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Volume 47, Number 3, 1992

URI: https://id.erudit.org/iderudit/050789ar
DOI: https://doi.org/10.7202/050789ar

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Publisher(s)
Département des relations industrielles de l’Université Laval

ISSN
0034-379X (print)
1703-8138 (digital)

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Article abstract
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Managers and researchers have paid considerable attention to organizational commitment, mainly because it has been shown to be a

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** The two authors contributed equally to this research. An earlier version of this paper was presented at the annual meeting of the Academy of Management, San Francisco (1990). The authors would like to thank Shamsul Alam for his statistical advice and Suzanne Kiely for her editorial assistance. Usual disclaimers apply. Financial support for this research project was in part provided by the University of Lethbridge Research Fund under Contract No.86-1934-405, and by a grant from the Alberta Manpower "STEP" Program, Contract No.11149. The views expressed in this paper are the authors' own and are not necessarily shared by these organizations. Portions of this paper were written while the author was at the Stanford Centre for Organizations Research at Stanford University.

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Relat. ind., vol. 47, no 3, 1992 © PUL ISSN 0034-379 X 439
predictor of important organizational outcomes such as turnover, absenteeism, and tardiness (e.g. Angle and Perry 1981; Mowday, Porter and Steers 1982; Baba and Knoop 1987). Organizational commitment, unlike satisfaction, is a relatively stable employee attitude. It can be defined as a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the firm and a strong desire to remain in the organization (Porter, Steers, Mowday and Boulian 1974).

Organizational commitment is an international phenomenon affecting both management and lower level employees. If research in this area is to remain relevant, a substantially greater proportion of studies needs to go beyond the purely domestic perspective (Adler 1983; Kohn 1989). Studies which compare the organizational commitment of workers in different countries have recently gained more attention (e.g. Lincoln and Kalleberg 1985; Luthans, McCaul and Dodd 1985; Near 1989). However, most of this cross-national research has focused on countries with vastly different societal cultures (e.g. Japan and the USA). The main conclusion of most research comparing commitment in Japan and the USA has been that differences are not as significant as expected (Lincoln and Kalleberg 1985; Luthans, Baack and Taylor 1987; Marsh and Mannari 1971, 1972 and 1977; Near 1989). Most importantly, the differences that do exist are hard to explain as cultural values, norms and beliefs are so vastly different that certain commitment items used in the USA cannot be included in the survey instrument given to Japanese workers (Hanada 1984). Near (1989) used the common Porter et al. (1974) commitment scale for comparing models of commitment between Japanese and American production workers. She found that Americans demonstrated higher levels of organizational commitment. Based on these findings she suggested that the Western conception of commitment may simply not apply to this other culture because "Western concepts and measures of commitment may not explain the sentiment that Japanese workers feel towards their organizations" (Near 1989: 294). It would seem that before further comparisons of extremely diverse cultures are made, there is a need to investigate whether the development of commitment is different in similar cultures and countries (Bhagat and McQuaid 1982) in which the same commitment measures and concepts can be applied. Quite surprisingly, there is almost no such cross-national research even though this approach would enable an examination of the assumption that the development and processes of organizational commitment are similar in countries whose societal cultures are comparable. Understanding of such similarities and/or differences would also assist the development of more appropriate models and hypotheses to be used when comparing countries with extreme cultural differences.
This paper reports on an empirical study which examined differences in organizational commitment between Canada and the United States. We used the side-bet theory as the conceptual framework for examining these differences. Side-bet theory specifically refers to cross-national issues when dealing with organizational commitment. This paper assesses the importance of this theory for explaining organizational commitment cross-nationally. Increasing our comprehension of differences in the process and development of organizational commitment between cultures may better our understanding of the nature of the processes through which people chose to identify with objects in their environment and find purpose in life. In this way we increase our understanding of society (Mowday, Porter and Steers 1982, chap. 1).

THEORETICAL FRAMEWORK

A major limitation of previous research on cross-national differences and/or similarities in organizational commitment is the lack of a theoretical framework. Two views of organizational commitment have dominated the literature (Griffin and Bateman 1986). The first sees commitment as affective or attitudinal and has been called the "organizational behaviour" (Staw 1987) or "psychology" (Near 1989) approach. This view sees the individual as identifying with the organization and, therefore, committed to maintaining membership in order to pursue his/her goals. This treatment of commitment perhaps has its most frequently cited origins in the work of Porter and his associates (e.g. Porter, Steers, Mowday and Boulian 1974; Mowday, Porter and Steers 1982) and has been termed affective commitment (Meyer and Allen 1984) and value commitment (Angle and Perry 1981). A different approach to commitment has its basis in Becker's (1960) side-bet theory which is an exchange-based approach (Griffin and Bateman 1986). The term side-bet has been used by Becker (1960) to refer to the accumulation of investments valued by the individual which would be lost or deemed worthless if he/she were to leave the organization. According to this view, the individual is bound to the organization by extraneous factors, such as income and hierarchical position, and intraneous factors, such as "knowing the ropes" and interpersonal relationships. The loss of friendships and seniority rights can also be a factor when changing employers.

Side-Bet Indexes

The basic strategy for testing the side-bet theory has been to demonstrate that commitment increases as the number or size of side-
bets increases. Age, organizational tenure, hierarchical level, education and income are some of the variables that have been associated with commitment. These variables have been used to test the side-bet theory as proposed by advocates of Becker (Alutto, Hrebiniaik and Alonso 1973; Ritzer and Trice 1969; Sheldon 1971; Shoemaker, Snizek and Bryant 1977). Seven side-bet indexes were included in our study: age, tenure, education, marriage, gender, salary and position.

