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ABSTRACT. Research into implicit leadership theories has revealed that people’s conceptualizations of good and bad leadership, based on their experiences, have impacts on how they perceive leadership. This paper presents results from a study of 148 freshman Hospitality and Tourism Management students’ preferences of management principles. It focuses on dichotomy principles in three dimensions, how tasks are defined (Functionalism vs. Idealism), how decisions are reached (Conflict vs. Harmony), and how organizational resources are utilized (Organic vs. Mechanic). The main findings were that there were large differences in the students’ preferences and four characteristic groups were identified, though explaining the differences by mainly demographic variables was problematic. The findings and their implications are discussed with regard to industrial and educational implications and further research.

KEYWORDS: Hospitality, tourism, students, education, management principles
INTRODUCTION

In leadership research there is a growing interest in understanding the impacts of people’s implicit theories about leadership (e.g., Lord & Brown, 2003; Lord & Maher, 1993). Research into subordinates’ implicit theories has demonstrated that the implicit theories explain the degree to which subordinates consider their superior (in organizations) a good or bad leader. Furthermore, if people consider a superior to be a good leader, the superior will often be more successful as a leader. In consequence, this theoretical understanding defines leadership by the subordinates’ preferences and judgment (e.g., Brodbeck et al., 2000; Engle & Lord, 1997; Fuller et al., 1996; Keller, 1999; Kenney et al., 1994; Kenney et al., 1996; Stewart, 2001).

Research within the field of implicit leadership theories has revealed that children at the age of 5-6 years have some rudimentary concepts of what good leadership is (for overview, see Lord & Maher, 1993). These concepts develop by age due to all the leadership experience people get from being together with friends, parents, teachers, etc., and the implicit theories are continuously formed and utilized dynamically (Hanges et al., 2000). Students entering a university program should, therefore, as experienced laymen, be considered as experts on leadership.

Despite the fact that new students bear with them much personal experience about leadership, educational programs normally teach leader-ship theory, and often in a one-way communicative form, as a scientific or experience-based field of knowledge, without giving any attention to the huge amount of experience and preferences already existing in the students’ minds. In fact, if students’ leadership preferences were under-stood and taken into account, parts of the leadership training should supposedly be unnecessary, and other parts that are not in accordance with the students’ implicit theories should be thoroughly explained, demonstrated, and taught in order to convince or “resocialize.”

A study of 148 newly arrived students at the Hospitality Management Program and the Tourism Management Program at the Norwegian School of Hotel Management, University of Stavanger, Norway, was executed in order to reveal the students’ concepts of some central dimensions of leadership/management principles. The study focused on the students’ preferences towards executing leadership in three dimensions: Idealism-functionalism, harmony-conflict, and organic-mechanic organizational modes. The analysis implies that large differences exist in the students’ preferences for management principles, and that it is possible to identify groups of students with differences in preference combinations.
THEORY

Despite the hundreds of articles that prescribe the best way to manage the hospitality and tourism business, there is little systematic leadership/management research into the industry. The limited research has largely revealed that leadership in the industry is important and necessary (see for review, Pittaway et al., 1998). One important research contribution by Tracey and Hinkin (1994, 1996), however, reports that trans-formational leadership (also called charismatic leadership) functions better than transactional leadership. The transformational leader is characterized by the ability to influence subordinates’ attitudes, assumptions, and building a commitment for the organization’s mission (Yukl, 2002, p. 204). The transactional leader bases leadership on contingent exchanges of valuated resources for the subordinates’ support (Bass, 1995).

Because of the large and well-documented changes in the industry’s environment, there is presumably a need for good leadership. A reasonable assumption, though, is that large parts of the hospitality industry are managed by traditional leader styles (see e.g., Pittaway et al., 1998; Tracey & Hinkin, 1994, 1996). For example, a study by Worsfold (1989) indicated that managers in some U.S. hotels appreciated a participative leadership style, but were inclined to use a more authoritative style. Also, a study from Hong Kong found that Chinese hotel managers were autocratic and paternalistic in their leadership style (Mok et al., 1998). Studies of the hospitality industry manager’s low ability to take advantages of employees’ work motivation and lack of promoting learning environments also indicates a traditional hieratic leadership approach in the industry (cf. e.g., Gjelsvik, 2002; Ross, 1994; Zacarelli, 1985).

