

National culture and strategic change in belief formation

Lívia Markóczy

University of California, Riverside

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Abstract

This paper studies strategy related beliefs in five organizations in Hungary with substantial foreign participation. We find that one of the strongest determinants of similarity of beliefs was being a member of the functional area favored by the strategic change. The effect of being in the favored area was greater than the effect of all other individual characteristics, including nationality.

Biographical Note

Lívía Markóczy is an assistant professor of strategic management at the Anderson Graduate School of Management at the University of California, Riverside (from July 2000). She earned her PhD in management from Cambridge University in 1995, and has prior degrees in economics from the Budapest University of Economics. Her research interests include judgment and decision making, cooperation and justice perceptions, and international management.

She can be reached at the AGSM UC Riverside, and full contact information is available from <http://www.goldmark.org/livia/contact.html>.

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Introduction

A manager's beliefs may be based more on the role played her/his functional area in strategic change than on other factors often cited as influencing belief. During any strategic reorientation at least one area of an organization will be raised to prominence and receive an increased share of resources. Those areas will be referred to as **favored areas**. In a study conducted for other purposes (Markóczy, 1997) it was observed that managers in favored areas share closer beliefs than managers with other characteristics. Being a member of the favored area appeared to play a larger role in shaping business beliefs in my sample than being of a particular nationality or rank.

This observation is not particularly surprising when put in the context of a political view of strategy development. Beliefs may be influenced by organizational politics (Narayanan and Fahey, 1982; Cyert and March, 1963) and by the strategic change process (Wooldridge and Floyd, 1989). Individuals with a shared interest in change tend to recognize their common interest and form alliances (Cyert and March, 1963; Allison, 1971). Alliance members tend to interact more often and to develop similar beliefs on goal and strategies to follow (Wooldridge and Floyd, 1989).

What is striking about the relative importance of favored areas on beliefs is that it shows the relative unimportance of other factors often held to be among the most important influencers of beliefs. These include factors such as national culture, functional area, education, age, rank, or gender.

Before discussing the literature, it is perhaps necessary to state why beliefs matter. In their daily activities, managers, like everyone else, are bombarded with a vast array of stimuli which compete for their attention. Attention, however, is a scarce resource (Kahneman, 1973). Which issue is attended to depends on beliefs about the importance of a certain stimulus (e.g., Dutton and Jackson, 1987). What actions are taken or predications made depend on beliefs about causal relations (Fiske and Taylor, 1991).

Beliefs are traditionally defined as concepts and perceived relationships that individuals hold to be true (Bem, 1970). Here we focus on those beliefs that guide the identification, selection and interpretation of issues relevant to the strategy of the organization (Dutton and Jackson, 1987; Dutton et al., 1989) as these are the ones that affect strategic decision making.

In addition to the strategy process there have been many suggestions about what shapes, forms and influences these sorts of beliefs in managers. In the following subsections some of those suggestions are briefly mentioned.

National-cultural differences

Studies with a focus on national-cultural differences assume that these have a strong influence on individual values and world views. This assumption is based on cross-cultural psychological studies which have argued that individuals' values, norms and general world views are shaped by the behaviors that are rewarded or penalized from early childhood (Barry and Child, 1957; Barry et al., 1976), by the norms and values that are transferred by socialization and training (Weeks et al., 1982), and by the degree of social pressure on conformity (Chandra, 1973; Claeys, 1967; Huang and Harris, 1973). Although several studies failed to find strong cross-cultural differences (Lambert et al., 1979; Minturn and Lambert, 1964; Haire et al., 1966), others nonetheless support the existence of cultural differences in values and world views (e.g., Fisher, 1988; Hofstede, 1994; Kluckhohn, 1946; Quinn and Holland, 1987; Trompenaars, 1993; Bigoness and Blakely, 1996). Support was also reported for cultural differences affecting work related values, world views, beliefs and behaviors of organizational members (e.g., Welsh et al., 1993; Geletkanycz, 1997), although some of the approaches taken in that work are not uncontroversial (Markóczy and Goldberg, 1998). This raises the question of whether values and world-views also affect the prioritization and evaluation of strategic issues. In a conceptual paper Schneider (1989) showed how culturally induced values and world views might affect the prioritization and evaluation of strategic issues. In a follow-up study she and her co-author tested the relationship between national-cultural background and the evaluation (but not the prioritization) of strategic issues and found support for such a relationship (Schneider and de Meyer, 1991). The few other studies that tested the relationship between national-culture and prioritization of strategic issues produced inconclusive results. Kotha et al. (1995), for example, found a positive relationship between national-culture and the expressed preferences of U.S. and Japanese managers towards various generic strategies. Govekar (1994), on the other hand, failed to find a relationship between the perceived importance of strategic goals and the national culture of managers. These studies also tended to limit their investigations to the effect of culture on the expressed strategic preferences saying little about the relative impact of national-culture in comparison to other factors.

