were interpreted more flexibly, under the condition that the quality performance would not be affected. Buoyed by the partnering spirit, they worked more closely with subcontractors in some special cases, to come up with more buildable engineering details. A specific example quoted in this project was about the irrigation box installation details, which were improved with this collaborative approach.

Given the common objective to run the project smoothly, main contractor staff offered to draft written engineer instructions after oral instructions were given during site visit. Before these written EIs were formally issued and confirmed, the instructed work commenced immediately after the detailed requirements and terms of the works were established through phone conversations with consultants. This kind of informal communication speeded up the procedural and operational matters considerably.

### 4.2.3 Disincentives for consultants to partner

Although the use of phone calls and other informal communication channels would mean quicker responses and faster project progression, this also imposed extra pressure on consultants. The workload could be compressed and intensified under partnering, without the sharing of any savings resulting from such arrangements. Partnering might seem to them as ‘useful but not indispensable’. The open book approach under partnering was only partially supported by the consultants. Taking a supervisory role, they had in their minds some implicit ‘marginally acceptable quality’ of works. However, they hesitated to disclose these standards, since they feared that the other parties would keep trying to challenge and eventually erode those ‘bottom-lines’.

## 5. Conclusion

Consultants and subcontractors have different needs and characteristics. The reported study revealed that, these two parties have a tendency to hold back and/or be held back from the expected partnering relationships and practices. Under current procurement systems and contracting conditions, these two parties perceive that a large portion of additional efforts and risks demanded by partnering devolves on them. These include for example, risks associated with an open book approach and the intensified workloads. However, they perceive that potential partnering benefits are not proportionally distributed to them. As extracted from both the questionnaire survey results and interviews, consultants agree that partnering increases flexibility for project implementation; subcontractors agree some site level changes are directly beneficial to them; and both parties agree that there are improvements in relationships under partnering. Yet, all those are mainly related to the better working relationships and atmosphere (‘soft side’) only. For example, consultants do not agree partnering can help to reduce the number of variation orders and cost claims; subcontractors do not agree that benefits from any improved technical performance filter down to them; consultants regard partnering as ‘useful but not indispensable’; subcontractors lack confidence in partnering especially when they cannot recognize much change in attitudes of other parties towards them, they are risk-averse and relatively passive if the main contractor does not frequently support the expected partnering.

The overall picture suggests that partnering ‘costs’ borne by consultants and subcontractors (including additional time expended) are not sufficiently offset by the benefits they can expect. It is therefore proposed that a feasible partnering arrangement should be both relationship-based and commercially attractive. Some commercial incentives are therefore recommended to supplement the ‘soft side’ partnering motivators. The present findings identify a critical need to mobilize consultants and subcontractors in broader and deeper partnering arrangements, given that they are important but often-neglected parts of the construction supply chain. Further investigations, for example through more detailed case studies, will be useful in order to reinforce and add depth to these initial findings.

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