How the Project Management Profession can derive insight from its job adverts to build Cultural Intelligence

Maxwell Chipulu, Udechukwu Ojiako, Alasdair Marshall, Terry Williams, Jun Guan Neoh, Caroline Mota and Yongyi Shou

The paper's primary value lies in explaining how Project Recruiters can derive insight from a cultural intelligence which thinks reflectively and adaptively about whether its cultural preferences are optimal for various purposes. First it is demonstrated that such preferences exist and are measurable. Drawing on job recruitment advertisements covering 2040 organisations across seven countries and seven industries, Hofstede's dimensions of national culture are used to categorise cultural preferences which the global project management industry persistently manifests in its specifications of desirable candidate qualities. Next, exploratory data analysis, Poisson regression and Negative Binomial regression are used to map global trends and national variegation. This raises issues which Project Recruiters should seek to be more culturally intelligent about, which relate to the adaptiveness of the cultural preferences that they articulate through their job advertisements, both to project tasks and to cultural contexts for projects.

Keywords: cultural intelligence; project management; Hofstede; cultural values

1. Introduction

We explain, through the illustrative value of the research, how Project Recruiters around the globe can cultivate a cultural intelligence which guides them in producing more effective them to produce more effective specifications of desirable attributes for Project Manager recruits, and which then further equips project leaders with the skills they need for the effective cross-

cultural management of project operations. We conceive of cultural intelligence as an organisational willingness and capacity to regard cultural preferences, such as those which culturally dominate the views that Project Recruiters hold about Project Managers, as objects for critical reflection. Our paper, however, also engages with a particular industrial problem: it can be difficult to distil cultural preferences from available evidence – and there may often be professional scepticism concerning whether they exist to be found in the first place. For these reasons we view culturally intelligent Project Recruiters as purposefully seeking awareness of, followed by critical reflection upon, cultural preferences, with the reasonable expectation that this may then offer useful insight.

Barney (2001) argues that organisational knowledge - where it helps organisations adapt to their environments, is not easily reproduced by competitors, and whose acquisition and development are facilitated by dedicated organisational procedures - constitutes true 'insight'. The starting point for our paper is to argue, accordingly, that cultural intelligence qualifies well as a possible source of insight because (i) there are significant obstacles to its cultivation which make it a possible source of competitive differentiation, and (ii) to be culturally intelligent fundamentally entails asking questions of adaptive fit concerning (at least in the context of this paper's concerns) whether the cultural preferences of Project Recruiters are likely to result in the formation of project teams that are culturally well adapted to their project environments. Next, we elaborate these two points with reference to contemporary cultural intelligence literature. The outcomes of this exercise address the main objectives of our paper.

2. Cultural intelligence

2.1 Overcoming obstacles to the development of Cultural intelligence

We view cultural intelligence as unable to flourish – or indeed to exist in any form - in a context where cultural preferences are held up, pre-reflectively, as professional common-sense. In other words, insofar as Project Recruiters perceive their cultural preferences as 'common sense', they will see nothing to be culturally intelligent about. Typically, contributors to modern cultural intelligence literature such as Templer, Tay, and Chandrasekar (2006), Thomas (2006) and Ng, Van Dyne, and Ang (2009) represent cultural intelligence as a construct that incorporates managerial competency and ability to reason, function and behave appropriately, effectively and efficiently within culturally diverse environmental settings. Ang *et al.* (2007, p. 338) refer to such cultural intellect as dependent upon underlying managerial "knowledge of basic frameworks of cultural values". However, such knowledge can itself be viewed as dependent upon processes of cognitive growth that move managers beyond unwittingly possessing and being influenced by cultural assumptions – as can be common within organisations, and which can occur simply through organisational and professional socialisation. More fully, we might consider that in many cases, becoming a professional, in particular through the acquisition of professional identity can involve pre-reflective assumptions acquired through learning and experience, which in turn can become obstacles to cultural intelligence.

Many sociologists and anthropologists – take for example Pierre Bourdieu's (e.g. 1977) work on *habitus* and *doxic experience* – help us appreciate that, to a certain extent, it is our culture that determines our propensity to acquiesce within pre-reflective common-sense more often than we realise. This has been examined in the context of the problems it can create for managers, particularly by limiting their ability to cope with novelty and complexity

(Heskett 2011); Project Management could be considered particularly prone to this problem because “Project Management as set out by the PM Societies is presented as a set of normative procedures which are self-evidently correct” (Williams 2005), an approach which also has profound implications for emerging ‘Project-as-Practice’ approaches to the study of Project Management (Blomquist, Hallgren, Nilsson and Soderholm 2010).

Taking stock, we regard the starting point for building cultural intelligence as the often challenging and humbling realisation that the professional common sense of Project Recruiters may comprise some cultural preferences which cannot be ‘intelligent’ from the standpoint of individual cognition because they are held pre-reflectively. We consider that it would be culturally unintelligent to propose that such preferences, once subject to critical reflection, should always be viewed as potentially harmful biases; on the contrary, cultural intelligence should allow for the possibility that professions can benefit from stored-up cultural wisdom even when its behavioural influences remain largely unsensed and undiscussed. What matters, we suggest, is that cultural intelligence pays due regard to these various possible interpretations each time it becomes aware that cultural preferences exist in a given situation/context.

Modern cultural intelligence literature explains how managers who are immersed within organisational cultures can achieve cognitive growth towards this more critical and reflective standpoint. Earley and Mosakowski (2004) emphasise that cultural intelligence arises from being culturally well travelled, i.e. from exposure to multiple cultural possibilities. In their classic text on social phenomenology explaining how we socially construct and improve common-sense knowledge, Berger and Luckmann (1971 p.35) try to theorise such experience in richer detail: as we encounter more cultural spheres, we experience dissonance of transition as ‘shocks’ which stimulate our critical senses. Global organisations uphold the

belief that 'cultural travel' produces better managers, which is why they expose their fast-track management employees to this experience. We, however, believe that relevant research evidence can also help convince managers they should aspire to be more culturally intelligent about their own cultural preferences. Hence our first research objective is to demonstrate the existence of Project Recruiter cultural preferences through a rigorous measurement procedure which brings to light conceptual frameworks within which they can develop their cultural intelligence.

Our research makes use of a previously published dataset (Chipulu, Neoh, Ojiako, and Williams 2013). Using the Delphi technique, Project Management experts are asked to link job advertisement content to our chosen culture domains to suggest that Project Recruitment advertisements around the world persistently reveal similar cultural biases in their listings of desirable Project Manager characteristics. We show that there is also variability, which should lead Project Recruiters to consider the implications of multiple cultural viewpoints co-existing within their profession. Taken together, these similarities and differences highlight some of the more important cultural preferences which we think they should aspire to become more culturally intelligent about. While allowing for the possibility that some Recruiters' views of desirable Project Manager qualities may clearly reflect project requirements and not cultural preferences as such, we nonetheless highlight the effectiveness of culture metrics in establishing culture domains as important denominators for Recruiter preferences.

2.2 Cultural intelligence as critical reflection on the adaptiveness of cultural preferences

The remainder of our paper then analyses our dataset to illustrate how Project Recruiters might derive useful insight through critical reflection on these cultural preferences. This will involve asking various questions relating to functional adaptation, all of which will reflect

cultural intelligence literature perspectives on the workings of cultural intelligence. A very common assertion is that cultural intelligence entails thinking about cultural adaptation to cultural settings (Heumann, Weiner and Remus 2011). Brislin, Worthley and Macnab's (2006) contribution asserts that culturally intelligent people ask whether effective functioning within cross-cultural endeavours is best facilitated by offering or demanding such adaptation. Ang and Van Dyne (2008) develop this idea by conceiving of cultural intelligence in terms of flexible repertoires of adjustments which deal with these dilemmas differently within each unique cross-cultural setting. We use these ideas to guide our analyses.

We think cultural intelligence can often have very subtle problems of environmental adaptation to consider. Cultural preferences may exist at the micro level in organisations within individual teams of managers, at more meso levels such as within organisational culture or within the institutional fields that nest organisational culture (for example within professions such as project management), and also at the macro level such as national culture. We regard it as appropriate to allow for complex mutual influences running between these levels, which entails appreciating there can be much to consider each time a Project Recruiter's cultural values seem at odds with the national culture within which they are recruiting. Hence we envisage that Project Recruiters are guided by their cultural intelligence to ask exploratory questions relating to cultural adaptation, which engage with complexity in such cases. The rationale for our paper is, correspondingly, to highlight cultural descriptors which can help Project Recruiters build their cultural intelligence by reducing this complexity to manageable proportions.