Individual experiences

Hambrick and Mason (1984) argued that individual characteristics are so strongly related to beliefs that they can be used as substitute measures for those beliefs. Although the substitutability assumption has been questioned

(Markóczy, 1997) some relationship has been found between some managerial characteristics and beliefs (e.g., Dearborn and Simon, 1958; Ireland et al., 1987). This relationship has been explained in two ways. In one view, those with similar characteristics probably have faced and solved similar problems during their lives (Bantel and Jackson, 1989; Westphal and Zajac, 1995). These similar experiences led then to similar beliefs. In another view, those with similar characteristics are more likely to be attracted to each other and as a consequence interact with each other more than with those who have different characteristics. This interaction pattern among those with similar characteristics is what explains the development of similar beliefs among these individuals over time (Smith et al., 1994).

The above streams of research tended to ignore the potential effect of organizational situations on individual beliefs. The study described below suggests that this often ignored factor is among the most important.

The study

The study, a multiple case design, was not designed to look for favored areas. Instead it was set up to compare the relative importance of different sorts of factors in influencing strategically relevant beliefs. While we may know from past studies that functional area (Dearborn and Simon, 1958), for example, influences beliefs, we can't tell whether it does so to a substantial or important degree unless we compare it to other influences. Asking, in isolation, whether some factor is important in influencing beliefs is like asking how long a piece of string is. Demonstrating a statistically significant relationship between some factor and a belief is often mistaken as demonstrating the importance of that factor (e.g., Geletkanycz, 1997). What is more revealing is to look at a range of factors and see which play the strongest roles. By working with a multiple case design it is possible to uncover novel factors in one case and examine it in subsequent ones (Yin, 1994).

Data were collected in five Hungarian organizations that were recently acquired by so-called Anglo-Saxon (ie, U.S.A., UK, and Australia) partners. While not all of the managers from the parent companies were themselves Anglo-Saxon they were all from highly developed western economies. (A few managers were from Holland and Belgium, while most were from the US, the UK and Australia).

Twenty to 27 managers participated in the study from each company. Participants were selected based on their hierarchical positions (which usually included the executive director and managers one or two levels down), because awareness of organizational issues tends to increase with organiza-

Table 1: Company characteristics

| Characteristics | \mathcal{A} | \mathcal{B} | \mathcal{C} | \mathcal{D} | \mathcal{E} |
|-----------------------|---------------|---------------|---------------|---------------|---------------|
| Employees | 9500 | 250 | 1000 | 1500 | 1300 |
| Industry | manuf. | manuf. | food | food | food |
| Year of acquisition | 1990 | 1990 | 1991 | 1991 | 1991 |
| Data collection | 1992 | 1992 | 1993 | 1993 | 1993 |
| Non-Hungarian partner | USA | USA | USA | UK | USA |

Table 2: Managers in the 5 organizations

| Characteristic | A | B | C | D | E |
|---------------------|----|----|----|----|----|
| Number of managers | 20 | 20 | 27 | 22 | 22 |
| Non-Hungarians | 8 | 8 | 8 | 5 | 8 |
| Top managers | 11 | 5 | 8 | 6 | 10 |
| Non-top manager | 9 | 15 | 19 | 16 | 12 |
| Technical education | 9 | 13 | 11 | 6 | 9 |
| Other education | 11 | 7 | 16 | 16 | 13 |
| Sales | 3 | 7 | 9 | 5 | 4 |
| Dominant sales | 1 | 2 | 11 | 6 | 9 |
| Production | 4 | 8 | 6 | 6 | 4 |
| Dominant production | 6 | 7 | 6 | 10 | 8 |
| Average age | 48 | 38 | 42 | 42 | 40 |
| Standard deviation | 9 | 8 | 8 | 8 | 8 |

tional level (Hambrick, 1981).