Student samples have often been used in studies of implicit leadership theories (e.g., Craig & Gustafson, 1998; Kenney et al., 1996; Rubin et al., 2002). Within the hospitality field, researchers have used students’ samples in order to find predicting factors when choosing carriers. This research has indicated the graduates’ willingness to work long-hour weeks (McCleary & Weaver, 1988), and features that make jobs attractive (Laker & Gregory, 1989). However, several studies have indicated that the students are unaware of and insecure about their own futures (George, 1993; Hing & Lomo, 1997). Hing and Lomo suggest that students in hospitality programs have only chosen a work context, and then expect the university program to define possibilities and give them thoughts of carrier paths. In a Scottish
cross-sectional survey, Barron and Maxwell (1993) reported that older students who have had practical training were more determined in their career plans. In a study of students in general, Luzzo and Ward (1995) present indications of the positive effects of part-time occupational jobs on both university grades and career plans. A condition for such effects is that the part-time jobs are relevant for studies and future careers.

Only a few studies from the tourism and hospitality industry focus on students’ and young employees’ conceptualizations of managers’ jobs and duties (Marnburg, 2005; Ross, 1994, 1995a). In an explorative study, Marnburg (2005) reports that students describe middle managers with whom they identify as hard-working, well-meaning, very business-minded individuals, but also as somewhat naïve and unaware of consequences of their actions or lack of actions. In the students’ descriptions of top management, they became more focused on negative elements: Top management was often described as not taking responsibility and not taking the necessary actions, due to either lack of understanding because of little operational insight or simple neglect of responsibility for different reasons. Ross (1994, 1995a) investigated quality ideals among 274 Australian hospitality employees and how they perceived their own and management’s ideals. It was found that being frank and genuine dominated in the employees’ minds, while the perceived management quality ideals were practical experience and being apologetic. Ross notes that the results might indicate that staffs are more subjectively and personal disposition-oriented as opposed to management, which prefers values that are visible and objective. If this is true, there exists a problem of understanding employees’ motivations and occupational intentions.

From the general research in people’s implicit leadership theories, it is well documented that such theories develop by age and experience (for a general introduction, see Lord & Brown, 2003; Lord & Maher, 1993). It is reported that personal values and personal differences, such as personality, predict the implicit theories (Keller, 1999). Keller also reported that when investigating a group of college students, their parental background had some prediction power. Cultural differences are also observed in the implicit theories, for example Gerstner and Day (1994), who compared implicit leadership theories of eight groups of students with different cultural origins who were studying in the United States. The results showed no universal leadership traits, but traits were common for subgroups of countries. More general research into cultural differences in leadership has reported that a main characteristic of Scandinavian leaders is that they show a lot of confidence and listen
more to their subordinates, and less to their superiors, compared with other cultures (Smith et al., 2003).

As a whole, this previous research points out that not only demographic variables like age and experience, but also personal background and the individual’s thoughts and motives (and lack of such) behind their choice of study program, seem to vary greatly. It is therefore reasonable to include more specific predictors for the students’ preferences towards management principles. One such predictor may be the students’ ambitions in regard to a future position in the industry. It is most likely that students who have concrete career plans will have higher ambitions compared with those who have few thoughts about the future. Another possible relevant predictor might be the students’ motivation and abilities to do their future managerial jobs. “Self-efficacy” is a psychological construct that describes: (1) A person’s belief in his or her capability to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in his or her life (Wood & Bandura, 1989), or (2) a person’s judgment of how well he or she can execute courses of action required to deal with prospective situations (Bandura, 1977). Bandura suggests that there is a difference between possessing skills and being able to use them well and consistently under difficult circumstances. People with the same skills might, therefore, perform poorly, adequately, or extraordinarily, depending on whether their self-beliefs of efficacy enhance or impair their motivation and problem-solving efforts. Self-efficacy has also been suggested to grow stronger over time as a person successfully performs tasks and builds the confidence necessary to fulfill his or her role in the organization (Gist & Mitchell, 1992).