Ritzer and Trice (1969) argued that side-bets should accumulate over time. For instance, through increased tenure the employee gains seniority and connections within the organization (Becker 1960). Data also indicate that older employees are less likely to change firms than are their younger counterparts (Carter 1988). This suggests that age and tenure should be the best indicators of investments in the employing organization (Meyer and Allen 1984).

Education was included as a side-bet index based on the idea that the less education one has, the fewer the career alternatives available (O'Reilly and Caldwell 1981). A low level of education increases the number of side-bets an employee must make in the organization (Ritzer and Trice 1969: 476) and this should increase his/her commitment. The inclusion of marriage as an index was based on the understanding that marriage is often synonymous with greater responsibilities and, therefore, with a person who is less willing to loose his/her investments in the employing organization (Ritzer and Trice 1969). Gender was considered as a side-bet variable "because of its central relationship with marital status and its attendant role responsibilities" (Alutto, Hrebiniaik and Alonso 1973: 452).

The rationale for including salary as a side-bet index was that those with higher salaries have more to lose and, therefore, are presumably less likely to leave their organizations (Ritzer and Trice 1969). Position was considered as an investment "because higher positions are supervisory positions, which over an extended period of time may result in some loss of professional competence and so limit alternatives" and because "supervisory positions are a reward from the organization ...which should enhance [the employee's] identification" (Sheldon 1971: 145).

**Side-Bet Theory in a Cross-National Context**

Unlike the psychological theory, Becker's side-bet theory refers to possible implications of cross-national differences in organizational commitment. Becker (1960: 36) argued that "a person sometimes finds that he has made side-bets constraining his present activity because the
existence of generalized cultural expectations provides penalties for those who violate them." He further maintained that:

For a complete understanding of a person's commitment we need...an analysis of the system of values or, perhaps better, valuables with which bets can be made in the world he lives in ... In short, to understand commitment fully, we must discover the systems of value within which the mechanisms and processes described earlier operate (Becker 1960: 39).

According to the side-bet theory, one would expect that, as much as calculative commitment can be developed to varying degree in all cultures, it is the nature and the magnitudes of the different side-bets that will differ from one nation to another. While Canadians and Americans are generally assumed to be similar in their work values (Griffeth, Hom, DeNisi and Kirchner 1985; Gattiker and Nelligan 1988), a noticeable difference in commitment side-bets could be indicative of differing values and beliefs.

A literature review revealed several theoretical and practical implications of previous research. Firstly, Becker's side-bet theory can provide an appropriate framework for examining cross-national differences because the effects of cross national differences on commitment are one of the basic assumptions of the theory. Secondly, recent works (Cohen and Lowenberg 1990; McGee and Ford 1987; Meyer an Allen 1984) criticize the side-bet theory, arguing that the theory is either not valid or was examined incorrectly. As one of the assumptions of the theory is that side-bets might operate differently in dissimilar cultures and value systems, a cross-national comparison of the theory may prove an appropriate way of testing the validity of the theory. Thirdly, cross-national research should be applied to the verification of any social theory to establish the generalizability of relationships and the limits for applying the theory across different populations (Triandis and Vassiliou 1972). Yet, despite the attributed importance of side-bet theory in a cross-national context (Becker 1960), past research has not verified the theory across national boundaries using all side-bet indexes. If side-bet theory is to meet the criteria for universality, replication of results across national boundaries must be accomplished (Bhagat and McQuaid 1982; Kohn 1989; Novak 1989).

Method

Design and Subjects

Canada. A stratified sample of twenty-eight employers was asked to participate in the survey. Of these twenty-eight, ten were firms selected at random from the Globe and Mail's annual roster of Canada's largest
organizations, twelve were medium-sized firms from Western Canada, three were educational institutions, and three were government agencies. As organizational type was not a variable of interest, organizations were recruited randomly from Alberta and British Columbia within each classification. The educational and government institutions were included because they brought potentially different organizational cultures and constructs of effectiveness to the sample, allowing for more reliable generalizations from the findings (cf. Blalock 1984, chap.4).1

All employers were asked to select three to six managers (female and male) and a similar number of support personnel from a variety of departments, and to distribute a questionnaire to each of these individuals.2 Surveys were returned directly to the researcher. Of the 380 people asked to participate in the study, 340 agreed and 306 responses were ultimately received (90%); 202 (66%) of the respondents were female, 196 (65%) were married, and 150 (44%) were managers.

*United States.* A stratified sample of fifteen employers was asked to participate: five were firms selected at random from the *Fortune 500* list, five were medium-sized firms from the Western U.S., three were educational institutions and two were government agencies. Except for the stipulation of locale (California, Utah and Oregon), organizations were recruited randomly within each group. The same procedure described for Canada was used for U.S. respondent selection. Of the 200 people asked to participate in the study, 185 agreed and 157 responses were ultimately received (85%). 74 (47%) of the respondents were female, 61 (39%) were managers and approximately 106 (68%) were married.

Instrument and Measures

Employee commitment was measured by the fifteen item *Organizational Commitment Questionnaire* (OCQ) (Porter et al. 1974) so that results of this study might be compared with previous work. Four other reasons contribute to the rationale behind using this scale (e.g., Meyer and Allen 1984; Ritzer and Trice 1969). (1) The Porter et al. scale is the most popular scale and its continued use has in a sense made it "the" approach to organizational commitment (Reichers 1985). (2) Most research examining the side-bet theory has used this measure when exploring the relationship between side-bet indices and measures of organizational commitment (Cohen and Lowenberg 1990). (3) The Porter

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1 All organizations contacted, except for one, were willing to participate.
2 Participation by employees was voluntary and selection of participants was made at random by the Vice-President Human Resources (or equivalent). The data includes employees from various departments and levels of the hierarchy.
et al. measure has demonstrated good psychometric properties and has been used over a wide range of job categories (Mowday, Steers and Porter 1979; Mowday, Porter and Steers 1982). (4) While the Porter et al. measure has been used extensively in cross-national research, the Meyer and Allen (1984) scale is rarely used and to our best knowledge has not yet been tested for its applicability in a cross-national context.