3. Cultural Preferences in Project Recruiter job advertisements

Our evidence base consists of Project Recruiter job advertisement text. In this section, we explain why such text is likely to contain cultural preferences that (i) send cultural signals to potential recruits which then influence the cultural compositions of project teams, and (ii) are amenable to measurement by culture metrics sensitive to differences in national culture in particular. As projects are increasingly global, the need to recruit highly skilled project management practitioners across cultural distance cannot be over-emphasised (Chipulu *et al*. 2013). Often recruitment is undertaken internationally to widen candidate pools. Such adverts temper applicant expectations by providing subtle insights into job roles and broader organizational-cultural contexts (Buckley, Fedor, Veres, Wiese and Carraher 1998; Phillips 1998). Some studies (Feldman, Bearden and Hardesty 2006; Rear 2013; Teng, Ye, Yu and Wu 2014) show that, based on response rate, job advertisements which reflect local (national) cultural values are more persuasive and thus more likely to attract candidates with required skillsets. According to Scheider's *Attraction-Selection-Attrition* (ASA) model, individuals are attracted to organisations that they believe fit them; and recruiting organisations select individuals they think fit *them*. Over time, as those who do not fit in leave, the organisation becomes more homogeneous, acquiring more salient cultural features (Schneider 1987; Schneider, Goldstein and Smith 1995). Thus, knowing that job seekers are likely to search for jobs aligned to their abilities and skills (Ostroff, Shin and Feinberg 2002), Recruiters who apply cultural intelligence by communicating cultural expectations through their advertisements stand to benefit in terms of both employee commitment (see Premack and Wanous 1985) and the fostering of desired organisational cultures.

Online recruitment is becoming increasingly popular (Chipulu *et al*. 2013), not least because it globalises the search for the most suitable candidates (Pfieffelmann, Wagner and

Libkuman 2010). Consequently, cultural terminologies are needed; but which to choose, and why? Here, it appears that there is a great deal that practitioners can learn from academics. As Pollay (1983) explains, an important consideration for anyone looking to demonstrate the existence of cultural influencers within text is that the culture metrics used should be suitable for mapping with content analysis. Most conceptions of culture refer to 'shared characteristics' (e.g. Erez and Earley 1993, p. 41). Some argue that members of a culture tend to share basic axioms (Leung *et al.* 2002) and values (Hofstede 1980a; Schwartz 1994; Inglehart 1997). Together these engender shared practices which are culturally meaningful because they reinforce the shared axioms and values that support them (Feather 1992). Hence it is possible to subtly signal support for or disapproval of an entire culture with reference to just one of its cognitive, ethical or behavioural elements. Culture metrics can tap these different sorts of cultural markers, taking them as proxy evidence for broader cultural formations, just as project recruits can quickly scan through a job advertisement and, based on just a few textual cues, visualise what sort of culture they would be immersed in. There is an important practitioner learning issue here. If our paper can successfully use culture metrics to tap cultural preferences, then this can help Project Recruiters better understand the cultural signals they broadcast to potential recruits within their advertisements.

4. Hofstede's cultural dimensions

General cultural description and measurement is challenging: There are many constructs and metrics to choose from. Despite numerous criticisms of Hofstede's work (see, for example, Kirkman, Lowe and Gibson 2006; McSweeney 2002), we decided to employ his widely used dimensions of national culture (Hofstede 1980a, 2001; Hofstede, Hofstede and Minkov 2010) to map out the cultural preferences currently reflected in project management job

advertisements. Two reasons guide this decision. The first is their popularity in the management (see Salter, Sharp and Chen 2013) and advertising literature (Albers-Miller and Gelb 1996; de Mooij 2010; De Mooij and Hofstede 2010) literature. Secondly, they remain the most validated dimensions of national culture in both project management (see Ojiako *et al.* 2012) and advertising (Samiee and Jeong 1994) research. Next, before discussing our methodology, we explain these in greater detail.

Javidan and House (2001) find Hofstede's cultural dimensions useful for mapping globalising trends in management culture. Tai (2004), de Mooij (2010) and De Mooij and Hofstede (2010) have utilised these indices to study how national culture influences advertising. Cross-cultural literature (De Mooij and Hofstede 2010; Goldman 1992; O'barr 1994; Tai 2004; Fam and Grohs 2007; De Mooij and Hofstede 2010) explains these influences as arising within national value systems in particular. For this reason, our study looks to value systems as key cultural influencers.

Hofstede's (1980a) original framework comprised four dimensions: *Individualism-collectivism, Power distance, Uncertainty avoidance* and *Masculinity-femininity*. Later, *Long-term orientation* was added (Hofstede and Bond 1988). Empirical research on Hofstede's dimensions has focussed disproportionately on Individualism/Collectivism (e.g. Kirkman *et al.* 2006). Hofstede (1980b, p. 45) defined Individualism (IND) as 'a loosely knit social framework in which people are supposed to take care of themselves and of their immediate families only', and Collectivism (COL) as being 'characterized by a tight social framework in which people distinguish between in-groups and out-groups, they expect their in-group to look after them'. Unsurprisingly, subtle indicators of Collectivism (COL) are common in non-verbal job adverts (Han and Shavitt 1994; Tai 2004). Collectivism (COL) is also likely to manifest within communications which are carefully tied to context and regulated by social expectation

(Gudykunst 1984; Cutler, Erdem and Javalgi 1997). According to De Mooij and Hofstede (2010), in individualistic (IND) cultures, advertising content is altogether blunter and is designed to 'get to the point fast' (p. 89).

Power Distance (PD) is defined as the extent to which a society accepts the unequal distribution of power in institutions and organisation (Hofstede 1980b). Zandpour, Campos, Catalano and Chang (1994) and Tai (2004) suggest that in high Power Distance (PD), cultures, advertising messages need to be explicit and clear when specifying roles. Similarly, De Mooij and Hofstede (2010) emphasise that in high Power Distance (PD) countries, both horizontal and vertical ties between managers tend to be specified, which can impose constraints on individual discretionary powers.

Hofstede (1980b, p. 45) defined Uncertainty Avoidance (UA) as 'the extent to which a society feels threatened by uncertain and ambiguous situations and tries to avoid these situations by providing greater career stability, establishing more formal rules, not tolerating deviant ideas and behaviours, and believing in absolute truths'. Some studies (Vishwanath 2003; Leonard, Van Scotter and Pakdil 2009) suggest that this aspect of national culture has negative implications for tolerance of complexity, which can manifest in preferences for communication media which constrict and simplify information flows; hence the negative correlation between UA and use of the internet as a communication channel suggested by Hofstede (2001) and Puck, Mohr and Holtbrügge (2006). Correspondingly, it can be inferred from literature (see Yüce and Highhouse 1998; Communal and Senior 1999 that UA national cultures are likely to prefer job advertisements which focus on reducing perceived uncertainty in various ways; for example, those that emphasise employee health and life insurance benefits, and articulate salary expectations. Studies (Yüce and Highhouse 1998; Feldman *et al*. 2006; Born and Taris 2010) suggest that job seekers are attracted to job advertisements

which contain specific information about job expectations, applicant qualifications and remuneration. Therefore, in line with Twichell (2012), it is reasonable to posit that ambiguity in job advertisements is likely to decrease the attractiveness of the advertised positions.

Masculinity (MAS) is the extent to which values, traditionally associated with male roles, such as 'assertiveness, performance, success and competition … prevail over values like quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity, which in nearly all societies associate with female roles and preferences' (Hofstede 1994, p. 6). Thus, high MAS national cultures are likely to emphasise achievement and productivity in their advertisements, whereas quality of life (work-life balance) considerations are more likely for low MAS national cultures.

Long-term Orientation (LTO) represents a contrast between values 'oriented towards the future, like thrift (saving) and perseverance' and values 'oriented towards the past and present, like respect for tradition and fulfilling social obligations' (Hofstede 1994, p. 10). Literature (Yau 1988; Tai 2004; De Mooij and Hofstede 2010 suggests that national cultures with high LTO are more likely to invest in the future. This may imply the wording of job advertisements which manifest the values of long-term worker orientation, for example by highlighting opportunities for educational development, training and promotion.

Employers search for individuals whose characteristics fit their organisation's actual or desired culture (Schneider 1987; Schneider *et al*. 1995; Holland 1996). Job advertisements can be used for content analysis because they contain key words and phrases that are representative of cultural attributes and behaviours that employers wish to see reflected in the project teams they assemble. Furthermore, our measurement approach appears viable because, as we see from the literature cited above, these preferences are also amenable to categorisation using Hofestede's cultural domains. For example, requirements for 'assertive

individuals' can be used as indicators for masculine cultures; phrases like 'relationship-oriented' can be used as markers for feminine cultures.