**Three Dimensions of Management Principles**

The many differences in defining leadership and management are illustrated in the introduction to Yukl’s (2006) book about leadership. An important theoretical distinction is the difference between management and leadership. Management is primarily focused on maintaining patterns of successful actions (routines); leadership is focused on developing new patterns of actions (Barker, 1997). When it comes to studying actual business like in the tourism and hospitality industries, it can be difficult to divide the functions of leadership and management, simply because managers are generally supposed to carry out leadership and are those given the means to do so. However, this study will also focus on how managers in the industry define tasks, how decisions are reached and how organizational resources are utilized.
Defining Tasks by Functionalism-Idealism. This dichotomy describes how the company’s tasks are defined. According to functionalism, a company is a function of the environment in which it is a part. In strategic management theory, this is called the “ecological perspective” (see e.g., Hannan & Freeman, 1987). According to this view, every organization takes part in an evolutionary process with competitive selection in which the entire population of the organization adapts to environmental changes. Institutional inertia or specific resources can block individual organizations. Good management is correctly interpreting and correctly responding to stimuli from external environments. Good management does not decide how the future should be, but should take advantage of opportunities and avoid threats in the environment.

According to idealism theory, human beings have the opportunity to make their own free/intentional choices. In strategic management theory, this position is called “the free choice perspective” (see e.g., Thompson & Tuden, 1959; Zajac & Kraatz, 1993). Adaptation to the external environment is explained by the organization’s ability to restructure itself in an intentional manner. Good management is being responsible, intentional, and creative and not only following the market demand, but also creating a market demand.

Reaching Decisions by Harmony-Conflict. Traditional management theory has emphasized a harmony view, and one of the best characteristics is perhaps found in Frederick Taylor’s classical writings (e.g., Taylor, 1913). Taylor describes how more efficient operational routines will make everyone happy: The employees will earn more, the employer will get a bigger profit, and the consumer will get a cheaper product. Harmony implies that a company’s goals and priorities will serve all stakeholders at the same time. According to the classical human relations approach, all conflict was bad for the organization, ironically described by Kelly (1988/1970, p. 322) as: “Conflicts are made by troublemakers, boat rockers and prima donnas.” In an article J. Kelley (1970) presented what he called “the new view” on conflicts. It is natural that stakeholders have different perspectives and also hold different knowledge. Conflicts create energy and knowledge and lead to productive dialogues followed by more informed and better-quality decisions. This is of course the case when task conflicts (and not, e.g., personal conflicts) arise. Studies of small groups have proven the positive effect of task conflicts (see e.g., Pelled et al., 1999).
Utilizing Resources by Organic-Mechanic Organization. The continuum between the need for permanent routines and the need for ad hoc problem solving was described by Burns and Stalker (1994/1961) in the two modes of organizing, organic and mechanic. In the mechanic mode, the organization is structured by rules and routines. In the organic mode, tasks and problems are solved ad hoc on the basis of the situation’s definition. To some degree, transactional and transformational leadership styles correspond to mechanic and organic mode of organization, correspondingly.

In this study, it was found sensible to use an eclectic approach to the three dichotomies and their interrelations. Previous research has indicated that people, for example, want both clear rules and possibilities to take advantage of ad hoc decisions (Marnburg & Ogaard, 2005; Ogaard et al., 2005). Theoretically and practically, it is also pointed out that leadership style (transactional/transformation) could be a combination or contextually dependent (Bass, 1997; Lord et al., 2001). This implies that people can have preferences for both modes in one of the dichotomies.

Research Questions and Research Conceptualization

This study asked about what kinds of management principles freshman students in Hospitality Management and Tourism Management have preferences for. It also asked whether there should be any differences in a student group, what they possibly could be, and how they could be explained. Figure 1 gives an outline of the studied variables. Because there is reason to believe that students are generally undecided about their future careers, the variable “Management ambition” is presented as a possible mediating variable because this variable will presumably differentiate those who have specific career goals within the educational field.