For Canada, Cronbach's alpha was .90 for the Porter et al. measure, while for the U.S. it was .93. Following the work of Angle and Perry (1981) and based on the results of a factor analysis, two subscales were created: value-moral commitment (Canada, alpha = .89; U.S., alpha = .93) and calculative commitment – commitment to stay (Canada, alpha = .79; U.S., alpha = .86). These subscales appear to differentiate between the individual's commitment and support of organizational goals and his/her commitment to remain as an organizational member. This interpretation of the two factors as value versus calculative is supported by Morrow (1983).

Table 1 indicates the factor loadings and shows which items were included in each of the subscales. Two items loaded significantly on both factors and were thus excluded from further analyses (Rummel 1970). In order to assess the stability of the factor structure obtained, cross-validation was achieved by randomly dividing the sample and conducting a new pair of factor analyses. The factor-loading patterns for these analyses were virtually identical with those for the overall sample in each country (i.e., separate factor analyses were done for Canada and the U.S.). Hence, the factor structure appeared quite stable and is corroborated by other U.S. studies (e.g., Angle and Perry 1981; Mowday, Porter and Steers, 1982: 223-224).

The two factors obtained appear to be conceptually distinct, as the value commitment scale includes items connoting pride in association with the organization (i.e., identification), willingness to perform for the firm and concern for its fate, as well as congruence of personal values with those of the organization (Morrow 1983). The calculative commitment scale contains a number of items relating to the individual's intention to retain membership in the firm. Unlike the items loading on Factor 1, these items do not represent an affective-value bond to the organization. Instead they represent a calculated involvement based on side-bet theory (Becker 1960). Furthermore, the scale measuring

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3 Subsequently, we will refer to value/moral commitment as value commitment and calculative commitment/commitment to stay as calculative commitment.

4 One of the two items loading highly on both factors (this organization really inspires the very best in me in the way of job performance) has been reported to do the same in previous studies (e.g., Mowday, Porter and Steers 1982: 223-224).
<table>
<thead>
<tr>
<th>Item</th>
<th>U.S. Communality Loadings</th>
<th>U.S. Factor Loadings</th>
<th>CANADA Communality Loadings</th>
<th>CANADA Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Value Commitment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am willing to put in a great deal of effort beyond that normally</td>
<td>.59</td>
<td>.77</td>
<td>.58</td>
<td>.55</td>
</tr>
<tr>
<td>expected in order to help this organization be successful</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I talk up this organization to my friends as a great employer</td>
<td>.70</td>
<td>.77</td>
<td>.61</td>
<td>.66</td>
</tr>
<tr>
<td>I feel very little loyalty to this organization</td>
<td>.62</td>
<td>-.78</td>
<td>.45</td>
<td>-.13</td>
</tr>
<tr>
<td>I am proud to tell others that I am part of this organization</td>
<td>.67</td>
<td>.77</td>
<td>.64</td>
<td>.63</td>
</tr>
<tr>
<td>I am extremely glad I chose this organization to work for over others</td>
<td>.54</td>
<td>.63</td>
<td>.56</td>
<td>.67</td>
</tr>
<tr>
<td>I really care about the fate of this organization</td>
<td>.67</td>
<td>.80</td>
<td>.49</td>
<td>.56</td>
</tr>
<tr>
<td>Deciding to work for this org. was a definite mistake on my part</td>
<td>.50</td>
<td>-.53</td>
<td>.51</td>
<td>-.32</td>
</tr>
<tr>
<td>Variance explained per factor</td>
<td>48.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>7.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Continuance Commitment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would accept almost any type of job assignment in order to keep</td>
<td>.50</td>
<td>.70</td>
<td>.44</td>
<td>.18</td>
</tr>
<tr>
<td>working for the organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I could just as well be working for a different organization as long</td>
<td>.48</td>
<td>-.69</td>
<td>.39</td>
<td>.57</td>
</tr>
<tr>
<td>as the type of work was similar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would take very little change in my present circumstance to cause</td>
<td>.47</td>
<td>-.58</td>
<td>.49</td>
<td>.68</td>
</tr>
<tr>
<td>me to leave this organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There's not too much to be gained by sticking with this organization</td>
<td>.50</td>
<td>-.43</td>
<td>.51</td>
<td>.66</td>
</tr>
<tr>
<td>indefinitely</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often I find it difficult to agree with this organization's policies</td>
<td>.44</td>
<td>-.55</td>
<td>.43</td>
<td>.62</td>
</tr>
<tr>
<td>on important matters relating to its employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For me this is the best of all possible organizations to work for</td>
<td>.72</td>
<td>.65</td>
<td>.61</td>
<td>-.41</td>
</tr>
<tr>
<td>Variance explained per factor</td>
<td>8.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>1.28</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The above factors were obtained using principal components analysis (SPSSx PA1). Orthogonal varimax rotations were performed on the data. Only loadings greater than .25 were statistically significant (p < .001), according to the Burt-Banks criterion (Child 1970). Factors were selected based on Eigenvalues (>1.00, see Kaiser 1970) and a Scree-test (Cattell 1966).