Table 1 summarizes the characteristics of the investigated companies while Table 2 provides descriptive statistics of the investigated managers. Organizations are marked with letters of the alphabet (\mathcal{A} – \mathcal{E}) which reflect the order of investigation (ie, company \mathcal{A} was investigated first and company \mathcal{E} last).

Data on strategic change

The main source of information on strategic change was open-ended, semi-structured interviews that were conducted with all the managers in the sample. Acquisitions in Hungary are a useful sample for investigating strategic change as these tend to undergo major restructuring after the acquisitions. Managers were asked to describe the major strategic change affected the goals, the resource allocations, and the organizational structure and values

of their companies. There was a high degree of agreement among the interviewed managers in each organization in the identification and description of the change process. Agreement was confirmed by the key informants and by the managers themselves during feedback sessions.

Strategic change

In each company the managers described the reorientation process their organization was undergoing. In four of the companies this reorientation meant turning a previously production-oriented company into a marketing and sales oriented one (companies *B*, *C*, *D*, *E*). The fifth had been turned into a production and R&D site of the non-Hungarian owner (company *A*). As a result the favored areas (marketing and sales in four of the organizations and production and R&D in *A*) were raised in prominence and received an increased share of resources. Namely, (1) new organizational units were set up in the favored areas (or the size of the existing units increased) even in those companies that were down-sizing overall; (2) new reward systems were introduced giving preference to those in the favored areas both in the allocation of tangible (e.g., company cars, bonuses) and intangible incentives (promotion possibilities); (3) new ways of thinking were promoted that emphasized the priorities of the favored areas.

Table 3 contains illustrative quotes on the description of the change process by the managers.

Individual characteristics

Information about individual characteristics was collected by asking managers to fill out a questionnaire that included questions on their age, education, hierarchical and current functional positions, and experiences in various functional areas. These characteristics were selected because they have been shown or argued to influence some form of beliefs and/or behavior in management. Dearborn and Simon (1958), for example, showed that the functional area in which managers work is related to the issues they consider important; Schuman and Scott (1989) found that similarity in age lead to similar beliefs; Ireland et al. (1987) found a relationship between hierarchical position of managers and their perceptions and interpretations; and Hambrick and Mason (1984) suggested that educational specialization (e.g., technical education versus training in humanities) shape individual beliefs.

Table 3: Descriptions of the strategic change process

| | |
|-----------------------|--|
| Importance of change | What is an unprecedented change in the company is that it has turned from a production-oriented company into a market driven one. (Company \mathcal{C}). |
| Realloc. of resources | [The new] marketing orientation could be measured in the amount of resources which are distributed to the marketing and sales area. There was a substantial increase in the number of employees in the marketing and sales areas and a network of sales agents was developed. So the most substantial changes in terms of their structure, in their approaches and in their methods were in these areas. (Company \mathcal{C}). |
| Realloc. of rewards | [A] new managerial group was formed here, and I refer now to the sales managers, who get western cars and huge salaries and other benefits. Can you imagine this? [This] is a small town and nothing remains hidden. (Company \mathcal{E}). |
| Value changes | The major issue is the introduction of a market oriented thinking which did not exist before. The most important change in the company is that we switch from the priority of the production to the priority of marketing. (Company \mathcal{B}). |
| New units | Two years ago the sales force was non existent. It did not have any traditions in [the company]. It was built up from zero in the last two years and now it works as a network which covers the whole country. (Company \mathcal{D}) |
| Hiring managers | Now, that the company has laid off most of its excess employees it is hiring new managers to the production and R&D areas [the favored areas] (Company \mathcal{A}). |

Coding individual characteristics

The information that managers provided on their characteristics was coded as follows.