Hypothesis

People’s implicit leadership theories develop by age, but for grown-ups, like students, it is more likely to expect that type and duration of contextual experience will have the most significance. Previous research has confirmed this by demonstrating that relevant occupational experience explains different degrees of career determination (Barron & Maxwell, 1993) and success during and after studies (Luzzo et al., 1997). In addition, other variables like knowledge of the industry, etc.
can be of significance for what sort of leadership principles the students might prefer. Keller (1999) reported that parental background was a predictor of implicit leadership theories in a student sample. This indicates that demographic background variables, such as parents’ managerial experience or experience with the industry, could explain differences in preferences of managerial principles. Also, cultural background has been reported as a predictor of implicit leadership theories (see e.g., Gerstner & Day, 1994).

“Self-efficacy” is a psychological construct that describes: (1) A person’s belief in his or her capability to mobilize the motivation, cognitive resources and courses of action needed to exercise control over events in his or her life (Wood & Bandura, 1989), or (2) a person’s judgment of how well he or she can execute courses of action required to deal with prospective situations (Bandura, 1977). Bandura suggests that there is a difference between possessing skills and being able to use them well and consistently under difficult circumstances. People with the same skills might, therefore, perform poorly, adequately or extraordinarily, depending on whether their self-beliefs of efficacy enhance or impair their motivation and problem-solving efforts. Self-efficacy has also been suggested to grow stronger over time as a person successfully performs tasks and builds the confidence necessary to fulfill his or her role in the organization (Gist & Mitchell, 1992). A positive relationship should therefore be expected between age/occupational experience and self-efficacy.

The following hypotheses are therefore suggested:

**H1:** Students’ demographics and self-efficacy will explain their differences in preferences for management principles.
Demography and self-efficacy as such will be tested by H1, explaining preferences of management principles by background, motivation, and personal recourses, but these variables say nothing about what challenges are in the student’s mind. In order to concretize this, the level of management position can appear as a mediating variable, and the following hypothesis was asked:

H2: Students’ management ambitions will appear as a mediating variable when explaining differences in management principles.

As previous research has indicated, many students are generally unaware about their future careers (George, 1993; Hing & Lomo, 1997). On the other hand, research also reports that students have high quality standards and meet a demanding reality where they expect to work hard and long hours (Marnburg, 2005; McCleary & Weaver, 1990; Ross, 1994, 1995a). Together, these indications form a somewhat strange picture because it is logical that students who are unaware of their future, will also have limited thoughts about the industry in general. An assumption could therefore be that there exists a great difference between student groups concerning directions and degrees of preferences for management principles. Although a hypothesis that claims grouping or clusters cannot be rejected, the following hypothesis is presented:

H3: Students can be grouped into groups that differ in management principle preferences.

METHOD

Setting and Sample

In the first week of the first semester in August 2002, new students in the Hospitality Management Program and the Tourism Management Program at the Norwegian School of Hotel Management, University of Stavanger, were asked at the beginning of a regular lecture in the compulsory subject “Organizational Behavior and Service Management” to complete a questionnaire about their preferences and views on management. All students present completed the questionnaires. One hundred and forty-eight of the 155 new students were present, which gives a response rate of 95%.
The population of this sample is basically the same as Norwegian students starting up their studies in other years. One should be careful about drawing general conclusions about Hospitality and Tourism students in general because there is reason to believe that Norwegian students have a somewhat different view on management due to cultural differences (see e.g., Gerstner & Day, 1994; Smith et al., 2003). On the other hand, relations between predicting variables and clustering will presumably have a more general character and indicate patterns in a larger population.

**Sample Profile**

Table 1 gives an overview of the respondents. In the Hospitality Program, approximately one-third of the students are men, but only 16% are men in the Tourism Program. Mean age is 22.5 years. The Tourism students are generally younger and less occupationally experienced than the Hospitality students. For example, 16 of the hospitality students hold a Craft Certificate (chefs, waiters, receptionists). In Norway, this includes a minimum of one year of craft education at a school and a minimum of three years of training, followed by a Final Craft Examination.

In addition to the work experience referred to in Table 1, all but one student has had some part-time work experience. Some of the respondents had managerial experience, but all this experience was as supervisors or middle managers in operational settings. The respondents were also asked about their family’s relationship to the industry, where only 30 of 148 students had a close family member working in the industry. Two-thirds of the respondents had parents (mother or father, or both) who held a position as a manager with personnel responsibility.

