

MIS Recruitment and Retention Factors: Some Preliminary Cross-Cultural Comparisons

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ABSTRACT

With the growing internationalization of businesses, and the increasing mobility of IS/IT professionals there is a need to understand the aspects of the work environment and the job that motivates these professionals. As more and more organization employ professionals from a range of different cultural backgrounds, the question arises as to whether or not the incentives structure, work features and motivators are the same for different cultural groups. This paper reports the results of a pilot study comparing attitudes of computing professionals from three countries (Australia, China and the Philippines) into those work environmental factors and motivators that act as incentives to join a company, and to remain. Exploratory factor analysis identified eight factors that attracted individuals to join and stay with a company. These factors when converted to composite variables results compared for the three countries. The similarities and differences are compared suggesting that a "one size fits" all approach to recruitment in IS may not be justified.

Keywords: Motivators, Incentives, Information Systems, Cross-cultural, International Comparisons

INTRODUCTION

During the late 90s and early 2000, the worldwide shortage of IS/IT professionals caused serious concern in economies around the world. This shortage seems to have abated, maybe temporarily. With the growing internationalization of businesses, the interdependencies of the world economies, and the increasing mobility of IS/IT professionals there is a need to understand the aspects of the work environment and the job that motivates IS professionals. As more and more organization employ professionals from a range of different cultural backgrounds, the question arises as to whether or not the reward structure and motivators are the same for different cultural groups.

The study reported in this paper explores the features of the working environment that firstly attracts an IS/IT professional to join an organization and secondly whether the views have changed since joining. This will be of benefit to employers of IS/IT professionals recruiting from widely differing cultures in understanding in some way what may motivate their staff.

OTHER STUDIES

Gill and Pidduck (2001) showed that work challenge and work environment were far more important to IS professionals than issues of compensation. The Gartner Group (Morello, Zidar, McNee & Smith 1998) predicted that enterprises relying on financial compensation alone were likely to have a high staff turnover. Goles (2001) reporting on student perceptions of IS/IT job attributes, suggests that financial and other benefits are not used to select jobs but rather to eliminate them. Goles further suggests that the learning of new skills in the job is of significant interest amongst students. Smits, Tanner & McLean (1995) found that salary was only an indicator of career progress and was not a significant indicator of job satisfaction of organizational commitment. Lee (2002) provided some interesting insights regarding career strategies, job and career plateauing, and job satisfaction among IT professionals. Paré, Tremblay & Lalonde (2000) presented a model to explain turnover intentions of IT staff and identified several factors covering HR

practices, remuneration and organizational behavior & commitment that influence turnover intentions. A slightly more recent study by Horwitz, Chan and Quazi (2003) addressed the issues of attracting then motivating and retaining qualified knowledge workers. They separated the approach into three separate strategies. The most popular motivation and retention strategies had some common overlap covering challenging work, management support, work freedoms and bonuses which also were the more effective strategies for retention whereas strategies such as flexible work practices and funding for studies and conferences were the least effective. More recently King, Xia, Quick & Sethi (2005) demonstrated there were complex mediating relationships involving socialization tactics, role adjustment and organizational attachment which made IT professionals different from other professionals.

Several authors have suggested that training was an important factor in both the hiring and retention of IT professional staff (Gjestland, Blanton, Will & Collins 2001; Paré, Tremblay & Lalonde 2001; Acton & Golden 2002). Paré et al. in particular noted that IT employees are sensitive to the importance of skill development when it comes to deciding whether to leave an organization. They also noted that training is too often regarded by employers as a perk rather than an investment in intellectual capital. Lash & Sein (1995) presented a theoretical framework where organizations and IT professionals are motivated by different expectations. Organization, they suggest, have specific needs leading to jobs that must be filled whereas IT professionals are concerned with career anchors. Thatcher *et al.* (Thatcher, Liu & Stepina 2002) developed a path model examining that showed intrinsic motivation that was positively related with job attitudes and found hygiene factors were important in motivating IT workers.

A study of new information systems professionals King & Xia (2001) found that socialization of new employees was an important factor in retaining newly hired IT employees. They proposed that organizations make a special effort to assist new IT employees adjust via socialization processes to help them change from "outsiders" to "insiders" including mentoring schemes. Lee (2002) found that social support is significantly associated with job satisfaction and turnover intentions.