Citizenship, post-secondary education, and native language was used to identify cultural background. These three items were used so that the repatriate managers could also be clearly categorized as either Hungarian or non-Hungarian managers.

Managers were divided into two education types based on whether they were trained in the natural sciences including mathematics and engineering, or not.

By level of position managers were categorized into those who occupy top or non-top positions.

Managers were divided into two age groups based on the median age in the sample: those 40 or under and those older than 40.

Functional areas included personnel/HRM, finance/accounting, marketing/sales, general management, computer/systems, research/development, production-engineering, R&D, and “others”. In addition to the current functional position, functional background (labeled as dominant functional area) was also captured and included the area in which a manager had spent more time than in any other (Michel and Hambrick, 1992, 22).

Capturing individual beliefs

Individual beliefs were captured by using a causal mapping technique. Causal maps (CMs) are representations of individuals’ beliefs about which issues are relevant in a given domain and about causal relations between these issues. These beliefs have been demonstrated to be important to strategy formulation and decision making (Dutton and Jackson, 1987; Dutton et al., 1989; Fiske and Taylor, 1991).

The causal mapping technique used included the following steps (Markóczy and Goldberg, 1995):

1. Development of a pool of constructs of those issues which are potentially relevant to organizational success for a given sample of organizations;
2. Selection of those constructs which managers consider as relevant for the success of their organizations;
3. Assessment of the causal relationship between pairwise constructs considering the constructs selected as most relevant.

A brief description of the above steps are provided below. For more detail on the method see Markóczy and Goldberg (1995).

Development of a pool of constructs

The constructs were developed from thirty interviews by Markóczy (1995) with 15 Hungarian and 15 Anglo-Saxon senior managers in international acquisitions as part of a separate study. During these structured but open-ended interviews managers were asked to describe those issues, including goals, means, and environmental factors which were relevant to the success of their organizations. These issues were coded by two coders (one Hungarian and one English, both with a degree in management) into a list of 60 constructs. During coding those issues with similar meaning were coded into the same constructs. For each decision coders sought agreement, as opposed to working independently, to utilize their complementary expertise. To ensure that the pool of constructs covered the major issues which might be relevant for success, the resulting list of constructs was compared with a similar list developed by Walsh (1988). Four items from the latter list were added to the original list as the coders considered these as potentially important. Note that adding new items to this list does not constitute a validity problem since if managers did not find these added issues important this would only mean that they would not select these as potentially relevant. The resulting 64 constructs went through a translation and back-translation process and two pilot studies including a total of 52 executive-MBA managers. During these pilot studies managers were asked to point out missing constructs or alternative constructs with similar meaning. No new constructs were suggested while existing constructs with similar meaning were collapsed into 49 constructs which were used in the causal mapping exercise. These constructs, with a clarifying definition provided by the author, were placed on cards to aide the selection procedure.

Selecting the constructs

To identify beliefs about relevance, subjects were asked to sort the constructs into two piles: one pile should include those constructs which they considered to be most relevant for the success of their organizations, and the other should contain those which they did not consider as relevant. The selection procedure was repeated with the success pile until the managers were left with 10 or fewer constructs. In the latter case they were asked to complement the constructs to ten from the last success pile. Limiting the selected factors to the top ten was necessary as trial elicitation showed that the next elicitation

step, which includes assessing the causal relationship between all pairwise combinations of the selected constructs, tends to exhaust the patience of the subject beyond 10 constructs (Markóczy and Goldberg, 1995).

Causal relationship

To identify cause-effect beliefs, for each distinct ordered pair of constructs (90 pairs for 10 constructs) subjects were asked three questions: (1) whether one construct influences the other (if not a new pair of constructs was considered, otherwise the questioning proceeded); (2) whether it does so positively or negatively; and (3) whether the influence is weak, moderate or strong. With this technique the existence, the polarity and the strengths of the causal relationships were established. The 10 selected constructs together with the 90 causal relationship constituted the CM for each manager's beliefs on the top ten relevant issues in light of desirable future and the causal relationships among these issues. Figure 1 contains an example of such a CM in which there are eight constructs which are listed in the row and column headers. The cells contain numbers indicating the strength and direction of the influence of the row construct on the column construct.