**Measures**

The questionnaire was pre-tested by a small group of students and lecturers at the Norwegian School of Hospitality Management. The pre-testing resulted in that several of the items were adjusted in order to make it more clear and understandable.

The three dichotomies were measured by 24 items, eight items each, by using statements to which the respondents marked whether or not they agreed on a 7-point Likert-like scale (1 = “Disagree completely”
The eight items within each management principle were formulated by system theoretic perspectives on the company, divided into four systems: Strategic, social, production, and administrative (cf. Appendix). In order to secure the respondents’ understanding of the issues represented in the items, subtitles referring to system definitions were given for each of the four systems: “Principles for how the
company defines its strategy and decides which services it will offer its customers” (strategic system); “Principles for how the managers relate to their subordinates” (social system); “Principles for how the company arranges for task completion and usage of technology” (production system); and “Principles for how the company keeps itself updated” (administrative system). Cronbach’s Alpha was measured at 78.9, which is neither remarkably high nor low.

Bandura (1977) originally conceptualized efficacy to comprise two dimensions: The magnitude, which is the level of performance the person thinks he or she can reach, and the strength or the probability he or she assesses for him/herself for reaching specific performance levels. This conceptualization relates efficacy to specific tasks, which are time and space delimited. Self-efficacy was operationalized in a general way that is related to important areas of management tasks (see e.g., Sherer et al., 1982 for a similar conceptualization). Most items were adapted from Sherer et al. (1982) and adjusted to the management setting. Typical items include: “Should I experience lack of information when performing my job, I will always be able to get hold of the necessary information,” and “If subordinates are not satisfied with the work environment, I will in almost all situations be able to ‘turn’ the situation in such way that they experience the work environment in a much better way.” Self-efficacy had a Likert-like response format ranging from 1 (“Disagree completely”) to 7 (“Agree completely”). Cronbach’s Alpha was measured at 72.4, which is at the lower end of what is acceptable. However, the low number of items (five) could explain some of the low figure.

The variable “Management ambition” was measured by one item: The respondents were asked, “What kind of job position would you like to hold ten years from now?” Nine alternatives were given: “CEO for a large company,” “A high position in a large company (e.g., regional director, marketing director, human resources director),” “Manager of a smaller company,” “Functional director in a medium-sized company (e.g., marketing manager, human resources manager, quality manager, accounting manager, etc.),” “Middle manager position with your own staff,” “Professional position with opportunity to work with special issues,” “Independent position (e.g., consultancy),” “Other.”

**Analyses**

In order to test the hypotheses’ correlation analyses, univariate variance analyses (ANOVA), multivariate general linear models (MANOVA), and
a cluster analysis were employed by using SPSS for Windows Version 13 (Spss, 2004)

RESULTS

Table 2 gives the descriptives concerning the three dimensions. “Functionalism,” “Conflict,” and “Mechanic” have the largest variances. The students have the lowest preferences for “Conflict” and highest for “Idealism.”

Table 3 shows the correlations among six management principles. As mentioned earlier, the respondents were not forced to choose between the principle dichotomies within the three dimensions, and were able to give high scores on every item. Actually, it seems like this is what the respondents have mainly done, that is, they have given (more or less) all dimensions high and low scores. This explains the high correlations between the dimensions.

TABLE 2. Descriptives of the Six Management Principles

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionalism</td>
<td>148</td>
<td>2.25</td>
<td>7.00</td>
<td>5.03</td>
<td>.86</td>
</tr>
<tr>
<td>Idealism</td>
<td>147</td>
<td>3.75</td>
<td>7.00</td>
<td>5.47</td>
<td>.71</td>
</tr>
<tr>
<td>Conflict</td>
<td>145</td>
<td>1.75</td>
<td>6.50</td>
<td>3.90</td>
<td>.93</td>
</tr>
<tr>
<td>Harmony</td>
<td>147</td>
<td>3.00</td>
<td>6.75</td>
<td>4.75</td>
<td>.85</td>
</tr>
<tr>
<td>Organic</td>
<td>147</td>
<td>3.25</td>
<td>6.25</td>
<td>4.88</td>
<td>.61</td>
</tr>
<tr>
<td>Mechanic</td>
<td>148</td>
<td>2.75</td>
<td>7.00</td>
<td>5.00</td>
<td>.83</td>
</tr>
</tbody>
</table>