Little has been reported concerning the issue of cultural differences involving MIS professionals' career anchors. Wormley and Igbaria (1991) reported on differences experienced by Afro-American MIS employees, found less job discretion, and career support than their white counterparts. Further they found less career satisfaction, lower performance ratings and earlier career plateaus than whites. Igbaria and McClosky (1996) surveyed 90 MIS employees in Taiwan. They found that job security, service and challenge were rated highest whilst technical competence and autonomy were rated lowest. They noted a number of differences towards entrepreneurship, challenge and autonomy between Taiwanese and American MIS employees with Taiwanese MIS employees exhibiting a lower career orientation.

METHOD

Based on a review of the literature a questionnaire was prepared addressing issues relating to features of the job, working environment and surrounding matters which might initially attract someone to join a company and which might provide incentives to stay. Participants were asked to indicate what attracted them to join their company and if these features motivated them to stay after they had joined. Given the concerns often expressed anecdotally by employers over the

churn of highly skilled personnel these are important questions needing answers. Demographic details were also requested including age, gender, years employed in the present position.

Both paper based and web-based survey distribution were used. Mehta and Sivadas (1995) demonstrated that e-mail based surveys generated response rates comparable to those of postal surveys but significantly faster, at lower cost and of a higher quality. On the other hand, Tse, Tse, Yin, Yi, Yee & Hong (1995) in an internal survey of Hong Kong University staff experienced a much lower return rate for e-mail surveys (6%) compared with conventional mail (27%) that they attribute to the possibility of participant identification with e-mail. Comley (1996) found comparable response rates from the two methods. Comley also indicated that electronic data collection methods are often self-selecting due to recipients irregularly checking email messages and consequently have the potential to introduce bias. He points out however that although this is a problem for representative samples it is less of a problem for targeted groups as in the case of the present research. Electronic surveys, by their nature are accessible only by those with access to the appropriate technologies and we would expect that this problem would be lower amongst IS/IT professionals than in the general population because of the nature of the work they do.

The questionnaire was set up using Microsoft FrontPage 2000. Data were captured using Microsoft Access 2000. Electronic surveys have the advantage being pre-coded and free of ambiguity of response in that only one response per item can be selected. They have the disadvantage that they risk missing those who do not have access to computers and the web, although this was not seen to be a problem for the group being surveyed. During the first half of 2003, invitations to participate were sent by email to 365 IS professionals throughout Australia. A total of 40 usable replies were received from Australian participants representing an overall response rate of 11 percent – acceptable for unsolicited surveys of this type but lower than was hoped. In China and the Philippines paper based surveys were distributed by local contacts and distributed numbers are not available. However the selection was based on convenience sampling. Analysis of the data was carried out using SPSS R14.

The survey was sent to IT workers seeking their views on those aspects of the job or organization that appealed to them. Respondents were those who were actually working in an IT environment in a professional capacity. It specifically excluded contractors, self-employed people or those in managerial roles as the study was expressly aimed at IS professionals who are employees.

Participants were asked to rate the importance of incentives offered by employers to IT career professionals. They were asked to rate the importance of 31 items using a Likert scale of 1-5 (where was 1 irrelevant to 5 essential). The incentives considered included opportunity for promotion, travel, a friendly work environment, challenging work assignments, ongoing training provided by the employer, an industry competitive salary, flexible working conditions, reliable internal communications, supportive superiors, scope for individual skills development, and economic fringe benefits such as company vehicles and shares.

RESULTS

As can be seen from Table 1, in each country the majority of IS professionals were male, accounting for nearly 73 percent of respondents from Australia, 80 percent from China and just over 55 percent for the Philippines.

Table 1. Gender distribution

Country (P14)		Frequency	Percent
Australia	Female	11	27.5
	Male	29	72.5
China	Female	6	20.7
	Male	23	79.3
Philippines	Female	21	44.7
	Male	26	55.3

Table 2. Age distribution of respondents

Country (P14)	Age Group	Frequency	Percent
Australia	20-29	18	45.0
	30-39	11	27.5
	40-49	10	25.0
	50-59	1	2.5
China	20-29	18	62.1
	30-39	5	17.2
	40-49	5	17.2
	50-59	1	3.4
Philippines	30-39	43	91.5
	40-49	4	8.5

Table 2 shows the age distribution of respondents. Over 62 percent of the Australian respondents are below 40 years of age, from China 79 percent and from the Philippines nearly 92 percent. As might be expected, fewer respondents were in the above 40 age group presumably because older respondents are more likely to be in senior positions.

Respondents were asked how long they had been employed in their present position. Two people did not answer this question. Of those who did answer the average was 2.7 years, the shortest two months and the longest 10.7 was years. The majority had held their position between 3 months and five years.