The following items loaded high on both factors and were thus left out in all subsequent analyses: I find that my own personal values and the organization's values are very similar; this organization really inspires the very best in me in the way of job performance.
calculative commitment is quite similar to that used by Meyer and Allen (1984) in testing the side-bet theory. For example, two of the sample items of the measure developed by Meyer and Allen (1984), "It would be very hard for me to leave my organization right now, even if I wanted to" and "It would not be too costly for me to leave my organization in the near future" (reversed scaling), are similar in their meaning to some of the following items from the calculative factor of the Porter et al. measure: "It would take very little change in my present circumstances to cause me to leave this organization", "There's not much to be gained by sticking with this organization indefinitely" or "I would accept almost any type of job assignment in order to keep working for the organization" (see Table 1). Because of the overlap of these measures and the fact that Meyer and Allen's measure (1984) had been used in only four studies and never in a cross-national context, we felt that for comparability of our study in testing side-bet theory, using the Porter et al. measure would be beneficial.

**Empirical Model**

The model presented here is based on the side-bet theory and is in accordance with previous works which have examined this theory (e.g., Alutto, Hrebinjak and Alonso 1973; Cohen and Lowenberg 1990; Meyer and Allen 1984; Ritzer and Trice 1969; Sheldon 1971; Shoemaker, Snizek and Bryant 1977; Stevens, Beyer and Trice, 1978). However, in contrast to previous research, this model tests the usefulness of the structural side-bet theory in a cross-national setting as suggested by Becker (1960) and Novak (1989).

This study estimated the effects of all the side-bet variables upon value commitment and calculative commitment, as well as the overall commitment scale proposed by Porter et al. (1974). The following regression models were estimated:

\[
\begin{align*}
O\text{COM} &= \beta_0 + \beta_1(\text{AGE}) + \beta_2(\text{TEN}) + \beta_3(\text{MGT}) + \beta_4(\text{Y}) + \beta_5(\text{ED}) + \beta_6(\text{M}) + \beta_7(\text{G}) + \epsilon \\
C\text{COM} &= \beta_0 + \beta_1(\text{AGE}) + \beta_2(\text{TEN}) + \beta_3(\text{MGT}) + \beta_4(\text{Y}) + \beta_5(\text{ED}) + \beta_6(\text{M}) + \beta_7(\text{G}) + \epsilon \\
V\text{COM} &= \beta_0 + \beta_1(\text{AGE}) + \beta_2(\text{TEN}) + \beta_3(\text{MGT}) + \beta_4(\text{Y}) + \beta_5(\text{ED}) + \beta_6(\text{M}) + \beta_7(\text{G}) + \epsilon
\end{align*}
\]

Table 2 gives the variable definitions used in this study. A table of scale means and standard deviations is included to provide the relevant descriptive analysis of the data (see Table 3).

Results in Table 3 demonstrate that there are almost no differences between the two samples in their levels of organizational commitment. The Canadian employees were more committed than the American sample for all three commitment measures, but the difference was only significant for the calculative commitment factor (\(p < .05\), using a two-tail \(t\)-test).
### Table 2

**Variable Definitions**

**DEPENDENT VARIABLES**

- **VCOM**: Value commitment, a continuous score made up of 7 items, ranging from 5 (high belief in organizational values) to 1 (do not believe in organizational values)
- **CCOM**: Continuance commitment, a continuous score made up of 7 items, ranging from 5 (high belief in organizational values) to 1 (do not believe in organizational values)
- **OCOM**: Organizational commitment, a continuous score made up of 15 items, ranging from 5 (high organizational commitment) to 1 (low organizational commitment)

**SIDE-BET VARIABLES**

- **AGE**: Actual age of respondent
- **ED**: 1 if completed a B.A. degree, zero otherwise
- **M**: 1 if married, zero otherwise
- **TEN**: 1 if organizational tenure is above four years, zero otherwise
- **Y**: Actual monthly earnings of respondent
- **MGT**: 1 if manager, zero otherwise
- **G**: 1 if female, zero otherwise

**INDEPENDENT VARIABLES**

### Table 3

**Means and Standard Deviations of Selected Variables**  
(Standard Deviation obtained)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Canada</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>32.40 (9.20)</td>
<td>38.46 (11.02)</td>
</tr>
<tr>
<td><strong>B.A. Degree</strong></td>
<td>.41 (.49)</td>
<td>.59 (.49)</td>
</tr>
<tr>
<td><strong>Married</strong></td>
<td>.65 (.48)</td>
<td>.68 (.47)</td>
</tr>
<tr>
<td><strong>Tenure</strong></td>
<td>.47 (.50)</td>
<td>.48 (.50)</td>
</tr>
<tr>
<td><strong>Earnings</strong></td>
<td>23230.36 (12858.68)</td>
<td>28011.82 (13890.09)</td>
</tr>
<tr>
<td><strong>Hierarchical</strong></td>
<td>.30 (.46)</td>
<td>.54 (.50)</td>
</tr>
<tr>
<td>Level</td>
<td>.66 (.47)</td>
<td>.47 (.50)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td>3.28 (.55)</td>
<td>3.19 (.48)</td>
</tr>
<tr>
<td>to Stay</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value</strong></td>
<td>2.70 (.46)</td>
<td>2.68 (.49)</td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>2.99 (.32)</td>
<td>2.94 (.28)</td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Regression Results

Table 4 presents the regression results for the two samples, the total of the two commitment factors and the overall commitment measure.

Before considering the details of commitment differences between Canadian and American respondents, it was necessary to determine whether it was correct to assume that the parameters changed in moving from a model which constrained Canadian and U.S. participants to be the same (one overall regression including both countries) to a model was unconstrained with respect to nation (separate regressions for the Canadian and U.S. samples). To do this, a 'Chow' test was employed (see Kennedy 1985: 87-88 for formal derivations) between the constrained (Canadian and U.S. respondents combined) and unconstrained models (separate regressions for Canadian and U.S. respondents). The F-statistic for nation is the test statistic corresponding to the null hypothesis of overall equality of structures; this hypothesis could be rejected as all F's obtained were statistically significant (p<.05). Hence, for Canadian and U.S. respondents, culture was found to be a significant factor when assessing organizational commitment.