Analyses

The analysis included the identification of differences in individual beliefs. This was followed by a calculation of how well those differences in beliefs were captured by the differences in individual characteristics. It should be noted that the similarities and differences discussed are between all pairs of individuals, and are not part of a group level analysis. In a sense, the level of analysis (distances between individuals) is somehow higher than the individual level, but lower than the group level. The analysis was designed to recover information about the individuals with particular properties even though nothing non-relational can be said about any individual.

The first step in analyzing similarities and differences in beliefs was to calculate distance ratios between pairs of CMs within each company. For this purpose a modified version of Langfield-Smith and Wirth's (1992) formula was used as described by Markóczy and Goldberg (1995).¹ The resulting dis-

¹The actual calculation of the distance ratios is rather cumbersome and involves a very large and ugly formula. It requires looking at extended matrices which have columns and rows for constructs which were not listed in one of the CMs but possibly listed in another. For each cell in such extended matrices is compared to the corresponding cell in the other. If both cells correspond to nodes that are in both maps, then the absolute value of the

Figure 1: Matrix presentation of causal map

| | 30 | 47 | 3 | 5 | 33 | 43 | 20 | 35 |
|----|----|----|---|----|----|----|----|----|
| 30 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |
| 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| 33 | 0 | 0 | 2 | 0 | 0 | 0 | -1 | 0 |
| 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | -2 | 1 | 0 | 0 | -1 |
| 35 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |

| | | | |
|----|--------------------------------|----|----------------------------|
| 3 | Vision and strategic direction | 5 | Market share |
| 20 | Competition in market | 30 | Leadership in organization |
| 33 | Knowledge of market needs | 35 | Brand recognition |
| 43 | Bank connections | 47 | Efficiency/productivity |

The example causal map of Figure 1 is adopted from Markóczy and Goldberg (1995). It contains eight constructs (so it is smaller than the CMs that were elicited from the managers that contained ten constructs). The selected constructs are listed in the first row and first column. Matrix cells contain the existence, strengths and polarity of the causal relationship between those constructs which are listed in the row and column. The direction of the influence is from row to column.

tance ratio is a rational number between 0 and 1 inclusive, where 0 indicates identical maps and 1 total dissimilarity.

For analysis, subgroups of managers were formed based on each characteristic (e.g., Hungarian or Top-manager; note also that each manager falls into several subgroups). The distance data in different subgroups of managers were used to ascertain whether the average distance (and standard deviation) between the CMS inside the subgroups was smaller than the average distance of the CMS between managers who were inside versus outside the subgroups (for short “average distance” indicates average distance and standard deviation). A *t*-test was used to compare the means of subgroups. If managers within these subgroups were closer in their beliefs to each other than to managers outside of their subgroups, we can conclude that managers with the given characteristics had more similar beliefs to each other than to the rest of the managers. So, for example, if the average of the distances between members of some subgroup G is \bar{x}_w (average within the group) and the average distance of these members of G from others who are outside of the subgroup is \bar{x}_a (average across the group) then the *t*-test was used to see whether \bar{x}_w is substantially less than \bar{x}_a . Table 4 lists the positive *t*-values in a decreasing order to reflect their relative importance in influencing individual beliefs. For comparison the table also lists the average distances and standard deviations of the CMS of all investigated organizational members in each organization.² It is difficult to calculate probability measures from distance data because these are not independent of each other. Thus, the *t* values cannot be used (directly) to estimate probabilities. An indirect measure was suggested by Jeff Goldberg (personal discussion) to gauge these probabilities. The technique is originally inspired by – but is less sophisti-

cell values are taken and added to the grand total difference. If one map has both nodes while the other doesn't then 1 is added to the grand total difference. If neither map has both required nodes for that cell then nothing is added. The grand total is then divided by the maximum possible grand total for the dimension of those maps. The calculation can be performed quickly by software which is available freely from the author's website.