Results from the questionnaire containing 31 questions relating to employment aspects are presented in Table 3. Cronbach's α was used to test the reliability of the questions. For pooled results, the Cronbach value was 0.91 for responses concerning "joining" the organization and 0.92 for "staying" with the organization. These each comfortably exceed the benchmark value of 0.7 normally chosen for item reliability. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used for testing the suitability for applying factor analysis. The value for KMO was 0.83 and Bartlett's test indicated a significant result indicating the questions were suitable for factor analysis. Principle Components Analysis using a Varimax rotation was applied. Those questions that returned a loading of less than 0.5 and which load on more than one factor were excluded. The final factors with low loadings suppressed for clarity are presented in Table 3.

Eight latent factors were isolated that accounted for just over 70 percent of the variance. The eight factors isolated relate as follows Factor 1 – Job Challenges, Factor 2 – Recognition of self, Factor 3 Non-financial rewards, Factor 4 – Financial rewards, Factor 5 – Company reputation, Factor 6 – Support culture, Factor 7 – Risk aspects and Factor 8 - People related. Composite factors created from these groupings were according to the methods outlined in Hair, Black, Babin, Anderson & Tatham (2006). As the number of component variables was different in each case, an average score was computed from the component variables for each composite factor. The same factors were also applied to responses concerning the reasons for staying with a company. Questions relating to on-going training were confounding variables and loaded onto more than one latent factor. Treated separately they showed no significant differences regarding joining and staying but there were significant differences for the provision of on-going training. This feature was substantially less important for Chinese worker; Australian and Philippine workers were similar in their responses.

Joining Factor Comparisons

The results for desirable features joining the company are presented in Table 4. The composite variables were compared for the three countries using the Kruskal-Wallis test. All but one factor displayed significant differences at the 0.01 level or better. Rewards and company status are much more important to the Philippine group than for either the Chinese or Australian group. The Australian group appears more influenced by stability concerns that do either the Chinese or Philippine groups. Job challenges are slightly more important to Australian IS workers than the Philippine group and much more than the Chinese group.

Table 3. Final rotated factor scores (joining)

	Component							
	1	2	3	4	5	6	7	8
J20 Variety of challenging work projects	.730							
J4 Challenging work assignments	.714							
J5 Provision for on-going training to gain new skills	.702							
J16 The company IT/IS culture	.656							
J10 Opportunities to expand personal skills	.630							
J21 Opportunities for job mobility within the company	.539							
J24 Recognition of my skills by my superiors		.859						
J25 Acknowledgment of effort by superiors		.823						
J23 Recognition of my skills by my co-workers or peers		.789						
J2 Opportunities for sponsored travel			.819					
J28 Opportunities for international work			.767					
J1 Good promotional prospects within the company			.550					
J11 Fringe benefits (eg company shares, car etc)				.796				
J31 Good bonuses based on performance				.715				
J6 A high salary for the industry				.546				
J13 Company reputation nationally					.822			
J14 Company reputation internationally					.716			
J8 Reliable internal communications						.874		
J9 Supportive superiors						.646		
J29 Proximity of company to my home							.782	
J27 There are few opportunities in IT at present							.739	
J17 Company size								.768
J30 Organization is socially active								.646

Extraction Method: PCA.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 9 iterations.

Staying Factor Comparisons

The results for staying with the company are presented in Table 5. All factors exhibited significant differences across the three samples with the Chinese group clearly rating their views much lower than the others. Rewards, reputation and recognition factors are more important to the Philippine group but risk factor are more important to the Australian group.

Differences

Table 6 summarizes the differences in composite responses for joining and staying with a company. In all cases the z-scores are negative suggesting a lessening of attitude towards their employing company. However there are no significant differences for the Australian group for any of the factors at the 0.05 or 0.1 levels. For the Chinese, “people issues” are significantly different with an increase in the positive ranks. For the other groups there was also an increase but the results were not significant. For the Philippine group the situation is quite different with four factors showing a significant difference between the joining and staying responses covering job challenges, recognition of self, financial rewards and risk factors. Non-financial rewards, company reputation and the support culture factors are not significant for the Philippine group at the 0.05 level but are at the

0.1 level. Only the people factor is not from significant at these levels. However these results display a lessening in the reasons for staying compared with those for joining with the exception of company reputation.