5. Research methodology

5.1 Research questions

Our first research objective - to produce evidence showing that Project Recruiter job advertisements contain cultural preferences that are measurable using Hofstede's domains - generates the following research question:

- *RQ1*: *To what extent are Hofstede's national culture values reflected in advertisements for project management positions?*

Our second objective, namely to illustrate how Project Recruiters can become more culturally intelligent by reflecting on the adaptivities of their cultural preferences, is met through following research question, which we consider as a springboard for exploring a number of adaptivity issues:

- *RQ2*: *To what extent are global distributions of Project Recruiter cultural preferences, as measured from our job advertisement data using Hofstede's indices, incongruous with global distributions of scores on Hofstede's indices found by previous research?*

5.2 Data

Embracing the call for 'more research in operations management which is based on data from the real world' (Flynn *et al.* 1990), we used a large-scale survey-based dataset to address these two research questions. The data were originally gathered in 2011 by Chipulu *et al*. (2013). Using a search string "project AND manager", Chipulu *et al.* (2013) took a sample of 2306 online advertisements from 30 different jobsites with adverts for project management

positions (jobs) across eight countries. Using content analysis, they extracted the 102 most frequently occurring keywords in the advertisements. Although all 2306 were unique, not all were placed by different organisations. In this study, because we use the organisation as the unit of measurement, it was important to ensure the organisations are unique too. Therefore, we only included the subset of the original dataset comprising unique adverts placed by unique organisations. There were 2040 such cases. Table 1 shows how the 2040 cases vary by nation and industry sector.

INSERT Table 1 ABOUT HERE

5.3 Measures

To measure the occurrence of national cultural values by job advertisement keyword, we employed the *Delphi* technique. First proposed by the RAND Corporation (Dalkey, Brown and Cochran 1969) as an experimental technique for eliciting group opinion in a United States Air Force project the Delphi technique has been extensively applied in many different fields. These include long-range forecasting predictions (Ono and Wedemeyer 1994), identifying and ranking key issues for management appointments (Schmidt 1997), and for exploring and understanding situations to identify theoretical perspectives for research (Okoli and Pawlowski 2004). The validity and reliability of scientific measurements cannot be directly transferred between different research paradigms (Hasson and Keeney 2011) and subsequently methodological rigour can be difficult to establish, as each research design and consensus process is unique. Therefore, in order to ensure reliability, attributes such as questionnaire design and expert panel selection, as well as the implementation of the Delphi analysis all require careful scrutiny (Ono and Wedemeyer 1994). The Delphi technique has, however, been shown particularly effective in studies similar to the present one, where it is

desirable to generate and explore a wide range of alternative views; to uncover and question the underlying assumptions causing variations in individual views, and to correlate the opinions of individual experts in an attempt to reach reliable group consensus (e.g., Gupta and Clarke 1996).

We implemented two rounds of the Delphi process with an expert panel of five academics that were familiar with Hofstede's framework and had published extensively on national cultural dimensions. First was an inception phase intended to ensure a consistent appreciation of Hofstede's framework and the keywords across the panel: Working independently, we asked each expert to study a summary of the characteristics of Hofstede's dimensions based on Hofstede (2001), and a list of the keywords including descriptions of what each keyword means. Although Hofstede (1980a) conceived of Individualism-collectivism (IND-COL) and Masculinity-femininity (MAS-FEM) as bipolar constructs, these were kept separate to allow the experts to make direct connections between a keyword and each dimension singly, for example, Individualism rather than Individualism-collectivism collectively, which we thought may result in task ambiguity. This approach is not unusual. Following meta-analysis of studies using separate Individualism (IND) and Collectivism (COL) measures, Oyserman, Coon and Kemmelmeier (2002) conclude that Individualism and Collectivism may be independent. Similarly, the GLOBE study (House *et al*. 2004) contends that Hofstede's Masculinity-femininity construct is confounded by irrelevant factors and therefore split it into two separate *assertiveness* and *gender egalitarianism* dimensions. Measurement scale evaluation studies (Spence 1993) also suggest that Masculinity and Femininity should be considered as subscales of the same factor, not opposite ends of one scale, meaning that an observed value of Masculinity is neither an accurate nor adequate indicator of Femininity.

In Delphi round one, we asked each panel member to match keywords to cultural dimensions on a scale ranging from '0' = 'not at all', through '1' = 'somewhat matches this dimension', to 2 = 'very closely matches this dimension'. The independent matches from the five experts were then aggregated into the mean match score of each keyword to each dimension, which we recoded as 'not at all', if mean less than 0.67, or 'somewhat matches this dimension', if mean equal to or greater than 0.67 but less than 1.33; otherwise, 'very closely matches this dimension'. A spreadsheet containing the aggregate results for round one was then emailed to the panel, followed by a period of electronic discussion of the aggregate matches.

In round two, once again working independently, each expert was asked to consider either maintaining or revising their earlier judgments in the light of the aggregated peer judgments. To examine the interrater reliability of the matches across the five experts, we calculated the Cronbach's alpha coefficient (e.g., Crocker and Algina 2006) for each cultural dimension. The results, which are shown in table 2, suggest that there is high internal consistency among the five judges on all cultural dimensions so that it is appropriate to combine the matches of the five experts on each dimension into an aggregate match. Therefore, we aggregated the matches of each keyword to each dimension from Delphi round two. Table 3 shows the aggregate matches; only keywords that received an average greater than zero are shown. In order to ensure that only keywords that were matched to a dimension by the majority of the panel were taken into consideration, only keywords with a mean score of at least 1.33 were considered. This is because a mean score of at least 1.33, or two-thirds of the possible maximum of 2, can only be achieved if and only if no more than one of the panel of five states that a keyword is 'not at all' a match for a dimension. .

INSERT Table 2 ABOUT HERE

INSERT Table 3 ABOUT HERE

From these data, the presence of each Hofstede dimension in each job advertisement was calculated as

$$y_{ij} = \sum_{k=1}^{k=102} w_{jk} x_{ik},$$

Where: *i* = a job advert; *j* = a Hofstede dimension; *k* = a keyword; x_{ik} = presence of keyword *k* in job *i* [= 0 if absent; = 1 if present]; and w_{jk}= expert panel rating of match of keyword *k* to dimension *j* [0 = if mean panel value less than 1.33, otherwise = 1]. y_{ij} is thus the count of the number of keywords in an advertisement that match dimension *j*. The mean count, $\bar{y}_j$, reflects the level of the requirement and, hence, the value that organisations ascribe to behaviours consistent with dimension *j* in project jobs based on the panel's matching of keywords to dimension *j* and how frequently those matching keywords occur across jobs.

6. Data Analysis and Results

To answer *RQ1* (i.e. to examine the extent to which national culture values are reflected in advertisements for project management positions) we conducted exploratory data analysis on counts of cultural dimensions arising from the Delphi panel scores. The mean counts on the cultural dimensions across nations and industries are, respectively, shown in Figures 1 and 2 below.

INSERT Figure 1 ABOUT HERE

INSERT Figure 2 ABOUT HERE

Compared to country, cross-industry variance appears lower which is perhaps unsurprising given that the cultural dimensions were designed specifically to tap national cultural

difference. Notably, Individualism (IND) and Masculinity (MAS) have, respectively, the lowest and second-lowest mean counts across all countries and industries, indicating these cultural preferences to be the least valued in project management. By contrast, Collectivism (COL) and Uncertainty Avoidance (UA) have the largest mean counts. Hence these cultural patterns supply us with the cultural preferences which we recommend that global Project Recruiters consider foremost when seeking to develop reflective cultural intelligence.

We see that Uncertainty Avoidance is largest in India, Singapore, the UK and US; Collectivism in China, Hong Kong and Malaysia. Uncertainty Avoidance has the largest mean count across all industries, except manufacturing and 'other industries' where Collectivism is the largest. All of this provides useful information pinpointing where (considering both geography and industry) these various cultural preferences may be exerting particularly strong influences on Project Recruiters.

