Econ. J. of Hokkaido Univ.,
Vol. 30 (2001), pp. 55～68

The Career Anchor Instrument —A Tool for Comparing Japanese and Canadian Career Orientations—

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This paper introduces a twenty-four item Career Anchor instrument to efficiently compare the career orientations of Japanese and Canadians. The instrument, based on Schein's (1990) Career Anchor research, assesses the relative orientations of people along eight dimensions: security, entrepreneur, income, rootedness, service, specialization, management and balance. In order to address cultural differences in survey responses, researchers should transform respondent data before constructing additive scales. The latter point is demonstrated by comparing findings using raw and transformed data.

1. Introduction

There is growing evidence that globalization is leading to the international convergence of management practices (Economist, 2000). This means that, despite the diversity of national models forged since WW II, the potential career paths facing current and future workers from developed countries are becoming similar. Further, globalization by definition means that both labor and capital are becoming more mobile. Therefore employers and employees, and indeed policy-makers of different cultures need to understand each others' expectations. Such mutual understanding is difficult to achieve when job markets are undergoing dramatic changes, such as those likely to be felt in Japan (Lincoln, 1999). Accurate knowledge of the mutual needs of workers and their organizations will, by enabling better fit, lead to more efficient management (Sullivan, 1999).

This paper addresses a key aspect of this fit: the career orientations of potential employees. We do this by developing and demonstrating a simple research process-comprising a research instrument and associated analytical technique—which facilitates the cross-cultural comparison of these orientations amongst Japanese and Canadians about to enter the workforce.

Following, we first argue that a new instrument and related analytical

technique are needed to offer unbiased and reliable cross-cultural comparisons of career orientations. Next, we outline our research methods. We then present the results of our analyses, which illustrate the cross-cultural validity and reliability of our approach. Finally, we offer a discussion of our findings and suggest avenues of future research.

2. Background

Several scales have been used to compare career or job preferences across cultures. Studies using these scales have offered a broad range of valuable assessments of how people in different cultures think about their working lives. However, most of these instruments are not appropriate for wide use for two main reasons. First, they tend to be either very long or not very comprehensive. Second, and most significantly, the scales, because they are typically designed to be administered to actual or potential employees, lack significant types of career orientations: towards entrepreneurship (Katz, 1994) and geographic mobility (or immobility). Our instrument, based on Schein's (1990) Career Anchor work aims to extend this valuable research stream by developing a comprehensive instrument which is of moderate length, yet comprises eight aspects of career values, content and conditions, including entrepreneurship and geographic mobility.

The most comprehensive instruments used for cross-cultural career research are demanding of respondents because they comprise very many items. For example, Hofstede's famed four dimensions were derived from about 60 of 150 items in IBM's international employee attitude surveys (Hofstede and Bond, 1988). Vondracek et al. (1990) used Pryor's (1983) 52 item measure of work values to compare Japanese and Americans. Super, Sverko and Super's (1995) international Work Importance Study (WIS) developed eighteen common, and two optional, five item scales. Ralston et al. (1996) employed Schwartz's (1992) value survey which is made up of 56 items measuring ten sub- and three higher order dimensions of motivational goals. Such lengthy surveys may be feasible for 'captive' respondents; a shorter survey will be more useful for studies of broader populations.

Other studies have employed less onerous measures. Bigoness and Blakely (1996) used Rokeach's (1973) eighteen item Value Survey, based on ranks, for their comparisons across 12 country samples. Harpaz (1990) was most efficient in terms of length: his instrument asked respondents to rank only eleven work goals. Harpaz's (1990) item set is quite comprehensive, but does not address the wish to be either the wish to be entrepreneurial or stay in

one place, both key aspects of career choice.

The ranking approaches are very effective because they allow analysis procedures which can overcome cross-cultural biases, and reveal differences in relative, rather than absolute preferences. The problem with these instruments is that they cannot be very comprehensive, because adding further items to a rank-order instrument can raise demands on respondents.

Why does the method of analysis matter?

There has been no shortage of cross-cultural comparisons of Japanese and North American work or career preferences. However, very few have acknowledged the systematic bias associated with comparing Likert scale scores of Japanese and North Americans, despite the recognized tendency of Japanese (and Chinese) to avoid extreme scale values (Si and Cullen, 1998). Therefore the conclusions reached, while they may not be misleading, are less than convincing.