**TABLE 3. Pearson’s Correlations Among the Six Management Principles**

<table>
<thead>
<tr>
<th></th>
<th>Functionalism</th>
<th>Idealism</th>
<th>Conflict</th>
<th>Harmony</th>
<th>Organic</th>
<th>Mechanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionalism</td>
<td>1</td>
<td>.50**</td>
<td>.35**</td>
<td>.36**</td>
<td>.16</td>
<td>.48**</td>
</tr>
<tr>
<td>Idealism</td>
<td></td>
<td>1</td>
<td>.38**</td>
<td>.44**</td>
<td>.34**</td>
<td>.50**</td>
</tr>
<tr>
<td>Conflict</td>
<td></td>
<td></td>
<td>1</td>
<td>.39**</td>
<td>.28**</td>
<td>.22**</td>
</tr>
<tr>
<td>Harmony</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>.36**</td>
<td>.50**</td>
</tr>
<tr>
<td>Organic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1.22**</td>
</tr>
<tr>
<td>Mechanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**Correlation is significant at the .01 level (two-tailed).
Testing H1: Management Principles by Demography–Self-Efficacy

The correlations between self-efficacy and age/total work experience are .18 and .20, respectively, both significant at a .05 level.

Table 4 shows correlations between work experience and managerial experience (in years) with the six principles. The correlations are small and not significant, and the assumptions that work and managerial experience are associated with management principle preferences are rejected. Self-efficacy is positively associated with all management principles, and significant concerning Functionalism, Harmony, Organic, and Mechanic.

The nominal and ordinal independent variables were tested in a Multivariate General Linear Model with the management principles as dependent variables. Testing gender differences accepted H0, (Hotelling’s $T^2 = .115$, $F (6, 142) = 1.92$, $p = .09$). H0 was also accepted for Parents’ leadership experience (Hotelling’s $T^2 = .077$, $F (6, 142) = 1.28$, $p = .27$). The general testing of differences explained by holding a Trade License, Family’s knowledge of the industry, and Place of upbringing all rejected the H0 with Hotelling’s $T^2 = .137$, $F (6, 142) = 2.27$, $p = .04$, and $\eta^2 = .12$. Hotelling’s $T^2 = .157$, $F (6, 142) = 2.61$, $p = .02$, and $\eta^2 = .14$, and Wilk’s lambda = .715, $F (18, 130) = 1.98$, $p = .01$, and $\eta^2 = .11$, respectively. Interaction effects were not detected.

The more detailed analyses of Trade License do not reveal in which dimensions the variable gives differences. Concerning Family’s knowledge of the industry, the detailed analyses show a significant difference concerning preferences for Organic organization ($F (1, 142) = 8.72$, $p = .00$, and $\eta^2 = .08$), where the descriptive figures revealed that those with a family with knowledge of the industry have a score of Organic with a mean of 4.80 ($SD = .74$), and those with no family in the industry have a 4.93 ($SD = .58$).

### TABLE 4. Pearson’s Correlation Demography–Efficacy and Management Principles, N = 148

<table>
<thead>
<tr>
<th></th>
<th>Functionalism</th>
<th>Idealism</th>
<th>Conflict</th>
<th>Harmony</th>
<th>Organic</th>
<th>Mechanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work experience</td>
<td>.06</td>
<td>-.13</td>
<td>-.10</td>
<td>.02</td>
<td>.08</td>
<td>.07</td>
</tr>
<tr>
<td>Managerial experience</td>
<td>-.4</td>
<td>-.08</td>
<td>-.06</td>
<td>-.10</td>
<td>-.03</td>
<td>-.07</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.21**</td>
<td>.16</td>
<td>.04</td>
<td>.36**</td>
<td>.19*</td>
<td>.20*</td>
</tr>
</tbody>
</table>

*Correlation is significant at the .05 level.
**Correlation is significant at the .05 level (two-tailed).
Place of upbringing (large town, medium town, rural, or mixed) also differentiated the Organic organizational principle, ($F (3, 142) = 3.50$, $p = .02$, and $\eta^2 = .09$). A Tukey HSD post hoc test did not reveal between which groups this difference might exist.