Differences Between Canada and the United States

Results in Table 4 show that the side-bet indexes explained an insignificant amount of the variance in organizational commitment in all of the models, except for calculative commitment (Canadian sample). Probably the most important finding was that side-bet indexes appear to have a stronger effect when trying to predict calculative commitment than did either value commitment or the 15 item overall commitment questionnaire (OCQ).

The data in Table 4 also reveal that, in all the regressions, marital status and organizational tenure were of no significance in predicting commitment. Moreover, hierarchical level was significant only for the combined sample in predicting the overall commitment scale (see Table 4).

5 The Chow test is based on the F-test and compares the residuals obtained for each regression for the constrained model (including respondents from both countries) model versus the unconstrained model (a separate regression for either of the two countries). If the Chow test results in a significant F (p<.05), the beta weights obtained for the separate regressions for Canada and the U.S. are significantly different from those obtained for the overall regression (i.e. the overall sample) and cross-national differences exist.
TABLE 4
Side-Bet Variables Affecting Organizational Commitment: Regression Results for Canada and USA
(F.-test in parentheses)

<table>
<thead>
<tr>
<th>Independent Side-bet Variables</th>
<th>Commitment to Stay</th>
<th>Value Commitment</th>
<th>Overall Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Canada</td>
<td>USA</td>
<td>Combined Sample</td>
</tr>
<tr>
<td>Constant</td>
<td>2.66</td>
<td>3.23</td>
<td>2.90</td>
</tr>
<tr>
<td></td>
<td>(288.53*)</td>
<td>(296.32*)</td>
<td>(605.85)</td>
</tr>
<tr>
<td>Age</td>
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<td>.003</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>(.067*)</td>
<td>(.47)</td>
<td>(1.28)</td>
</tr>
<tr>
<td>B.A. Degree</td>
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<td>-.18</td>
<td>-.05</td>
</tr>
<tr>
<td></td>
<td>(.28)</td>
<td>(4.02*)</td>
<td>(.88)</td>
</tr>
<tr>
<td>Married</td>
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<td>-.09</td>
<td>-.07</td>
</tr>
<tr>
<td></td>
<td>(.133)</td>
<td>(.90)</td>
<td>(1.40)</td>
</tr>
<tr>
<td>Tenure</td>
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<td>.01</td>
<td>-.06</td>
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<tr>
<td></td>
<td>(2.41)</td>
<td>(.02)</td>
<td>(1.12)</td>
</tr>
<tr>
<td>Earnings*</td>
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<td>8.04E-06</td>
<td>9.83E-06</td>
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<tr>
<td></td>
<td>(10.79*)</td>
<td>(4.36*)</td>
<td>(14.86*)</td>
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<tr>
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<td>-.07</td>
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<tr>
<td></td>
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<td>(1.21)</td>
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<tr>
<td>Gender</td>
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<td>.15</td>
<td>.18</td>
</tr>
<tr>
<td></td>
<td>(5.97*)</td>
<td>(2.62)</td>
<td>(8.44*)</td>
</tr>
<tr>
<td>R2 adjusted</td>
<td>.06*</td>
<td>.02</td>
<td>.04</td>
</tr>
<tr>
<td>Standard error</td>
<td>.53</td>
<td>.47</td>
<td>.52</td>
</tr>
</tbody>
</table>

N. of cases: 287 140 427 285 142 427 283 139 427

Note: To examine whether an unrestricted model (separate regression based on country) mattered a Chow test was performed (for further explanation see also text) for each scale used. The results were significant (p<.05).

*p<.05
**p<.10
Looking at age and education, the variables affect commitment differently in the two countries. Age has a positive effect on calculative commitment and a negative effect on value commitment in Canada. The reverse is true for the U.S. Education negatively affects calculative commitment while positively affecting value commitment for the U.S. sample. Canadian results indicate the opposite. Interestingly enough, neither predictor variable was significant in explaining the overall commitment scale. Another interesting cross-national (cultural) difference is that while gender was an important predictor for calculative commitment in Canada – suggesting that females tend to have greater commitment to stay with their firms – the variable was not of the same importance for the U.S. sample. This effect is even more apparent when one looks at the overall commitment scale (see Table 4). Moreover, for calculative commitment, income was the only significant predictor in both Canada and the U.S.

**Correlations with Tenure and Age**

Ritzer and Trice (1969) suggested that age and tenure would be the most important variables in testing the side-bet theory. Meyer and Allen (1984) examined the relationships between different measures of organizational commitment and age as well as tenure. In their study they used five different measures of organizational commitment. One was the OCQ of Porter et al. (see the overall scale in this study); the other four were measures of calculative and value commitment. Their results indicated that value commitment tends to be positively correlated with tenure and age. Correlations between age and tenure and the three commitment measures for our samples are reported in Table 5.

The results in Table 5 indicate that only for the variable age can significant correlation coefficients be reported. The differences between our results and those of Meyer and Allen (1984) are very interesting. Firstly, while Meyer and Allen found relatively high and positive relationships between the OCQ and age, no such significant relationships were found in our samples. Secondly, while Meyer and Allen (1984) reported a positive correlation between value commitment and age, this correlation was negative for our Canadian sample ($r = -0.15; p < .01$) and insignificant for the U.S. sample. Thirdly, while Meyer and Allen reported a negative correlation (not significant) between their measure for calculative commitment and age, we found instead a positive relationship ($r = 0.16; p < .01$), and an insignificant relationship for our U.S. sample. A fourth difference is that Meyer and Allen found positive and significant correlations between tenure and four of the five commitment measures they used, including the Porter et al. measure. In contrast, the data in this study do not indicate such a relationship for either the Canadian or the U.S. sample.
DISCUSSION AND CONCLUSION

The results of this study have theoretical and practical implications towards three main issues: (1) the generalizability of the side-bet theory, (2) the appropriate measurement of organizational commitment and (3) the cross-national differences regarding organizational commitment.