Our second research objective, which seeks to illustrate how cultural intelligence can develop with reference to this or indeed some similar cultural evidence base, and which is interested in the extent to which such influences could be arising from, or incongruous with, the national cultural contexts within which Project Recruiters operate, is addressed by *RQ2*. Of course, fully comparing the cultural preferences we have found to what existing research tells us about how national cultural values vary both by geography and industry sector is well beyond the scope of this paper. Findings for *RQ1* suggested that it may be more productive to focus on comparing patterns by geography alone; however we conducted regression analysis of each cultural dimensional count to confirm this. Since y_{ij} is a count variable, based on the level of scaled deviance, a Poisson or Negative Binomial regression of each dimensional count with country, industry and national/industry interaction as predictors was conducted. Table 4 (below) summarises the results. The scaled deviance for Uncertainty Avoidance was

greater than unity, indicating over-dispersion. Thus, we ran a Negative Binomial regression for this dimension, as is appropriate when data are over-dispersed (see, for example, Coxe, West and Aiken 2009). The results indicate significant differences across nations on all dimensions except for Long-term Orientation; and significant industry differences for Masculinity and Femininity but no significant nation/industry interaction effects. National differences are strongest for Collectivism, and weakest for Masculinity.

INSERT Table 4 ABOUT HERE

Taking stock, it is important to reiterate that our second objective is explicitly *illustrative*. We chose to focus *RQ2* on national variations rather than on industry variations because they are more salient. Figure 3 juxtaposes the national variations that we found among Project Recruiters with national variations found by Hofstede *et al.* (2010). There are some minor differences in the indices displayed: whereas Hofstede's Masculinity index incorporates both Masculinity and Femininity, there are two separate counts for the two dimensions (Masculinity and Femininity) in this study. As result, in Figure 3, there are two points for Masculinity and Femininity counts from the current study versus the one point for Hofstede's' index. This pattern is replicated for Individualism/Collectivism as well.

INSERT Figure 3 ABOUT HERE

Even taking into consideration these differences in the indices displayed, it is clear that the two patterns themselves differ significantly. We can therefore quite confidently conclude that

Project Recruiter cultural preferences tend not to simply reflect macro-level influences from national cultures. Instead, there appear to be much richer adaptivity issues warranting the application of cultural intelligence on a nation-by-nation basis.

On Hofstede's index, the UK and US are highly individualistic - more so than the other countries listed. Sample Individualism (IND) mean counts are more convergent, and uniformly low across countries, including the UK and the US. Hofstede's UK and US Power Distance (PD) indices are lower than Individualism (IND), but sample mean Power Distance (PD) counts for both countries are higher than Individualism. Long-term Orientation (LTO) means that counts also appear convergent, with smaller inter-nation distances than those recorded on Hofstede's indices. Compared to other dimensions, Hofstede's Uncertainty Avoidance (UA) indices are generally low while sample Uncertainty Avoidance (UA) mean counts are generally high, suggesting a desire among local managers and organisations for more Uncertainty Avoidance (UA) practices. Notably, Singapore has the lowest Hofstede Uncertainty Avoidance (UA) index but the second-highest sample mean count. In contrast, in our data, Power Distance (PD) is much more differentiated than in Hofstede's indices, suggesting a need for the profession to consider whether it is sufficiently sensitive to the importance of this cultural dimension in those national cultural contexts where it is deemed important.

In Hofstede's bipolar construct of Individualism-collectivism, Individualism is the opposite of Collectivism. Thus, if country *A* has a larger Individualism value than country *B*, then, by negation, country *B* should have a larger Collectivism value than *A*, and similarly for Masculinity-femininity*;* this however was not found to hold consistent across all pair-wise comparisons of countries. For example, based on Hofstede's indices, it was expected that China would exhibit more collectivist and less individualistic job advertising content than India; however, India was found to have a lower mean count of *both* Individualism and Collectivism

than China. At the same time, it was expected that the UK would exhibit more masculine advertising content than Singapore; however we have found *both* UK Masculinity and Femininity mean counts to be lower than Singapore's. This implies that Masculinity-femininity qualities are less important in the UK than in Singapore. More importantly, however, it also illustrates that the profession might best develop cultural intelligence by using Hofstede's terms as general descriptors for cultural preferences *without* sharing his bipolar construct assumptions.

7. Discussion of Findings

Based on content analysis of the occurrences of keywords extracted from the advertised project management positions, Collectivism, Uncertainty Avoidance and, to a lesser extent, Power Distance were found to be the most salient cultural denominators for advertised project management positions. Masculinity and Individualism were found not to be salient. When we then consider the significant variance across nations on all cultural dimensions except Long-term Orientation, many different issues arise on a country-by-country basis concerning the extent to which Project Recruiters should be more sensitive to local cultural preferences.

We do not wish to underplay the argument that some global cultural standards may be desirable. Here, literature on project performance becomes important. The salience of Collectivism within the professions' global cultural preferences, we contend, underscores the importance that employers ascribe to communication (Ochieng and Price 2010) and teamwork skills (Scott-Young and Samson 2009) in project management. This is something cultural intelligence needs to consider as an adaptivity issue. We have already mentioned that cultural adaptivity issues span micro, meso and macro cultural levels; nonetheless we suggest

it would be far too simplistic for a cultural intelligence to conceive of project performance as always tending to be better when organisational and societal values are congruent (see Newman and Nollen 1996). Instead we think it is *also* vital to consider how adaptive cultural preferences are to project needs, particularly to universal needs such as effective communication. Perhaps trade-offs will need to be made in some cases, to better balance the adaptive fits of cultural preferences to both project needs and cultural contexts.

Although our paper focussed on the cultural intelligence of Project Recruiters in particular, our findings naturally have important implications for how and why Project Managers in general might usefully apply cultural intelligence in their ongoing management of project operations. Clearly, the cultural insights of Project Recruiters can only be fully exploited by passing them along for consideration by those they have recruited. They might also serve to stimulate debate within the profession as a whole. Findings on the salience of Uncertainty Avoidance in advertised project management positions are of particular interest from the standpoint of visualising what a more effective global project management culture might look like. Risk management skills remain very unevenly distributed amongst Project Managers around the world (Zwikael and Ahn 2011). Tolerance of uncertainty, and a corresponding understanding of the danger of false confidence, is widely regarded as healthy attributes in risk managers. Uncertainty in projects exists in many different forms (Hong, Nahm, and Doll 2004) and enlightened project management is usually conceived of as entailing the measuring and managing of uncertainty (as per a low Uncertainty Avoidance culture) as opposed to simplifying or banishing it through ceremony and leadership (as per a high Uncertainty Avoidance culture). Hence, what the profession now seems to require is a healthy debate concerning whether it needs a global risk culture based on low Uncertainty

Avoidance. How the profession handles this risk culture question is, we suggest, likely to challenge and inspire its cultural intelligence like no other issue.

The general salience of Power Distance which we found has implications for debate concerning whether a prescribed global project management culture might deliberately model itself on low Power Distance, so that relatively inefficient rigid hierarchical management structures and practices might be replaced by more fluid ones, better able to act quickly and deal with complex project challenges. We know that strict hierarchies in high Power Distance cultures may often reduce prospects for flexible and creative working in different teams and with different leaders (Harrison, McKinnon, Wu, and Chow 2000). This problem has also been highlighted in studies by Muriithi and Crawford (2003), Tan and Chong (2003) and Turner and Müller (2005).

Another finding (see Figure 3) with implications for global project management culture is that counts for Femininity were largely higher than those for Masculinity. This conflicts with earlier work by Buckle and Thomas (2003) who found that the hard masculine logic systems exert considerable influence on the 'best practice' as outlined in the PMBOK, a guide book which encompasses sets of standard project management terminology and guidelines. Interestingly, our regression results indicate that significant industry differences only occur for Masculinity and Femininity, which suggests that changes to Masculinity-femininity values might occur at different rates in different industries. Such changes are to be expected as scholars (Buckle and Thomas2003; Legault and Chasserio 2012) are beginning to observe a shift within the profession from an emphasis on control to a focus on interaction and emotional intelligence.

8. Conclusion

We have discussed cultural intelligence primarily as an attribute that Project Recruiters need. However we also recognise that the only reason they need it is so that Project Management Recruits can then reap its benefits within ongoing project operations. Clearly Project Recruits also stand to gain by applying it themselves within ongoing operations; and further research in that area is needed.

We have also discussed cultural intelligence as a valuable touchstone for debate within the global profession more generally. Conflicting pressures towards homogenisation with professional management culture, and towards greater potential for cultural incongruence issues to arise through globalisation, have made its cultivation essential. We think that the best way to stimulate cultural intelligence is to remind the profession that further debate is necessary in order to determine what cultural preferences they should focus on becoming more culturally intelligent about. We propose Hofstede's dimensions as a cultural language to facilitate this. In making this proposal we are mindful that cultural differences are not always easy to discuss; that said, Hofstede's dimensions may prove particularly useful in facilitating cross-cultural dialogue and understanding.