Several studies show Japanese score consistently low in self report surveys of work values and orientations. The Americans in Lincoln's (1989) study showed higher levels of organizational commitment and job satisfaction than their Japanese counterparts on all ten items measuring these constructs. The Japanese samples in the Work Importance Study (WIS) had low values in most categories of work values and work-role salience (Super and Sverko, 1995: 233, 269), while Canadians and Americans generally had high scores.

Ralston et al's (1997) study, cited above, comparing values of Japanese, Chinese, Russian and U.S. managers found the latter's scores were the highest on six of the range of ten sub-dimensions, and second highest on two more. In contrast, the Japanese were second from the lowest on six of these, and lowest on another. The Americans scored higher than the Japanese in terms of several collectivist and individualistic orientations, even though these constructs are typically negatively correlated.

Vondracek et al's (1990) study further illustrates the problem of bias. Their comparisons of Japanese and American students' work values, ranging from independence to importance of co-workers to altruism, showed American scores were higher than the Japanese on all thirteen scales. In their discussion Vondracek et al. (1990: 283) suggest this outcome could be the result of the "American students' greater likelihood of responding with extreme choices as compared to the Japanese students."

Not all of the conclusions arising from these studies are incorrect. However, given the systematic bias in Japanese survey responses, these findings would stand greater scrutiny if the response bias of Japanese were explicitly addressed. This is the main thrust of Leung and Bond's (1989) work which proposes a technical way "normalization" to do so. In fact, both Hofstede's (1980) and Schwartz's (1992) studies are exemplary because they used standardization procedures in their comparative studies.

3. Methods

Our research program has set out to develop a comprehensive set of measures, in Japanese and English, that enables rigorous cross-cultural comparisons. The Career Anchor instrument presented here builds on our previous work, which in turn was informed both by Schein's (1990) ideas, and research conducted by Japanese researchers, who shared Schein's approach. Each time we added or refined items we have employed back-translation methods (Sekaran, 1983) using multiple bilingual translators and/or university Japanese language instructors.

Schein's (1990) notion of Career Anchors undergirds our approach. These anchors are motives influencing people to choose a type of career in one's working life. His work over several years, identified eight anchors: (1) autonomy/independence, (2) security/stability, (3) technical-functional competence; (4) general managerial competence; (5) entrepreneurial creativity; (6) service or dedication to a cause; (7) pure challenge; and (8) lifestyle. Sakakibara et al. (1993) and Hirano (1994) adopted Schein's proposed scales for use in Japan.

The instrument has evolved in stages through earlier studies. For all items, respondents were asked to indicate on a five point scale from 1, 'completely disagree' to 5, 'completely agree' whether the item statements were true for them. With each iteration we revised the item pool based on debriefings with respondents and factor and reliability analyses. In Tiessen and Firkola (1999b) a thirty-five item scale, providing reliable measures for five dimensions was used. The next study modified the list, and offered forty items, which gave rise to six measures: income, security, entrepreneurship, management (aspiring to a high position), rootedness (unwillingness to move), and lifestyle (work-lifestyle balance) (Tiessen and Firkola, 1999a). This instrument, while effective, was not completely satisfactory because the item response structure it elicited did not result in reliable measures of important career orientations, such as contribution to society and job content specialization, identified by

Schein and others.

This led us to our two stage study in fall 1999. In stage one, 128 MBA students at McMaster University completed a forty-seven item instrument assessing the dimensions of interest. These were analyzed using principal components analysis, with oblique rotation, in order to reduce the number of items and derive a set of comprehensive career orientations (SPSS, 1997). The three highest loading items for each factor were used to compute additive scales which were assessed for reliability using Cronbach Alpha computations. In total eight three item scales were identified: security, entrepreneurship, income, rootedness, service, specialization, management and balance. The items describing these scales are shown in Table 2, introduced below.

In stage two, we applied the new eight scale, twenty-four item instrument to samples of Japanese and Canadian management undergraduates. A key step in our analysis was transforming the scale data in order to reduce the bias associated with differences in how Japanese and Canadians complete self -report surveys. We did this simply by dividing each respondent's item score by her/his overall mean scale score. This transformed data made each respondent's mean item score equal to one. This was necessary, because before this transformation, the mean item score value for the Japanese group was significantly lower than that for the Canadians.

The transformation process we performed was preferred over normalization, as recommended by Leung and Bond (1989), for two reasons. First, the smaller number of items would make the normalization procedure less stable for each respondent. Second we did not want to impose normalized distributions when they may not reflect the actual distributions of scores.