Side-Bet Theory

Similar to previous research (Alutto, Hrebinak and Alonso 1973; Meyer and Allen 1984; Ritzer and Trice 1969; Shoemaker, Snizek and Bryant 1977; Stevens, Beyer and Trice 1978), we examined the relationships between side-bet indexes and organizational commitment. What distinguishes this study from earlier ones is the attempt to examine the theory in more depth by testing it cross-nationally and by using several measures of commitment. The data indicate that only insignificant amounts of the variance in value commitment, calculative commitment and the overall commitment scale can be explained. This raises some doubts as to the usefulness of the theory in explaining organizational commitment.

The results regarding age and tenure have some interesting implications concerning side-bet theory, especially when they are compared to those of Meyer and Allen (1984). Meyer and Allen's findings and conclusion that age and tenure will be correlated with value commitment measure receive no empirical support from our findings. The OCQ measure had no meaningful relationships with either age or tenure. In the Canadian sample, the calculative commitment factor had a positive correlation with age while the value commitment factor had a negative correlation with age. These results are practically in opposition to those of Meyer and Allen (1984). Therefore, it would seem that Meyer and Allen's (1984) conclusion that some questions be raised "about the usefulness of both age and tenure as side-bet indicators" (p. 377) is very situationally-based and does not permit generalization beyond their study. Meyer and Allen (1984) argued that "the instruments used in tests of the side-bet theory may not be measuring commitment as Becker conceptualized" (p. 377) and that this perhaps explains the failure of their data to support the side-bet theory. Our findings tend to reject this argument: Side-bet indexes explained an insignificant amount of the variance no matter what measure was used. Future research should consider an alternative to the side-bet theory. As Meyer and Allen (1984) suggested, perhaps we need to "directly [obtain] employee's perceptions of the size and importance of investments they have made" (p. 378). Examining the theory in this way would enable demonstration
that the side-bet theory has either not been examined properly or simply cannot receive empirical support.

Commitment Measures

One of the important findings of this study is that American and Canadian employees perceive the concept of commitment similarly as shown by the stability of the factor analysis across the two samples. In contrast, use of the Porter et al. measure in comparing organizational commitment of Japanese workers with that of American workers led Near (1989) to conclude that Western concepts and measures of commitment may not accurately reflect the sentiments of Japanese workers toward their employer. Similarly, this study indicates that comparisons of organizational commitment based on Western culture can only be made in that type of culture (Bhagat and McQuaid 1982). Some additional conclusions on the measurement of organizational commitment emerge from our results. We used Porter et al.'s (1974) OCQ, considered to be the most common measure of organizational commitment (Griffin and Bateman 1986; Morrow 1983; Reichers 1985). Most research which has used this measure has interpreted it as a one dimensional construct and has not factor analyzed the measure (Griffin and Bateman 1986). In contrast, our results support the notion that it is better to understand this measure as representing a two dimensional construct, greatly strengthening the calls of earlier research for a "conceptual distinction between affective and continuance commitment" (McGee and Ford 1987). These two concepts of commitment were defined by different items. The value commitment factor was composed of items that deal with the acceptance of the values and the goals of the organization. The continuance factor was composed mainly of items representing employees' desires to stay with or to leave the organization. This conclusion is supported by Kidron (1978) and Gould (1979) and by Angle and Perry's (1981) interpretation of the factor analysis.

Our factor results are further supported by the regression data in Tables 4 and 5; mainly by the different directions of effect on organizational commitment for age in Canada (i.e. positive for calculative and negative for value commitment) and for the education variable of possessing a B.A. degree in the U.S. (i.e. negative for calculative and positive for value commitment). It would seem that our results do not support Meyer and Allen's (1984) conclusion that the 15 item Porter et al. (1974) scale is a value-affective measure. Instead, our data suggest that the Porter et al. measure is two-dimensional, assessing both calculative and value commitment.
One might argue that Meyer and Allen (1984) have already developed and empirically examined a calculative and value measure whose re-examination by McGee and Ford (1987) was successful. We disagree with this claim for at least three reasons: (1) internal consistency reliability estimates were substantially lower than those obtained with the Porter et al. measure (e.g., Meyer and Allen 1984); (2) confirmatory factor analysis using the items developed by Meyer and Allen results in more than two factors (e.g., McGee and Ford 1987), which suggests limited stability of the factors obtained (Angle and Perry 1981); and (3) our regressions and correlational results support the two dimensional structure of Porter et al. measure more convincingly than those of Meyer and Allen (1984). An additional, perhaps most important reason, is that Meyer and Allen used a single Canadian organization (a university) which necessarily limits the generalizability of their results (Blalock 1984, chap. 4). McGee and Ford (1987) used universities located both in the U.S. and Canada (without analyzing the data for each country separately), but the validity of their results could be doubted in light of our data which suggest some cross-national differences in organizational commitment.

It is worth recognizing some recent criticism of the Porter et al. measure (Reichers 1985). It has been argued that the items pertaining to a person's desire to remain in the organization, in fact, represent outcomes of commitment and therefore should be omitted from the measure. Consequently, one of the main issues for future research is to further clarify this issue. If Reichers's claim can be confirmed by empirical data, future measures of organizational commitment should not include items dealing with turnover intentions. If value commitment and calculative commitment can be further substantiated, as in this study and others (e.g., Angle and Perry 1981), the Porter et al. measure with its two factor explanation would prove appropriate for measuring organizational commitment.