We also think that Project Recruiters and, more generally, Project Managers can become better aware of their cultural preferences, together with some of the more important adaptivity issues they need to address, simply by completing Hofstede's indices and checking their scores against those of local populations. This is something we did not do because we were primarily concerned with illustrating the untapped value of job advertisement data in particular. We regard this as a particularly valuable source of evidence because it reveals specifically those cultural preferences that matter most through their possible moulding influences on project teams. We believe Project Recruiters should heed this point too. In

particular, they should allocate adequate meeting time to agree the wording of job advertisements, and should regard these meetings as cultural management activities requiring cultural intelligence.

Of course our study has limitations. One limitation is the use of Hofstede's dimensions. The criticisms of Hofstede's work are well known (see, for example, McSweeney 2002); for example, Hofstede's assumption of cultural homogeneity within countries, which does not always reflect reality. Thus, although Hofstede's dimensions and approach allow researchers to carve with a very blunt scalpel, they may not always represent the most robust cultural descriptors. Our findings prompt us to recommend them as a conceptual framework for developing cultural intelligence; nonetheless further research using alternative dimensions may well lead to improvements on our recommendations. One possibility is to use cultural dimensions proposed by the GLOBE study (House *et al.* 2004), which provide "helpful updates to Hofstede's dimensions'' (Husted 2000, p. 208).

Another limitation is one which both this study and Chipulu *et al.* (2013) share. We searched for the phenomenon of cultural intelligence only within the explicit content of the project management advertisements. Studies (e.g., Gaucher, Friesen, and Kay 2011) however do suggest that employee job choice depends on both *explicit* and *implicit* cues. Therefore, examining the possible role of implicit cues in such job advertisements will be of both academic and managerial interest.

References

Albers-Miller, N. D. and Gelb, B. D., 1996. Business advertising appeals as a mirror of cultural dimensions: a study of eleven countries. *Journal of advertising,* 25 (4), 57-70.

Ang, S. and Van Dyne, L., 2008. *Handbook of cultural intelligence: Theory, measurement, and applications*. ME Sharpe.

Ang, S., *et al.,* 2007. Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review,* 3 (3), 335-371.

Barney, J.B., 2001. Resource-based Theories of Competitive Advantage: a ten year retrospective on the resource-based view. *Journal of Management*, 27, 643-650.

Berger, P. L., and Luckman, T., 1971. *The Social Construction of Reality.* London: Penguin University Books.

Blomquist, T., Hallgren, M., Nilsson, A., and Soderholm, A., 2010. Project-as-Practice: in search of project management research that matters. *Project Management Journal*, 41 (1), 5-16.

Born, M. P., and Taris, T. W., 2010. The impact of the wording of employment advertisements on students' inclination to apply for a job. *The Journal of Social Psychology,* 150 (5), 485-502.

Bourdieu, P., 1977. *Outline of a Theory of Practice.* Cambridge: Cambridge University Press.

Brislin, R., Worthley, R., and Macnab, B., 2006. Cultural intelligence understanding behaviors that serve people's goals. *Group & Organization Management,* 31 (1), 40-55.

Buckle, P., and Thomas, J., 2003. Deconstructing project management: a gender analysis of project management guidelines. *International Journal of Project Management,* 21 (6), 433-441.

Buckley, M. R., *et al.,* 1998. Investigating newcomer expectations and job-related outcomes. *Journal of Applied Psychology,* 83 (3), 452.

Chipulu, M., Neoh, J. G., Ojiako, U., and Williams, T., 2013. A Multidimensional Analysis of Project Manager Competences. *IEEE Transactions on Engineering Management,* 60 (7), 506-517.

Communal, C., and Senior, B., 1999. National culture and management: Messages conveyed by British, French and German advertisements for managerial appointments. *Leadership & Organization Development Journal,* 20 (1), 26-35.

Crocker, L., and Algina, J., 2006. *Introduction to classical and modern test theory.* Andover, UK: Cengage Learning.

Coxe, S., West, S. G., and Aiken, L. S., 2009. The analysis of count data: A gentle introduction to Poisson regression and its alternatives. *Journal of Personality Assessment,* 91 (2), 121-136.

Cutler, B. D., Erdem, S. A., and Javalgi, R. G., 1997. Advertiser's relative reliance on collectivism-individualism appeals: a cross-cultural study. *Journal of International Consumer Marketing,* 9 3), 43-55.

Dalkey, N. C., Brown, B. B., and Cochran, S., 1969. *The Delphi method: An experimental study of group opinion* (Vol. 3). Santa Monica, CA: Rand Corporation.

de Mooij, M., 2010. *Consumer behavior and culture: Consequences for global marketing and advertising*. Sage.

De Mooij, M., and Hofstede, G., 2010. The Hofstede model. *International Journal of Advertising,* 29 (1), 85-110.

Earley, P. C., and Mosakowski, E., 2004. Cultural intelligence. *Harvard Business Review,* 82 (10), 139-146.

Erez, M., and Earley, P. C. ,1993. *Culture, self-identity, and work*. New York: Oxford University Press.

Fam, K.-S., and Grohs, R., 2007. Cultural values and effective executional techniques in advertising: a cross-country and product category study of urban young adults in Asia. *International Marketing Review, 24*(5), 519-538.

Feather, N. T., 1992. Values, valences, expectations, and actions. *Journal of Social Issues,* 48 (2), 109-124.

Feldman, D. C., Bearden, W. O., and Hardesty, D. M., 2006. Varying the content of job advertisements: The effects of message specificity. *Journal of Advertising,* 35 (1), 123-141.

Flynn, B. B., Sakakibara, S., Schroeder, R. G., Bates, K. A., and Flynn, E. J., 1990. Empirical research methods in operations management. *Journal of Operations Management,* 9 (2), 250-284.

Gaucher, D., Friesen, J., and Kay, A. C., 2011. Evidence that gendered wording in job advertisements exists and sustains gender inequality. *Journal of Personality snd Social Psychology,* 101 (1), 109.

Goldman, R., 1992. *Reading ads socially*. Psychology Press.

Gudykunst, W. B., 1984. *Methods for intercultural communication research* (Vol. 8). Sage Publications, Inc.

Gupta, U. G., and Clarke, R. E., 1996. Theory and applications of the Delphi technique: A bibliography (1975–1994). *Technological Forecasting and Social Change,* 53 (2), 185-211.

Han, S.-P., and Shavitt, S., 1994. Persuasion and culture: Advertising appeals in individualistic and collectivistic societies. *Journal of Experimental Social Psychology,* 30 (4), 326-350.

Harrison, G. L., McKinnon, J. L., Wu, A., and Chow, C. W., 2000. Cultural influences on adaptation to fluid workgroups and teams. *Journal of International Business Studies,* 31 (3), 489-505.

Hasson, F., and Keeney, S., 2011. Enhancing rigour in the Delphi technique research. *Technological Forecasting and Social Change,* 78 (9), 1695-1704.

Heskett, J., 2011. *The Culture Cycle: how to shape the unseen force that transforms performance.* Prentice Hall.

Heumann, J., Weiner, D., and Remus, D., 2011. The Role of Cultural Differences and Cultural Intelligence in Controlling IS Offshoring Projects: A Theoretical Model. *AMCIS 2011 Proceedings*, Paper 38.

Hofstede, G., 1980a. *Culture's Consequences: International Differences in Work Related Values*. CA: Sage.

Hofstede, G., 1980b. Motivation, leadership, and organization: do American theories apply abroad? *Organizational dynamics,* 9 (1), 42-63.

Hofstede, G., 1994. Management scientists are human. *Management science,* 40 (1), 4-13.

Hofstede, G., 2001. *Culture's Consequences: Comparing values, behaviours, institutions and organisations accross nations*. CA: Sage.

Hofstede, G., and Bond, M. H., 1988. The Confucius connection: From cultural roots to economic growth. *Organizational Dynamics,* 16 (4), 5-21.

Hofstede, G., Hofstede, G. J., and Minkov, M., 2010. *Cultures And Organizations: Software For The Mind.* 3rd ed. McGraw-Hill eBooks.

Holland, J. L. (1996). Integrating career theory and practice: The current situation and some potential remedies. *Handbook of career counseling theory and practice*, 1-11.

Hong, P., Nahm, A. Y., and Doll, W. J., 2004. The role of project target clarity in an uncertain project environment. *International Journal of Operations & Production Management,* 24 (12), 1269-1291.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., and Gupta, V., eds., 2004. *Culture, Leadership and Organizations : The GLOBE Study of 62 Societies*. CA: Sage.