DISCUSSION

These preliminary indicators show that there are some differences in expectations of IS/IT professionals based on cultural origins. It appears from the results that remuneration are less important to both Chinese and Australian IS workers than for Philippine IS workers and similarly for non-monetary rewards. Company reputation is more of an attraction for Philippine staff. Australian staff appear to favor broad recognition of to motivate them to join a company. Australian IS workers also indicate factor such as job availability and proximity to home as important and this may indicate a concern for the current job market in Australia

The differences when asked whether the same items that attracted them to join a company also were important in their staying with the company displayed interesting cultural differences. The responses from Australian participants did not show significant changes. People issues were less and significant for the Chinese group but the remaining factor bore no significant differences. For the Philippine IS workers there were several factors that were significantly different at the 0.05

Table 4. Composite factor mean ranks for each country (joining company) (* significant for $p < 0.01$; # not significant $p > 0.05$)

	country	N	Mean Rank
job challenges *	Australia	40	68.61
	China	29	42.03
	Philippines	47	60.05
recognition *	Australia	40	69.74
	China	29	37.03
	Philippines	47	62.18
non-monetary *	Australia	40	52.84
	China	29	44.52
	Philippines	47	71.95
remuneration *	Australia	40	56.65
	China	29	42.40
	Philippines	47	70.01
company status *	Australia	40	53.41
	China	29	38.88
	Philippines	47	74.94
support culture *	Australia	40	63.91
	China	29	41.31
	Philippines	47	64.50
risk factors *	Australia	40	75.83
	China	29	33.28
	Philippines	47	59.32
people factors @	Australia	40	59.93
	China	29	48.76
	Philippines	47	63.30
	Total (all)	116	

Table 5. Composite factor mean ranks for each country (staying with company) - all significant at $p < 0.01$

	Country	N	Mean Rank
job challenges stay	(P14)		
	Australia	40	61.98
	China	29	41.47
	Philippines	47	66.05
recognition stay	Australia	40	57.98
	China	29	39.66
	Philippines	47	70.57
non-monetary stay	Australia	40	51.21
	China	29	45.14
	Philippines	47	72.95
remuneration stay	Australia	40	52.19
	China	29	41.33
	Philippines	47	74.47
company status stay	Australia	40	57.15
	China	29	41.05
	Philippines	47	70.41
support culture stay	Australia	40	60.93
	China	29	42.22
	Philippines	47	66.48
risk factors stay	Australia	40	75.64
	China	29	31.52
	Philippines	47	60.56
people stay	Australia	40	60.84
	China	29	41.60
	Philippines	47	66.94
	Total (all)	116	

level or better. Factors that became more important included Challenges, Recognition, Rewards ($p < 0.1$), Remuneration, Support ($p < 0.1$) and Risks; Company reputation was less important ($p < 0.1$).

The study has its limitations. Firstly, the number of respondents is quite small and this limits the ability to generalize the results. The differences in responses concerning reasons for joining and reasons for staying with a company were obtained at the same time. This of course relies on the ability of the respondent to remember what aspects were the attractions to join the company and this is problematic for those with a longer service. The data were collected in the respondent's home country. The same outcomes may not be present if collected from people working in a foreign country.

The research reported here is preliminary in nature but does suggest that cultural differences may affect IS/IT staff preferences when it comes to rewards and incentives. With the growing internationalization of companies, the increased mobility of staff, and a growing number of staff from different cultures, it should not be assumed that a homogeneous reward/incentive structure is going to satisfy all. More research into this appears warranted.

The instrument used is available on request.

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Table 6. Differences in response joining vs. staying

Test Statistics ^c						
		Asymp. Sig.		Asymp. Sig.		Asymp. Sig.
challstay - job challenges	-.26 ^a	.80	-1.21 ^a	.23	-2.45 ^a	.01
recogstay - recognition of self	-1.61 ^b	.11	-1.61 ^a	.11	-3.06 ^a	.00
rewardstay - non-monetary extras	-.15 ^a	.88	-1.05 ^a	.29	-1.81 ^a	.07
finstay - remuneration	-.78 ^a	.43	-1.25 ^a	.21	-3.28 ^a	.00
reputstay - company status	-.71 ^a	.48	-.36 ^a	.72	-1.74 ^b	.08
supportstay - support culture	-.20 ^b	.84	-1.36 ^a	.17	-1.81 ^a	.07
riskstay - risk factors	-1.00 ^a	.32	-.25 ^a	.80	-2.50 ^a	.01
peoplestay - people factors	-.61 ^b	.54	-2.18 ^b	.03	-.06 ^a	.95
a.						
b.						
c.						

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