Cross-National Differences and Similarities

An important contribution of this study is its attempt to establish the degree of generalizability of relationships proposed by side-bet theory. Specifically, the study tests whether side-bet indexes are of similar importance to explaining organizational commitment in the U.S. and Canada. Our data suggested a high degree of similarity between the U.S. and Canada, as has been suggested by other researchers (e.g., Griffeth, Hom, DeNisi and Kirchner 1985). As cross-national similarities lend themselves more readily to interpretation than do differences (Kohn 1989), we disregarded the differences in the cultures and political and economic systems and instead concentrated on social-structural
universals as represented by the side-bet theory (cf. Kohn 1989). Age, earnings and gender had greater effect on calculative commitment in Canada than in the U.S, while education (having a B.A. degree) resulted in significant effects upon calculative and value commitment in the U.S. only.

For the American data, our findings are supported by human-capital theory which suggests that increased education decreases a person's commitment to stay because of increased opportunities to change jobs (O'Reilly and Caldwell 1981). The absence of this relationship in Canada is supported by research which indicates that occupational mobility is lower in Canada than in the U.S. (McRoberts and Selbee 1981). It is possible that Canada's smaller industrial and population base limits job hopping somewhat; hence, the lack of effect of education upon calculative commitment. It is worth noting, however, that the variable of possessing a B.A degree has different effects on the measures of commitment. The effect is positive for value commitment and negative for calculative commitment. This distinction further supports our conclusion. Calculative commitment represents an intention to stay in the organization. Those with more human capital (B.A degree) have more alternatives, so it would make sense that their commitment is more of the value commitment type and not due to lack of alternatives.

The pattern of different directions for value versus calculative commitment also exist for the variable age. The relationship with age is positive for calculative commitment and negative for value commitment. In Canada, age was a significant predictor for both calculative and value commitment. Other Canadian data show highly significant effects of age upon income. This effect is smaller for the U.S. (e.g., Gattiker, in press), which may explain our findings. Nonetheless, in contrast to research (using U.S. data) which reported that older employees' work-related attitudes are more positive (see Rhodes 1983, for an extensive literature review), this study suggests the opposite for Canadian respondents' value commitment. One explanation for this finding may be that with age Canadian workers become somewhat disillusioned with corporate life, thereby reducing levels of value commitment (cf. Hofstede 1984). Another reason may be the higher degree of unionization in Canada; union members perceive themselves to be part of a class struggle, making it impossible to believe in corporate values (Gunderson 1985).

Gender was an important variable for calculative commitment in Canada, suggesting that females have higher levels of commitment than males. In contrast, gender was not a significant determinant of commitment for the U.S. sample. One explanation for this finding may be that in Canada it is more difficult for a woman to be accepted within an organization than it is in the U.S. (e.g., Symons 1986). Once a Canadian women has become a full-fledged corporate member, she may hold more
strongly to her position, making her calculative commitment higher than that of her American counterpart.

Following Becker's arguments (1960), it could be said that similarities in cultural expectations between Canada and the U.S., as well as the value systems of subcultures "such as those associated with occupational groups" (p. 39), may explain the lack of major differences discovered by our study. Hence, future research should test the side-bet theory by comparing occupational groups (e.g., white collar, engineers and teachers) in the U.S. and Canada to examine whether differences supporting Becker's claims can be found. This study suggests that cross-national comparisons using work commitment measures are useful. However, based on this study's results and those reported by Near (1989), it seems that the Western conception of commitment may apply only to similar cultures and not to different cultures such as those of Japan and India. As well, our data indicate that even when assessing side-bet theory in cultures which are quite similar (e.g., Western countries, same language, sharing a large border and practising free trade with each other), caution is warranted and differences in side-bets must be carefully interpreted. Future research should concentrate on developing concepts of commitment that accurately reflect the values and meanings of commitment of the particular culture in which the measure is to be applied. Several questions should be addressed. What degree of cultural similarity will permit use of measures of commitment based on the same concept of commitment? Can two different cultures can be compared at all? Can two different concepts of commitment (one for each culture) be used to compare employee levels of commitment? Moreover, how may these differences be interpreted? Answers to these questions will facilitate future cross-national/cultural comparisons of the concepts of organizational commitment and work commitment in general.

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Évaluation de l'attachement organisationnel des employés canadiens et américains

Gestionnaires et chercheurs ont montré beaucoup d'intérêt à l'attachement organisationnel (AO), et ce, principalement par ce qu'il s'avère être un prédicteur d'impacts organisationnels importants pour le roulement, l'absentéisme et les retards au travail. L'absence d'un cadre théorique a été une contrainte majeure pour les recherches portant sur les ressemblances et les différences d'AO entre pays. Cet article fait état d'une étude empirique référant à la théorie des avantages comparatifs (side-bet theory) comme cadre conceptuel et portant sur les variables d'AO entre le Canada et les États-Unis. Le terme side-bet a été utilisé par Becker (1960) pour décrire la somme des investissements chers à un individu qui seraient perdus ou sans valeur advenant son départ de l'organisation. Dans cette optique, l'individu serait lié à l'organisation par des facteurs extrinsèques, tels son revenu d'emploi et la hiérarchie de son poste, et par des facteurs intrinsèques telles ses relations interpersonnelles. La théorie des avantages comparatifs fait appel, lorsqu'en présence de l'attachement organisationnel, à des matières impliquant plus d'un pays. Bien que les valeurs au travail des Canadiens et des Américains soient généralement présumées analogues (Griffeth, Hom, DeNisi et Kirchner 1985), une variation dans les avantages comparatifs pourrait indiquer des valeurs et des croyances particulièrement à chaque pays.