Husted, B. W., 2000. The impact of national culture on software piracy. *Journal of Business Ethics,* 26 (3), 197-211.

Inglehart, R., 1997. *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies.* NJ: Princeton University Press.

Javidan, M., and House, R. J., 2001. Cultural acumen for the global manager: Lessons from project GLOBE. *Organizational Dynamics,* 29 (4), 289-305.

Kirkman, B. L., Lowe, K. B., and Gibson, C. B., 2006. A quarter century of Culture's Consequences: a review of empirical research incorporating Hofstede's cultural values framework. *Journal of international business studies,* 37 (3), 285-320.

Legault, M.-J., and Chasserio, S., 2012. Professionalization, risk transfer, and the effect on gender gap in project management. *International Journal of Project Management,* 30 (6), 697-707.

Leonard, K. M., Van Scotter, J. R., and Pakdil, F., 2009. Culture and Communication Cultural Variations and Media Effectiveness. *Administration & Society,* 41 (7), 850-877.

Leung, K., *et al.,* 2002. Social Axioms The Search for Universal Dimensions of General Beliefs about How the World Functions. *Journal of Cross-Cultural Psychology,* 33 (3), 286-302.

McSweeney, B., 2002. Hofstede's model of national cultural differences and their consequences: A triumph of faith - a failure of analysis *Human Relations,* 55 (1), 89-118.

Muriithi, N., and Crawford, L., 2003. Approaches to project management in Africa: implications for international development projects. *International Journal of Project Management,* 21 (5), 309-319.

Newman, K. L., and Nollen, S. D., 1996. Culture and congruence: The fit between management practices and national culture. *Journal of international business studies*, 27 (4), 753-779.

Ng, K.-Y., Van Dyne, L., amd Ang, S., 2009. From experience to experiential learning: Cultural intelligence as a learning capability for global leader development. *Academy of Management Learning & Education,* 8 (4), 511-526.

O'barr, W. M., 1994. *Culture and the ad: Exploring otherness in the world of advertising*. Westview Press Boulder, CO.

Ochieng, E., and Price, A., 2010. Managing cross-cultural communication in multicultural construction project teams: The case of Kenya and UK. *International Journal of Project Management,* 28 (5), 449-460.

Ojiako, G. U., *et al.,* (2012). *Cultural Imperatives in perceptions of Project Success and Failure*. Atlanta, US: PMI.

Okoli, C., and Pawlowski, S. D., 2004. The Delphi method as a research tool: an example, design considerations and applications. *Information & Management,* 42 (1), 15-29.

Ono, R., and Wedemeyer, D. J., 1994. Assessing the validity of the Delphi technique. *Futures,* 26 (3), 289-304.

Ostroff, C., Shin, Y., and Feinberg, B., 2002. Skill acquisition and person-environment fit. *Work Careers: A Developmental Perspective*, 63-90.

Oyserman, D., Coon, H. M., and Kemmelmeier, M., 2002. Rethinking individualism and collectivism: evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin,* 128 (1), 3-72.

Pfieffelmann, B., Wagner, S. H., and Libkuman, T., 2010. Recruiting on corporate web sites: Perceptions of fit and attraction. *International Journal of Selection and Assessment,* 18 (1), 40-47.

Phillips, J. M., 1998. Effects of realistic job previews on multiple organizational outcomes: A meta-analysis. *Academy of Management Journal,* 41 (6), 673-690.

Pollay, R. W. (1983). Measuring the cultural values manifest in advertising. *Current Issues and Research in Advertising,* 6 (1), 71-92.

Premack, S. L., and Wanous, J. P., 1985. A meta-analysis of realistic job preview experiments. *Journal of Applied Psychology,* 70 (4), 706.

Puck, J. F., Mohr, A. T., and Holtbrügge, D., 2006. Cultural convergence through web-based management techniques? The case of corporate web site recruiting. *Journal of International Management,* 12 (2), 181-195.

Rear, D., 2013. Converging work skills & quest; Job advertisements and generic skills in Japanese and Anglo–Saxon contexts. *Asian Business & Management,* 12 (2), 173-196.

Salter, S. B., Sharp, D. J., and Chen, Y., 2013. The moderating effects of national culture on escalation of commitment. *Advances in Accounting,* 29 (1), 161-169.

Samiee, S., and Jeong, I., 1994. Cross-cultural research in advertising: an assessment of methodologies. *Journal of the Academy of Marketing Science,* 22 (3), 205-217.

Schmidt, R. C., 1997. Managing Delphi Surveys Using Nonparametric Statistical Techniques*. *Decision Sciences,* 28 (3), 763-774.

Schneider, B., 1987. The people make the place. *Personnel Psychology,* 40 (3), 437-453.

Schneider, B., Goldstein, H. W., and Smith, D. B., 1995. The ASA framework: An update. *Personnel Psychology,* 48 (4), 747-773.

Schwartz, S. H., 1994. Are There Universal Aspects in the Structure and Contents of Human Values? *Journal of Social Issues,* 50 (4), 19-45.

Scott-Young, C., and Samson, D., 2009. Team management for fast projects: an empirical study of process industries. *International Journal of Operations & Production Management,* 29 (6), 612-635.

Spence, J. T., 1993. Gender-related traits and gender ideology: evidence for a multifactorial theory. *Journal of Personality and Social Psychology,* 64 (4), 624.

Tai, H. S., 2004. The relationship of cultural values and message strategies in service advertising. *Marketing Intelligence & Planning,* 22 (4), 438-454.

Tan, W., and Chong, E., 2003. Power distance in Singapore construction organizations: implications for project managers. *International Journal of Project Management,* 21 (7), 529-536.

Templer, K. J., Tay, C., and Chandrasekar, N. A., 2006. Motivational cultural intelligence, realistic job preview, realistic living conditions preview, and cross-cultural adjustment. *Group & Organization Management,* 31 (1), 154-173.

Teng, L., Ye, N., Yu, Y., and Wu, X., 2014. Effects of culturally verbal and visual congruency/incongruency across cultures in a competitive advertising context. *Journal of Business Research,* 67 (3), 288-294.

Thomas, D. C., 2006. Domain and Development of Cultural Intelligence: The Importance of Mindfulness. *Group & Organization Management,* 31 (1), 78-99.

Turner, J. R., and Müller, R., 2005. The project manager's leadership style as a success factor on projects: a literature review. *Project Management Journal*, 36 (1), 49-61.

Twichell, E., 2012. *Attracting Talent Across Cultures: The Impact of Cultural Values on Generating and Maintaining Applicants.* Unpublished Unpublished thesis, DePaul University.

Vishwanath, A., 2003. Comparing Online Information Effects A Cross-Cultural Comparison of Online Information and Uncertainty Avoidance. *Communication Research,* 30 (6), 579-598.

Williams, T., 2005. *Extreme Over-Runs and What we can Learn.* The Project Management Institute.

Yau, O. H., 1988. Chinese cultural values: their dimensions and marketing implications. *European journal of Marketing,* 22 (5), 44-57.

Yüce, P., and Highhouse, S., 1998. Effects of attribute set size and pay ambiguity on reactions to 'help wanted'advertisements. *Journal of Organizational Behavior,* 19 (4), 337-352.

Zandpour, F., Campos, V., Catalano, J., and Chang, C., 1994. Global reach and local touch: Achieving cultural fitness in TV advertising. *Journal of Advertising Research*, 34 (5), 35-63.

Zwikael, O., and Ahn, M., 2011. The Effectiveness of Risk Management: An Analysis of Project Risk Planning Across Industries and Countries. *Risk Analysis,* 31 (1), 25-37.

Table 1. Organisations sampled by country and industry.

Country	Business Services	Construction	Engineering	Financial Services	Information Technology	Manufacturing	Other Sectors	Total
China	63	18	122	15	113	33	50	414
Hong Kong	9	4	10	13	37	5	25	103
India	24	53	81	14	301	11	16	500
Malaysia	6	5	18	15	55	6	5	110
Singapore	19	39	39	31	66	5	1	200
United Kingdom	55	18	79	84	241	23	17	517
United States	43	13	34	31	58	12	5	196
Total	219	150	383	203	871	95	119	2040

Table 2. Inter-rater consistency for each cultural dimension.

Cultural Dimension	Coefficient Alpha
Collectivism	0.839927
Individualism	0.733978
Power Distance	0.805582
Uncertainty Avoidance	0.808025
Masculinity	0.770203
Femininity	0.863388
Long-term Orientation	0.806986

Table 3. Aggregate matches of each keyword to each dimension.