We then conducted three sets of analyses, assessing: (1) scale reliabilities, (2) comparative factor structures in the two national samples, and (3) comparing the effects of gender and nationality on career orientations as assessed using raw and transformed data. For (1) and (2), we used transformed data.

For (3), we regressed dummy variables (0, 1) representing female-male and Japan-Canada on to the eight career orientations. This allowed us to simultaneously test for both types of effects. These regressions were performed using both raw and transformed data in order to demonstrate how addressing response bias affects the research findings.

Table1: Sample Characteristics

	Japan	Canada	Sig. 1
Gender B n, (%)			
Female	29 (29.3)	63 (47.4)	**
Male	70 (70.7)	70 (52.6)	
	99 (100.0)	133 (100.0)	
Age B mean	22.06	22.49	n.s.
Year in Program B n, (%)			
Year 3 or less	74 (74.7)	2 (1.5)	***
Year 4 or more	25 (25.3)	131 (98.5)	
Overall item mean score	3.49	3.71	***

Note : 1. Significance-n.s. not significant, *=0.05, **=0.01, ***=0.001

Sample

The students surveyed comprised matched samples of management students two reputable universities, Hokkaido University (n=99) in Sapporo, Japan and McMaster University (n=133) in Hamilton, Ontario. Table 1 shows their main characteristics.

The Canadian sample had a larger proportion of female students (47.4%) than the Japanese group (29.3%). The mean age of the students, twenty-two, was similar for both groups. Most (75%) of the Japanese were in the third year of their programs, while nearly 99% of the Canadians were in their fourth or (for a five year engineering management degree) fifth year. These groups were comparable because on-campus job recruitment typically commences in third year for Japanese, and the graduating year for Canadian students.

The last row of figures in Table 1 are the mean raw scores for the Japanese and Canadian students on the twenty-four items in the career orientation instrument. These show that the average Japanese score, 3.49 out of a maximum 5, was significantly lower than the Canadian score (3.71). This finding is a key argument for transforming the data as described.

4. The Career Anchor Instrument

Table 2 shows the three items used for each scale, as well as the Cronbach Alpha reliability assessments, based on transformed data. Overall the items tapped a broad array of underlying dimensions reflecting job content, conditions and work-personal life issues.

Table 2: Scale Items and Reliabilities (Cronbach Alphas)

	Alpha Coefficient		
	Japan	Canada	All
Security	0.653	0.723	0.625
1. I would like to work for an organization that provides job security.			
2. I wish to work for a company that can offer a secure job with a good salary and pension.			
3. I hope to work for a company that will provide long term stability.			
Entrepreneur			
1. I am always looking for ideas that would allow me to start my own business.	0.777	0.889	0.831
2. I would like to start up my own business.			
3. I would rather work for myself than join an organization.			
Income	0.640	0.651	0.636
1. I think success in a job is earning a high income.			
2. The most attractive jobs to me are those that have the highest income.			
3. When I search for a job, a high starting salary is very important for me.			
Rootedness	0.697	0.786	0.744
1. I would rather *not* be required to work abroad.			
2. I would like to work for an organization that will allow me to stay in one geographic area.			
3. I would rather stay where I reside than relocate for a promotion.			
Service	0.663	0.719	0.694
1. It is important that my job contributes to improving the quality of the local community.			
2. I want a job in which I can be of service to others.			
3. I think that the largest rewards in a job come from helping other people.			
Specialization	0.767	0.719	0.693
1. I want a job in which I work in one functional area (e.g.accounting or marketing) rather than being moved around to work in several departments.			
2. In my job I would rather be a specialist than a generalist.			
3. In my job I want to work only in one area of specialization.			

Table 2: Scale Items and Reliabilities (Cronbach Alphas)

	Alpha Coefficient		
	Japan	Canada	All
Management	0.527	0.489	0.558
1. I would like to reach a high level executive position.			
2. I think success in a job is reaching a high level executive position in an organization.			
3. I would like a job in which I am in charge of the entire organization.			
Balance	0.724	0.720	0.717
1. I think that real success is maintaining a balance between ones work and private life.			
2. I hope to have a job which allows me to keep a balance between my work and private life.			
3. I think a balance between my work and private life is more important than receiving a high ranking position in a company.			