Cultural variables were included in the survey by asking about the parents and the respondents’ place of upbringing. When grouping the answers into Scandinavian and Non-Scandinavian, the Non-Scandinavian groups became so low (below 20) that a further analysis was not executed.

**Testing H2: Management Principles by Management Ambition**

Pearson’s correlation between Management ambition and Self-efficacy was .24 and significant on a .01 level (two-tailed).

The analyses revealed no significant association between Management ambitions and preferences for Management principles (Pearson’s correlations, Functionalism .01, $p = .91$; Idealism −.07, $p = .43$; Conflict −.02, $p = .86$; Harmony .17, $p = .07$; Organic .09, $p = .33$; Mechanic −.01, $p = .93$), where $N$ was 117. The H0 is accepted. In fact, it is amazing how little association there is between Ambitions and Management principles.

**Testing H3: Cluster Analysis**

The analyses so far have revealed a somewhat confusing picture of the freshman students’ preferences for management principles. A way of further investigation is to make a cluster analysis based on different patterns in management principle preferences. The results of a cluster analyses are explorative and based on the researcher’s construction and do not give an inferential result.

A Ward’s method was employed and the suggested clustering in different-sized groups was studied. The size that showed the largest difference and unlike groupings with regard to Management principles was four. By employing a multivariate linear model with the six management dimensions as dependent variables, the general testing found significant differences (Wilk’s lambda = .097, $F (18, 142) = 26.76$, $p = .00$, and $\eta^2 = .54$), where the effect size corresponds to a correlation coefficient of .73, which is quite high. The detailed analysis revealed that all six principles were significant: Functionalism, $F (3, 142) = 42.54$, $p = .00$; Idealism $F (3, 142) = 42.26$, $p = .00$; Conflict, $F (3, 142) = 54.32$, $p = .00$;
Harmony, $F(3, 142) = 35.97, p = .00$; Organic, $F(3, 142) = 19.24, p = .00$; and, Mechanic, $F(3, 142) = 38.22, p = .00$). The descriptives of the four clusters are presented in Table 5.

**Analysing Cluster Characteristics**

Table 5 presents the scores within the clusters. In addition to differences in preferences between the clusters, they differ in overall score level: Cluster 4 has a very high overall mean score, Cluster 3 a very low, and Clusters 1 and 2 have a medium overall score. This analysis is based on differences in descriptive figures (see Table 5), relative distribution on the six principles, and confirmation by a conservative Tukey HSD post analysis followed by the multivariate testing as follows.

Cluster 1 is characterized by high preferences for Functionalism, low for Conflict, and high for Mechanic. According to the Tukey HSD post hoc analyses, this cluster differs significantly ($p < .05$) from the other clusters concerning Conflict and towards Clusters 2 and 3 concerning Functionalism and Mechanic. This confirms that this cluster is different from the others.

Cluster 2 is characterized by a relatively low score on Functionalism and Mechanic, but a high score on Harmony. According to the Tukey HSD post hoc analyses, this cluster differs significantly ($p < .05$) from the other clusters concerning Functionalism, Mechanic, and Harmony, except Cluster 1 concerning Harmony. This confirms that this cluster is different from the others.

Cluster 3 is the largest group, with 64 respondents. Low scores on all six principles characterize this cluster. Relatively speaking, however, this group has preferences for Organic and low preferences for Mechanic and Harmony. According to the Tukey HSD post hoc analyses, this cluster differs significantly ($p < .05$) from the other clusters concerning Organic, Mechanic, and Harmony, except Cluster 1 concerning Organic and Harmony. This confirms that this cluster is different from the others.