Project Management Job Keywords		Dimensional Match: Average of Expert Panel						
Keyword	**Description/Example advertisement text**	**PD**	**IND**	**COL**	**MAS**	**FEM**	**UA**	**LTO**
industry_specific_req	Industry-specific skill/experience is essential	.2	0	.2	0	.2	.4	0
comm_skills_req	Communication skills essential	.2	.4	1.4	.2	1.4	.8	.6
team_management_req	“manage teams”	1.4	1	1.2	.6	1.2	1	.6
leadership_req	“leader/ can lead team members”	1.8	.2	1.2	1.4	1.2	.2	.4
degree_education_req	Bachelor's degree	.4	0	0	0	.2	.4	0
stakeholder_management_req	“manage their expectations…”	0	0	1	0	.4	.8	1.4
budget_management_req	“…managing project budgets to targets…”	0	0	0	0	.2	1.6	.4
time_management_req	“ensure project is on time”	0	.2	.2	0	.2	1.4	1
commercial_aware_req	“business-minded/ entrepreneurial”	.2	.4	1	.2	.2	0	1
team_work_req	“work with team in a matrix structure”	1.2	1	1.8	.2	1.2	.8	.2
risk_management_req	“Identify risks. Issue risk logs”	0	0	0	0	.2	1.8	1.2
problem_solving_req	“solving problems as they arise”	0	0	0	0	.2	.6	.2
analytical_skills_req	“analytical/ numerical individual”	0	0	0	0	.2	.2	0
planning_req	“able to plan…”	0	0	0	0	.2	1.4	1.4
report_producing_req	“able to report status to stakeholders”	.2	0	1.2	0	.2	1	.4
quality_management_req	“manage quality up to standards”	0	0	0	0	0	.4	.2
Project_cycle_delivery_req	“experience of full project cycle”	.2	0	0	0	.2	.2	0
pmexp_unspecified	PM experience required but not stated clearly	0	0	.2	0	0	.4	0
third_party_management_req	“able to deal with vendors/ supplier”	.2	.8	1	.4	.2	.2	.2
monitor_skill_req	“Monitor the progress”	.2	0	1	0	0	1.2	.2
multi_task_project_manage_req	Simultaneously manage projects	0	0	.2	0	.2	.2	0

independent_req	“take initiative and work without supervision”	.4	1.4	1	.4	.2	.2	1
developing_skills_others_req	“train and mentor junior colleagues”	1.2	0	1.6	.2	1.4	0	1.2
people_skills_req	“have good people skills”	.2	1	1.6	.4	1.4	0	.2
drive_resilience_req	“drive for difficult/challenging work”	.2	.6	0	1	.2	.2	0
presentation_req	“presentation to clients”	.4	.4	.2	.4	0	0	.4
adapt_skills_req	“flexible in fast moving environment”	0	.4	.2	0	0	1.4	1.2
pmexp_upto3	Up to 3 years’ experience	0	.6	0	.2	0	.2	0
ms_office_req	“Proficient in MS Office suite”	0	.2	0	0	0	.2	0
microsoft_project_req	MS Project (Required)	0	.2	0	0	0	.2	0
nego_skills_req	“excellent negotiation skills”	.2	.8	.4	.4	.4	.2	.2
pmexp_upto5	Between 3 and 5 years’ experience	0	.2	0	0	0	.2	0
organise_req	“good organisational skills”	1	1	1.2	0	.2	1.2	0
pmp_certification_req		.4	.2	.2	0	.2	.2	0
scope_project_req	“able to scope the project”	0	0	0	0	0	.8	.2
change_management_req	“manage changes after execution”	0	.2	0	0	0	1.2	.4
prince2_req		.2	0	0	0	0	.2	0
influencing_skills_req	“persuasive in gaining resources”	1.2	1	1.2	1.4	.4	.2	.6
pmqualification_general_req		.2	.2	.2	0	.2	.2	0
cust_service_req	“must be customer-oriented”	.2	1	1	.2	.6	0	.4
pmexp_upto10	Between 5 and 10 years’ experience	0	.2	0	.2	0	.2	.2
agile_methodology_req		0	.2	0	0	0	.4	0
attentiontodetails_req	“must have good attention to details”	0	0	.2	0	0	.8	.2
accountability_req	“responsible/accountable for…”	1.2	1	1.2	.2	.2	1	1.4
critical_thinking_req	“able to question the status quo of methodologies”	0	0	.2	.2	0	.2	.2
contract_management_req	“contract management experience…”	0	0	.2	.2	0	.2	.2
industry_specific_desired	Technical skills unique to industry (programming language, engineering qualifications, accounting knowledge, etc.)	.2	.2	0	0	0	.4	0
strategic_thinking_req		.2	0	.2	.2	.2	.4	1.8
positive_attitude_req	“positive and upbeat at all times…”	0	0	1	0	0	0	.2
estimating_skills_req		0	0	0	0	.2	0	0
multi_cultural_req		.2	.4	1.4	.2	.2	.2	.2
sixsigma_qualification_req		0	.2	0	.2	0	.2	.2
professionalethics_req	“have a professional demeanour”	1.2	.2	.4	0	0	0	1.2
decisionmaking_skills_req	“able to make the right decisions…”	.2	1	.2	.2	.2	0	.2
masters_education_req		.4	.2	0	0	.2	.2	0
pmi_certification_req		.2	.2	0	0	0	0	0
allorganisationlevels_req	“must be able to deal with all organisation levels”	1	1.4	1.4	.4	.2	0	.2
regulations_knowledge_req		1.4	.2	0	0	0	1.8	.2
mba_education_req		.4	.4	.2	0	0	.4	0
career_motivation_req	“enthusiasm for career progression”	.2	1.6	.4	0	0	0	1
research_skills_req		0	0	.2	0	0	0	0
prince2_desired		.2	0	0	0	0	0	0
pmexp_1million	Managed budget of up to £1 Million	.2	.2	0	0	0	.2	0
pmqualification_general_desired	“Candidates with a PM qualification are preferable…”	0	.6	.2	0	0	0	0
scrum_methodology_req		0	.6	0	0	0	.8	0
waterfall_methodology_req		0	0	0	0	0	.2	0
opportunity_management_req	“identify and react to opportunity”	.2	1	.2	0	0	.4	.2
motivator_req	“Able to motivate team”	1.2	.6	1.4	0	.2	0	.4
degree_education_desired		.2	0	.2	0	.2	0	0
agile_methodology_desired		0	.8	0	0	.2	.2	0
pmp_certification_desired		.2	.2	.2	0	.2	0	0
scrum_methodology_desired		0	.8	0	0	.2	.2	0
earned_value_management_req	“familiar with the concepts of EVM”	.2	0	.2	0	.2	1	0
consulting_skills_req	“consulting skills to advise clients”	0	.2	.2	.2	.2	0	.2

pmexp_10million	Managed budget of more than £1M up to £1M	.4	.2	.2	.2	0	.2	.2
apm_qualification_req		.2	.2	.2	0	.2	.2	0
hnd_education_req		.2	.2	0	0	.2	.2	0
masters_education_desired		.2	0	0	0	0	0	0
consulting_skills_desired	"consulting skills to advise clients" (desired)	.2	.2	1	.2	.4	0	.2
risk_analyse_req		0	.2	.2	0	0	1.8	1
pmi_certification_desired		.2	0	.2	0	0	0	0
pmexp_30million	Managed budget of more than £2M up to £3M	.6	.4	0	.2	0	.2	.2
apm_qualification_desired		.2	0	.2	0	0	0	0
listening_skills_req		.2	.8	1.6	.4	1.6	.2	.2
change_management_desired	"manage changes after execution" (desired skill)	0	.2	.2	0	0	1.2	1.2
pmexp_20million	Managed budget of more than £1M up to £2M	.4	.2	0	.2	0	.2	.2
degree_secondupper_req		.2	0	0	0	0	0	0
iterative_methodology_req		0	0	.2	0	.2	.8	.2
nego_skills_desired		0	1	1.2	.4	1.2	.2	.2
third_party_management_desired		0	0	.8	0	.4	0	.4
msp_qualification_req		.2	0	.2	0	0	0	0
degree_firstclass_req		.2	0	.2	0	0	0	0
waterfall_methodology_desired		.2	0	.8	0	.2	.4	.2

Table 4. Summary of dimensional count regression results.