Table 3: Principal Component Analysis of Scale Items

	Security/ Entrepreneur		Income		Rootedness		Service	
	Japan	Can.	Japan	Can.	Japan	Can.	Japan	Can.
Want org. with job security	0.744	0.749						
Secure job and pension	0.768	0.786						
Long term stability	0.641	0.793						
Success is high income			0.761	0.773				
Attractive jobs have high income			0.746	0.774				
High starting salary impt.			0.590	0.643				
Not work abroad					-0.743	-0.820		
Stay in 1 geog. area					-0.83	-0.840		
Stay rather than promotion					-0.752	-0.767		
Ideas for own business	-0.598	-0.591				0.630		
Would like to start business	-0.630	-0.615				0.594		
Work for myself	-0.664	-0.538				0.480		
Improve quality of community							0.768	0.655
Service to others							0.773	0.711
Helping other people							0.672	0.814
One functional area								
Specialist not generalist								
One area of specialization								
Want high level executive								
Success is high executive								
Would like to be in charge								
Success is balance								
Hope for job with balance								
Balance more important								

Note: (1) Oblique rotation

Table 3 (continued): Principal Component Analysis of Scale Items

	Specialization		Management		Balance	
	Japan	Can.	Japan	Can.	Japan	Can.
Want org. with job security						
Secure job and pension						
Long term stability						
Success is high income						
Attractive jobs have high income			−0.568			
High starting salary impt.						
Not work abroad						
Stay in 1 geog. area						
Stay rather than promotion						
Ideas for own business						
Would like to start business						
Work for myself						
Improve quality of community						
Service to others						
Helping other people						
One functional area	−0.798	0.769				
Specialist not generalist	−0.783	0.736				
One area of specialization	−0.844	0.769				
Want high level executive			0.503	0.780		
Success is high executive			0.737	0.592		
Would like to be in charge	0.590		0.176	0.495		
Success is balance					0.835	0.830
Hope for job with balance					0.763	0.843
Balance more important					0.756	0.696

Note: (1) Oblique rotation

All of the Cronbach alphas for the Japanese and Canadian subsets and the overall sample were above a 'minimally acceptable' level of reliability (alpha=0.60), with the highest for the entrepreneur and rootedness scales.

Factor analysis: Comparing the structures of the Japanese and Canadian responses

We performed separate principal component analyses using transformed scores for the twenty four items in the career orientation instrument. The factors were rotated obliquely because previous studies had indicated relationships between several of the constructs (SPSS, 1997; Tiessen and Firkola, 1999 a). Table 3, which depicts all loadings greater than 0.4, shows that the structures of the Japanese and Canadian students career orientations were similar overall. The same analysis indicates though that the twenty-four items repre-

sent seven, not eight, factors.

For both the Japanese and Canadians the three security items loaded heavily and negatively on the entrepreneur factor 'labeled the security/entrepreneur factor' indicating that these items comprise a single dimension. This was the most significant factor, accounting for 15% and 20% of the variance respectively for the Japanese and Canadians. While we are treating these as separate scales in our analysis, these items could also be used as a single scale, as proposed in our discussion below.

The Japanese and Canadian loadings on the income, service and balance scales were similar. However there were some differences in terms of cross-loadings. The rootedness factor had only three unique loadings for the Japanese. However for the Canadians, the entrepreneur items all loaded heavily and negatively on this factor. This indicates that entrepreneurship was linked to mobility for the Canadians, but not for the Japanese.

The Japanese sample had large cross-loadings on two factors. One of the general management items, wanting to be in charge of an entire organization, was negatively related to specialization. An interesting finding was that seeking a high management position was negatively linked to the attraction of high incomes in jobs. This could have been the result of a public service orientation of several of the students in a national university like Hokkaido.

One of the twenty-four loadings was lower than expected for the Japanese sample. The desire to be in charge of an entire organization, a management orientation, did not reach the minimum 0.40 loading threshold.

Using raw and transformed data

The results of our regression analyses show that the choice to use transformed, rather than raw data leads to quite, but not completely different findings. As seen in Table 4, analysis of the effects of gender and nationality on the eight orientations led to nine links statistically significant at the 95% confidence level or higher when raw data was used. The same regressions, when performed using transformed data, revealed eight such links. However, only five on the findings, clearly the most stable, were the same in both cases.

The use of transformed rather than raw data did not change the direction of effects; rather it acted to make some statistically significant findings insignificant, and vice versa.