²Note that the *t*-test does not control for the effect of other subgroups when the effect of one subgroup is investigated. To allow such control in the analyses alternative calculations were also applied. These included (1) calculating cluster analysis in each company (Ward's method) by inputting distances among CMS; (2) regression analysis in each company regressing degree of cluster membership of each CM (see Markóczy and Goldberg (1995)) as the dependent variable on each individual characteristic (except dominant functional characteristics as these strongly correlate with current functional characteristics) as independent variables. These calculations are no less complex than the *t*-test because of the difficulties in using distance data and additionally because of the weaknesses of cluster analysis (see Markóczy and Goldberg (1995)). The results are consistent with those reflected in the *t*-tests, but are no simpler to present. Therefore to save space and to keep the focus of the paper clear, the alternative analysis of the data is not discussed.

cated than – the jackknife (Efron and Tibshirani, 1993; Mooney and Duval, 1993).

When a subgroup G yields a particular t values (t_G) we can see how meaningful t_G is by calculating the t values of every subset in the sample that is of the same size as G and see what fraction of these t values are greater than t_G . For example if t_G is 1.3 and there are eight members of G , and the sample has 20 members, then we calculate the t values for all possible combination of subsets with 8 members of the sample (altogether 125,969 combinations) and see how many of them have a t value greater than 1.3. The percentage that do have a $t > t_G$ directly reflects the probability of picking a subgroup of that size *from the sample* with a greater t value. The smaller this probability is, the less likely it is that the given t value occurred by chance. Thus, instead of making a probability estimate, all of the alternative possibilities were literally counted. The resulting percentage is labelled $\%_{>t}$ in Table 4.

Results of the analysis listed in Table 4 show no indication of a consistent relationship between individual cultural backgrounds and beliefs across organizations. In only one of the investigated companies (\mathcal{D}) was non-Hungarian cultural background identifiable as relatively important in influencing beliefs ($t = 4.588$, $\%_{>t} = 0.001$). Similar inconsistency was indicated concerning other individual characteristics with the exception of *some* current functional positions that were found relevant in each company ($t = 3.352$, $\%_{>t} = 0.005$, $t = 0.902$, $\%_{>t} = 0.219$, $t = 0.940$, $\%_{>t} = 0.218$, $t = 2.567$, $\%_{>t} = 0.016$, $t = 1.211$, $\%_{>t} = 0.121$ respectively). Note that it is not always the same functional area.

Dominant functional experience was also found to relate to managerial beliefs in four-out-of-five companies (\mathcal{A} : $t = 4.649$, $\%_{>t} = 0.009$; \mathcal{C} : $t = 1.175$, $\%_{>t} = 0.189$; \mathcal{D} : $t = 4.114$, $\%_{>t} = 0.002$; \mathcal{E} : $t = 2.475$, $\%_{>t} = 0.029$) although note that this influence is strongly tied to the current functional positions.

Technical education and age was found to affect beliefs in two of the companies (\mathcal{A} , \mathcal{C} for technical education where $t = 4.835$, $\%_{>t} = 0.001$; $t = 2.000$, $\%_{>t} = 0.078$ and \mathcal{C} and \mathcal{D} for age $t = 1.246$; $\%_{>t} = 0.080$; $t = 3.785$, $\%_{>t} = 0.001$). In addition, being in the top managerial position was relevant in one of the companies (\mathcal{C} $t = 1.186$ $\%_{>t} = 0.175$).

The effect of the favored areas on beliefs

The first case in the sample, \mathcal{A} , indicated that the favored functional area that was found relevant in shaping individual beliefs corresponded with the area favored by the strategic change. Namely, in company \mathcal{A} managers in the