Méthodologie: profil de l'échantillonnage

Au Canada, des 380 individus approchés pour participer à cette recherche, 340 ont accepté et 306 ont retourné notre questionnaire (90 %); 202 (66 %) sujets étaient des femmes, 196 (65 %) étaient mariées et 150 (44 %) étaient des gestionnaires. Aux États-Unis, 200 personnes ont été sollicitées pour l'étude, 185 ont donné leur accord et 157 questionnaires ont été complétés (85 %). De ce nombre, 74 (47 %) étaient de sexe féminin, 61 (39 %) étaient des gestionnaires et près de 106 (68 %) étaient mariées.
Instrumentation et mesure

L'AO des employés a été évalué à l'aide du questionnaire à 15 items sur l'attachement organisationnel (Porter et al. 1974) de façon à permettre des comparaisons entre cette recherche et d'autres déjà réalisées. Fondées sur les résultats de l'analyse factorielle, deux sous-échelles ont été créées : l'attachement affectif et l'attachement rationnel. Ces sous-échelles permettent de distinguer l'individu qui s'attache parce qu'il épouse ou appuie les objectifs organisationnels de celui qui tient à maintenir son lien d'emploi. Cette étude mesure les effets de l'ensemble des variables de la théorie des avantages comparatifs (l'âge, la permanence, la scolarité, le mariage, le sexe, le salaire et le niveau hiérarchique du poste) sur l'attachement affectif et rationnel ainsi que sur l'échelle globale d'attachement que propose Porter et al. (1974).

Résultats

Les résultats indiquent une légère divergence entre les deux échantillons quant au degré de AO. Les employés canadiens ont été trouvés plus attachés que les Américains en regard des trois mesures d'attachement, mais cet écart n'était significatif que pour l'attachement rationnel. Les régressions montrent que les indices des avantages comparatifs expliquent un nombre infime de variations à l'intérieur de tous les modèles, à l'exception de l'attachement rationnel (échantillon canadien).

La découverte la plus importante fut que les indices des avantages comparatifs semblent avoir un impact plus considérable sur la prédiction de l'attachement rationnel que ne l'a été l'attachement affectif ou le questionnaire à 15 items sur l'attachement. En ce qui a trait à l'âge et la scolarité, les variables ont un effet différent sur l'AO d'un pays à l'autre. L'âge a une influence positive sur l'attachement rationnel et une influence négative sur l'attachement affectif au Canada, tandis qu'aux États-Unis, le phénomène inverse a été observé. Pour l'échantillon américain, la scolarité affecte à la baisse l'attachement rationnel et à la hausse l'attachement affectif, alors que les résultats démontrent le contraire pour le Canada. Il est intéressant de noter qu'aucune valeur prédictive expliquait significativement l'échelle globale d'attachement. Une autre variance internationale culturelle d'intérêt porte sur l'importance du sexe comme prédicteur de l'attachement rationnel au Canada — suggérant que les femmes tiennent davantage à maintenir leur lien d'emploi avec l'entreprise — cette variable était moins éloquente en ce qui a trait aux États-Unis. Cet effet est encore plus apparent lorsqu'on examine l'échelle globale. D'autre part, le revenu d'emploi était l'unique prédicteur significatif commun aux deux pays.

Analyse et conclusion

Les résultats de cette étude ont des implications pratiques et théoriques sur trois points. 1) Le potentiel de généralisation de la théorie des avantages comparatifs. Les données révèlent qu'une petite partie des variations de l'attachement affectif, de l'attachement rationnel et de l'échelle globale d'attachement peut être expliquée. Ce qui laisse planer un doute sur l'utilité de la théorie dans la compréhension de l'AO. 2) La mesure appropriée à l'attachement organisationnel. Une des conclusions importantes de cette recherche touche la
ressemblance entre les employés canadiens et américains quant à leur perception du concept d'attachement tel que démontré par la stabilité de l'analyse factorielle d'un échantillon à l'autre. À l'opposé, le recours à la mesure développée par Porter et al. dans la comparaison d'AO entre les travailleurs japonais et américains a amené Near (1989) à conclure que les concepts et mesures occidentales ne reflètent pas fidèlement l'opinion qu'ont les salariés japonais de leurs employeurs. Cette étude signale que des comparaisons portant sur l'attachement organisationnel et qui repose sur la culture de l'ouest ne peuvent s'établir que pour cette culture (Bhagat et McQuaid 1982). 3) Les variations internationales d'attachement organisationnel. Une contribution notable de cet article vient de sa tentative de fixer le potentiel de généralisation des interrelations avancées par la théorie des avantages comparatifs. Nos données nous indiquent un haut degré de similitude entre le Canada et les États-Unis. En s'appuyant sur les arguments de Becker (1960), on pourrait affirmer que la similarité des attentes culturelles entre le Canada et les États-Unis, aussi bien que les systèmes de valeurs des sous-cultures "such as those associated with occupational groups" (p. 39), viendrait expliquer le peu de dissemblance décelée par notre recherche. Les recherches à venir devraient tester la théorie des avantages comparatifs en comparant des groupes d'emplois (e.g. cols blancs, ingénieurs et enseignants) au Canada et aux États-Unis pour vérifier si des différences appuyant les prétentions de Becker sont fondées. Notre travail suggère que les comparaisons internationales recourant aux mesures d'attachement au travail sont utiles. Toutefois, si on s'en remet aux résultats de la présente étude et à ceux de Near (1989), il s'avère que la conception de l'attachement ne s'appliquerait que pour des cultures semblables et non à des cultures hétérogènes telles celles du Japon et de l'Inde. De plus, nos données nous montrent, même lorsqu'employée avec des cultures plus homogènes (e.g. des pays occidentaux, une même langue, une frontière commune et des échanges commerciaux libéralisés) que la prudence est de mise et que l'interprétation des divergences dans les avantages comparatifs doit être faite avec circonspection.