Cultural Dimension	**Model**		**Type III Test Results- Chi-square Values**		
	Type of Regression Model	Scaled Deviance	Nation (*N* = 2040, *DF* = 6)	Industry (*N* = 2040, *DF* = 6)	Nation*Industry (*N* = 2040, *DF* = 36)
Collectivism	Poisson	0.96	232.99, *p* <.0001	NS	NS
Individualism	Poisson	0.55	72.72, *p* <.0001	NS	NS
Power Distance	Poisson	0.91	59.80, *p* <.0001	NS	NS
Uncertainty Avoidance	Negative Binomial	1.14	74.08, *p* <.0001	NS	NS
Masculinity	Poisson	0.79	35.24, *p* <.0001	16.25, *p* = 0.01	NS
Femininity	Poisson	0.81	176.74, *p* <.0001	13.08, *p* = 0.04	NS
Long-term Orientation	Poisson	0.93	NS	NS	NS
NS = Not significant					

Figure 1. Dimensional mean counts in the adverts by Nation

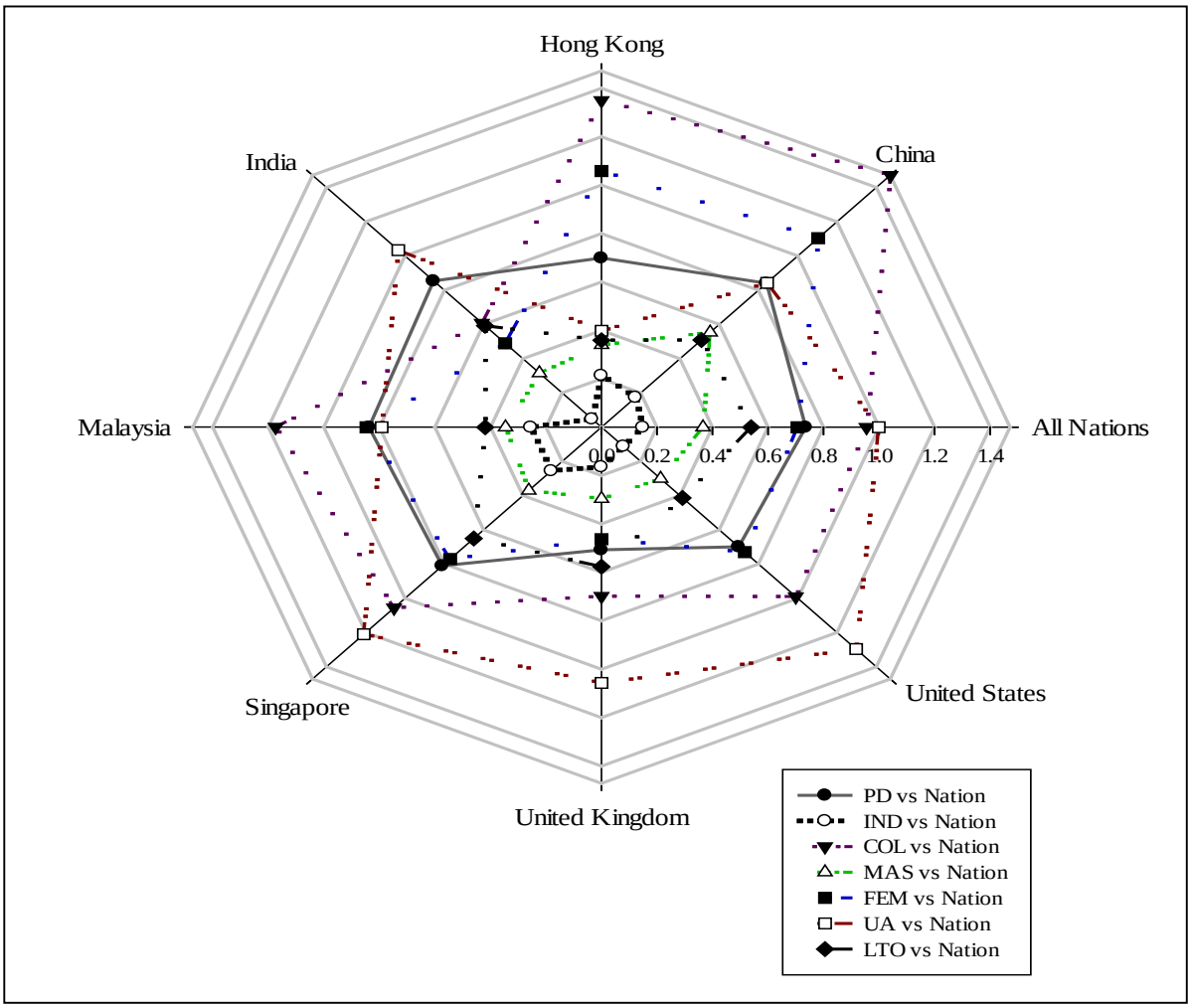

Figure 2. Dimensional mean counts in the adverts by Industry.

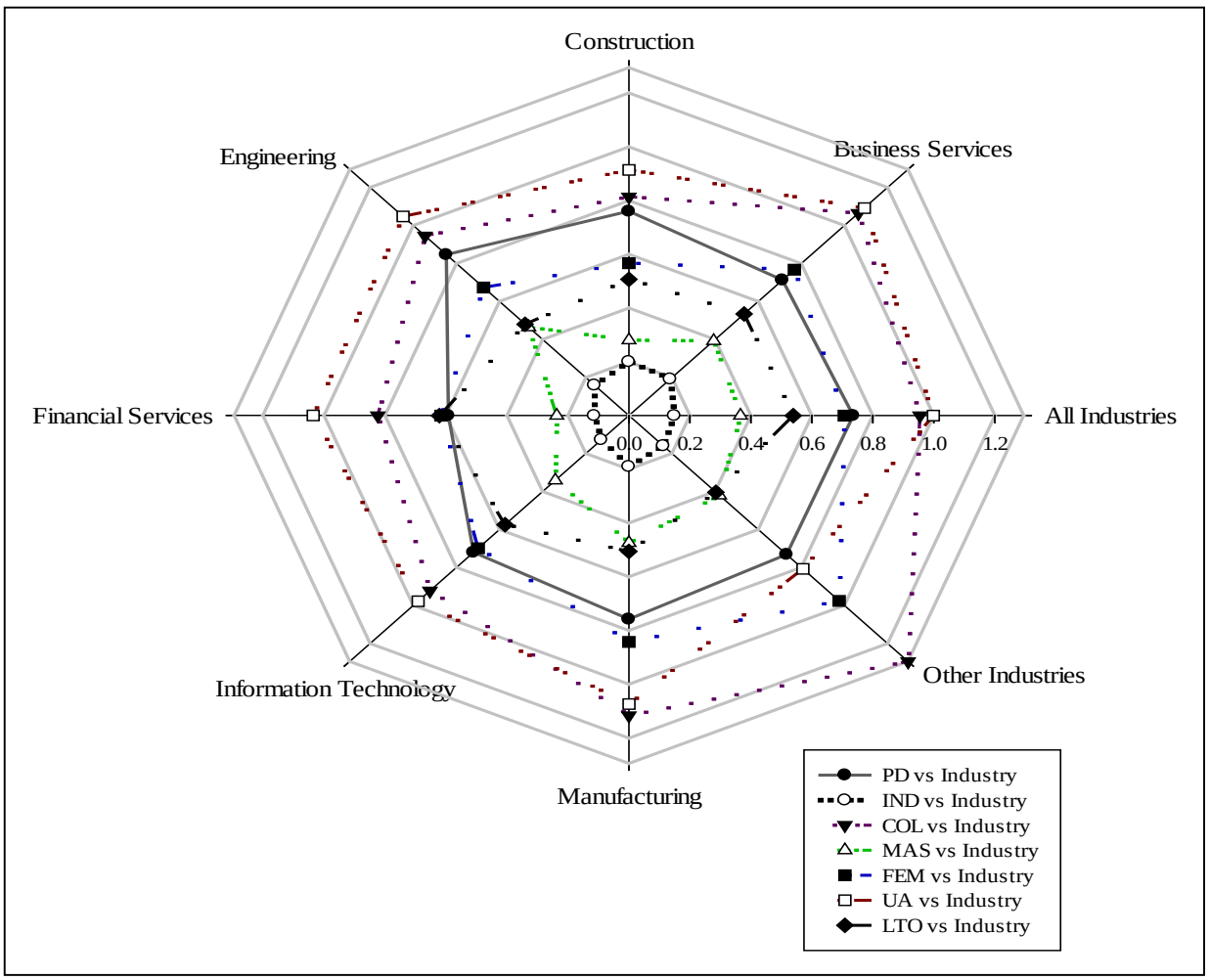

Figure 3. Dimensional mean counts in the adverts versus Hofstede's (2010) Indices.