Table 4: Intra-subgroup distances

| Subgroup | M | N_w | N_a | \bar{x}_w | \bar{x}_a | σ_w | σ_a | t | $\%_{>t}$ |
|-------------------------------|-----|-------|-------|-------------|-------------|------------|------------|-------|-----------|
| Company A | | | | | | | | | |
| All | 20 | 190 | | 0.781 | | 0.135 | | | |
| Technical training | 9 | 36 | 99 | 0.679 | 0.796 | 0.124 | 0.124 | 4.835 | 0.001 |
| Prod+RD dominant ¹ | 8 | 28 | 96 | 0.660 | 0.785 | 0.108 | 0.108 | 4.649 | 0.009 |
| Prod+RD current | 6 | 15 | 84 | 0.658 | 0.778 | 0.105 | 0.131 | 3.352 | 0.005 |
| Production current | 6 | 15 | 84 | 0.677 | 0.778 | 0.110 | 0.125 | 3.077 | 0.093 |
| Company B | | | | | | | | | |
| All | 20 | 190 | | 0.782 | | 0.149 | | | |
| Marketing current | 7 | 21 | 91 | 0.735 | 0.766 | 0.136 | 0.144 | 0.902 | 0.219 |
| Company C | | | | | | | | | |
| All | 27 | 351 | | 0.729 | | 0.145 | | | |
| Technical training | 11 | 55 | 176 | 0.677 | 0.721 | 0.127 | 0.147 | 2.000 | 0.078 |
| Age > 40 | 15 | 105 | 90 | 0.706 | 0.728 | 0.154 | 0.142 | 1.246 | 0.080 |
| Top position | 7 | 21 | 140 | 0.675 | 0.713 | 0.107 | 0.141 | 1.186 | 0.175 |
| Marketing dominant | 11 | 55 | 176 | 0.705 | 0.733 | 0.146 | 0.157 | 1.175 | 0.189 |
| Marketing current | 9 | 36 | 162 | 0.701 | 0.727 | 0.134 | 0.157 | 0.940 | 0.218 |
| Company D | | | | | | | | | |
| All | 22 | 231 | | 0.742 | | 0.142 | | | |
| Non-Hungarian | 5 | 10 | 85 | 0.514 | 0.734 | 0.136 | 0.144 | 4.588 | 0.001 |
| Marketing dominant | 6 | 15 | 96 | 0.573 | 0.734 | 0.140 | 0.141 | 4.114 | 0.002 |
| Age ≤ 40 | 9 | 36 | 117 | 0.657 | 0.761 | 0.152 | 0.142 | 3.785 | 0.001 |
| Marketing current | 5 | 10 | 85 | 0.592 | 0.718 | 0.130 | 0.148 | 2.567 | 0.016 |
| Company E | | | | | | | | | |
| All | 22 | 231 | | 0.805 | | 0.129 | | | |
| Marketing dominant | 9 | 36 | 117 | 0.751 | 0.813 | 0.137 | 0.130 | 2.475 | 0.029 |
| Marketing current | 4 | 6 | 72 | 0.707 | 0.776 | 0.154 | 0.133 | 1.211 | 0.121 |

M number of Maps; N_w number of distances between the maps within subgroups; N_a is the number of distances across subgroups. \bar{x}_w mean distance between N_w ; \bar{x}_a mean distance between N_a . σ_w estimated standard deviation within subgroups; σ_a estimated standard deviation across subgroups. t is the result of the student t -test. The meaning of $\%_{>t}$ is described in the text. ¹Combining the production and R&D areas was decided before the statistical analysis was made.

production and R&D areas shared similar beliefs ($t = 3.352$, $\%_{>t} = 0.005$) which corresponded with the ongoing transfer of the company to a production and R&D site. Similar relationships emerged between the strategic change process, the functional areas, and similarities in beliefs in the succeeding four cases as well. In these organizations managers in the marketing and sales functional areas seemed to share similar beliefs (\mathcal{B} : $t = 0.902$, $\%_{>t} = 0.219$; \mathcal{C} : $t = 0.940$, $\%_{>t} = 0.218$; \mathcal{D} : $t = 2.567$, $\%_{>t} = 0.016$; \mathcal{E} : $t = 1.211$, $\%_{>t} = 0.121$) while the companies showed a marketing and sales emphasis in their reorientation process.

This finding indicates that the direction of the strategy process played an important role in shaping individual beliefs in all of the investigated organizations.