Table 4 : Effects of gender and nationality on Career Orientations

	Raw data 1			Transformed data 2		
	Gender 3	Nationality 4	Sig. 5	Gender	Nationality	Sig.
Security		C > J	***	F > M		*
Entrepreneur	M > F	C > J	***	M > F	C > J	***
Income		C > J	***			n.s.
Rootedness			n.s.			n.s.
Service	F > M		*	F > M	J > C	***
Specialization		J > C	n.s.		J > C	***
Management	M > F	C > J	***		C > J	***
Balance		C > J	***	F > M		*

Notes:
1. Regressions using scale scores computed by summing three item values.
2. Regressions using scale scores computed by summing three item values, each divided by the respondent=s overall mean item value.
3. Statistically significant effects of gender on Career Orientation (" =0.05). F = female, M = male.
4. Statistically signficant effects of nationality on Career Orientations (" =0.05). J = Japan, C = Canada.
5. Statistical significance of Gender-Nationality model.
n.s. = not significant, * =0.05, * * =0.01, * * * =0.001.

The five findings that are similar when raw and transformed data are used highlight strong relationships between the orientations studied and gender and nationality. The ties identified in this study are: (1) men are more entrepreneurial than women, (2) Canadians are more entrepreneurial than Japanese, (3) women are more oriented to service than men, (4) Japanese are more oriented to specialization than Canadians, and (5) Canadians are more oriented towards management than Japanese. Three of these findings '(1), (2) and (5)' are consistent with those in previous work (Tiessen and Firkola, 1999). The other two were not tested for earlier.

The interesting differences revealed by the use of transformed data bear examination. First, the raw data suggested that the Canadians were more oriented towards security than the Japanese, a surprising outcome given Japan's traditional management practices (Lincoln, 1999). The transformed data did not reveal the expected outcome; it did though show that women were more oriented towards security than men. This finding is consistent with the negative relationship between this anchor and entrepreneurship revealed by the factor analysis above.

Second, the higher Canadian orientation towards income, as indicated by the raw data, was rendered statistically insignificant when the transformed data was used. Third, the transformed data showed the Japanese were more oriented towards service than the Canadians. This was not seen in the raw

data. Another different finding, that males were more oriented towards management than females, also disappeared when the data was transformed.

Finally, the importance of balance between one's private and work life was apparently more important for Canadians than Japanese, when raw data was employed. However, when the scores were transformed, the more expected outcome, that females were more likely to seek balance than males, emerged.

5. Discussion

The Career Anchor instrument offers an efficient means of making cross-cultural, Japan-Canada, comparisons of a broad range of job preferences. The eight scales, besides measuring work values and job content, also offer indicators of the relative importance of entrepreneurship and employment conditions. Principal component analysis suggests that the structures of the item sets are similar between the Japanese and Canadian samples. The reliabilities of the scales, while low are nonetheless adequate. These scales are more valid when the Japanese response bias is addressed by transforming item response sets individually.

As the principal components analyses showed, a key problem with the item set is that there are several cross-loadings between scales. The most significant is the significant and negative link between security and entrepreneurship, both important career orientations. A simple and valid solution would be to employ a six item scale, and treat this as a bi-polar scale.

The key limitation of the instrument as presented is that it has not yet been tested widely. It is likely that the dimensions of orientations will be delineated more clearly when students in other disciplines, such as education and engineering, or institutions, such as technical colleges or *tandai* are assessed. Further, the instrument will gain further validity when employed for studies of the orientations of those in the work force. This type of subject typically will have a better idea of what is feasible and desirable. That said, this study's use of an MBA population to develop the instrument was a step in this direction.

6. Conclusion

Cultural and institutional factors have given rise to international differences in human resource practices. However globalization, by increasing both competitive pressures and the incidence of cross-cultural management, is leading to a convergence of these policies. Under these conditions it is impor-

tant for workers and employers to be aware of the other's expectations, if they both are to achieve agreeable and efficient levels of mutual fit.

The twenty-four item Career Anchor instrument introduced here has been rigorously developed. The instrument offers a way of monitoring, and making cross-cultural comparisons of the career orientations of Japanese and Canadians, in an efficient fashion. This is because it is both comprehensive and short, meaning it places limited demands on respondents. It can be a useful tool to track the evolution of attitudes as the employment environment they are facing changes. While doing so, it is vital that researchers address the bias created by cultural differences in response patterns by properly transforming the data collected.

In a broader fashion, the survey can be used to establish baseline, and subsequently changes in the career orientations of those in other cultures, such as in Europe, India and China. Significantly for policy makers, by identifying entrepreneurship, the research helps tag an important contributor to growth, innovation and flexibility in national economies. Such a research program can contribute significantly to understanding how globalization can be understood and addressed at individual and organizational levels.

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