Discussion

The Study's Findings

The study suggests that the most important factors in influencing strategy related beliefs in the investigated organizations are neither national culture nor individual characteristics, but the area favored by the strategic change. Had the study produced no result, we would not know whether the method wasn't powerful enough or whether the relationships or constructs that we were looking for were weak or non-existent. The fact that the favored area consistently showed up as a factor while other characteristics did not indicates that the other characteristics are not particularly influential. Otherwise their influence would have been detected.

Beliefs may be strongly affected by the strategic change for several reasons. Firstly, those managers who benefit from the change might be more supportive of it and identify more with its direction than those whose position is threatened by it. In the investigated organizations those managers who worked in the favored areas experienced an improvement in their current situation (e.g., tangible and intangible rewards, discretion over more resources) and in their future prospects (increased promotion possibilities, job security). This may well have led them to identify with the direction of the change and develop similar beliefs as a consequence.

Secondly, those managers whose expertise falls into the favored areas are more likely to be included in strategic decision making than those whose expertise is outside of these areas. This would also explain the role of dominant functional areas in affecting individual beliefs in four-out-of-five investigated organizations (apart from the strong overlap between current

functional position and dominant functional background). Managers who participate more in the decision making process have a better chance to gain information and develop an understanding of it than those who participate less. More information and understanding of the change process might lead to more similar business beliefs.

Thirdly, those who work in the favored areas might have developed similar beliefs as a results of their shared interest in the change process. Studies on organizational politics show that shared interests often leads to more frequent interactions and coalition formation among individuals (Cyert and March, 1963; Narayanan and Fahey, 1982) that might lead to similar beliefs. Alternatively, one might also argue that it is not the strategy process that influences beliefs but the beliefs are the ones that shape the strategy process. This view, however, does not explain why only those managers who work in the favored areas share similar strategic beliefs while other managers do not. It is plausible, however, that the causal relationship between beliefs and the strategy process goes both ways. Which strategic areas are favored originally influences which managers are included in the strategic decision process and these managers then make strategic decisions that correspond to their beliefs.

Any of the above might explain how the strategic change process shapes managerial beliefs by itself, but it also might be the case that only a combination of these provide the full story. Alternative explanations may well be needed. This study therefore leaves substantial opportunity for future work seeking to understand the effect of strategic change on beliefs. The importance of this study, however is that it calls attention to the potential importance of the strategy process in affecting beliefs and proposes testable explanations for why that might be the case.

Are Cultural Differences Overrated?

The weak and inconsistent effect of national-culture suggests that while culture might influence general values and world views it does not pervade all aspects of individual beliefs, and that national-culture is much less important for these beliefs than other factors. One might argue that the beliefs I have measured are not sufficiently deep to get at the true cultural differences. But if the differences are so deep and subtle that they don't show up in beliefs about what is relevant and "what causes what" in the success of one's business, can they be said to matter for the formation of strategy? Maybe so but it seems doubtful. This study, by itself, falls short of demonstrating that cultural differences are overrated but it contributes to the argument, made directly by Markóczy (1998), and less directly by Markóczy and Goldberg (1997) and Markóczy and Goldberg (1998).

Beliefs about what issues are strategically relevant and how these influence each other might be more affected by the existing strategic and political processes in an organization or by the professional experience or training of managers than by their general national-cultural background. Haire et al. (1966) reflected on this latter point:

... being a manager is a way of life and that as such, a French manager might be expected to be more similar to an Indian manager, say than to a French non-manager.

Those individuals who choose to be managers might be more similar in their business skills and beliefs than they are to non-managers, independent of their national-cultural backgrounds. This view is reinforced by Lubatkin et al. (1997) who after investigating the relationship between managerial skills and national-cultural backgrounds of managers in three countries failed to find such a relationship.

Whatever the underlying reasons, findings of this study indicate that individual beliefs about strategic issues were more strongly related to the strategic change process than national-cultural backgrounds or other individual characteristics. These findings indicate that when managers assess which issues are relevant for their organization's success their individual differences might play a lesser role than the situation in which the decision is made. If so, national cultural and other individual differences might translate less to strategy formation than has been thought. Future studies should not neglect situational factors when investigating the effect of national-culture or other individual characteristics on beliefs or other aspects of individual cognition in the context of an organization.

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