Cluster 4 scores high on all management principles and is characterized by a relatively high score on Conflict and low scores on Idealism and Mechanic. According to the Tukey HSD post hoc analyses, this cluster differs significantly ($p < .05$) from the other clusters concerning Conflict, Idealism, and Mechanic, except Cluster 1 concerning Mechanic. This confirms that this cluster is different from the others.
TABLE 5. Clusters Based on Differences in Management Principles, N = 142

| Clusters | N  | Functionalism | | Idealism | | Conflict | | Harmony | | Organic | | Mechanic |
|----------|----|---------------||---------||----------||----------||---------||----------||----------|
|          |    | M  | SD | M  | SD | M  | SD | M  | SD | M  | SD | M  | SD |
| Cluster 1| 20 | 5.61| .58| 5.53| .39| 2.98| .69| 4.96| .61| 4.71| .56| 5.61| .57 |
| Cluster 2| 31 | 5.13| .46| 5.7 | .53| 4.41| .54| 5.24| .63| 5.01| .44| 4.98| .45 |
| Cluster 3| 64 | 4.40| .70| 4.97| .55| 3.50| .62| 4.12| .66| 4.61| .55| 4.46| .76 |
| Cluster 4| 27 | 5.82| .59| 6.23| .50| 4.94| .69| 5.43| .68| 5.48| .49| 5.83| .47 |
Cluster Members’ Characteristics

Table 6 gives descriptives on all independent variables. It is remarkable how small differentiation the clusters give for many of the variables. In the explorative search for differences, tests were executed for those variables the clusters seem to differentiate.

Concerning testing differences between the clusters explained by Program (Hospitality or Tourism) and Family in industry (yes/no), chi quadratic tests were employed. H0 was accepted for both Program and Family in industry with \( \chi^2 (3, N = 142) = 1.50, p = .68 \), and \( \chi^2 (3, N = 142) = 2.57, p = .46 \), respectively.

Concerning the independent variables on a rational level, univariate analyses of variance were employed. In case of detected significant differences, they were followed by Tukey HSD post hoc tests.

**TABLE 6. Cluster Descriptives**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Total mean</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Cluster 3</th>
<th>Cluster 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>104</td>
<td>— 14(15)</td>
<td>25(23)</td>
<td>45(46)</td>
<td>20(20)</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>38</td>
<td>— 6(5)</td>
<td>6(8)</td>
<td>19(17)</td>
<td>7(7)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitality</td>
<td>70</td>
<td>— 11(10)</td>
<td>17(15)</td>
<td>28(32)</td>
<td>14(13)</td>
<td></td>
</tr>
<tr>
<td>Tourism</td>
<td>72</td>
<td>— 9(10)</td>
<td>14(16)</td>
<td>36(32)</td>
<td>13(14)</td>
<td></td>
</tr>
<tr>
<td>Have trade license</td>
<td>18</td>
<td>— 3(3)</td>
<td>4(4)</td>
<td>8(8)</td>
<td>3(3)</td>
<td></td>
</tr>
<tr>
<td>Have parents as managers</td>
<td>95</td>
<td>— 11(13)</td>
<td>20(21)</td>
<td>45(43)</td>
<td>19(18)</td>
<td></td>
</tr>
<tr>
<td>Have family in industry</td>
<td>29</td>
<td>— 2(4)</td>
<td>5(6)</td>
<td>16(13)</td>
<td>6(6)</td>
<td></td>
</tr>
<tr>
<td>Place of upbringing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large city</td>
<td>41</td>
<td>— 6(6)</td>
<td>8(9)</td>
<td>18(18)</td>
<td>9(8)</td>
<td></td>
</tr>
<tr>
<td>Medium city</td>
<td>39</td>
<td>— 4(5)</td>
<td>6(9)</td>
<td>21(18)</td>
<td>8(7)</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>50</td>
<td>— 8(7)</td>
<td>13(11)</td>
<td>24(22)</td>
<td>5(10)</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>12</td>
<td>— 2(2)</td>
<td>4(3)</td>
<td>1(5)</td>
<td>5(2)</td>
<td></td>
</tr>
<tr>
<td>Previous university education</td>
<td>49</td>
<td>.49</td>
<td>.38</td>
<td>.55</td>
<td>.48</td>
<td>.52</td>
</tr>
<tr>
<td>Managerial experience</td>
<td>.39</td>
<td>.62</td>
<td>.15</td>
<td>.42</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Industrial full-time exp.</td>
<td>142</td>
<td>1.57</td>
<td>2.13</td>
<td>.92</td>
<td>1.72</td>
<td>1.56</td>
</tr>
<tr>
<td>Other full-time exp.</td>
<td>142</td>
<td>.56</td>
<td>.66</td>
<td>.71</td>
<td>.48</td>
<td>.76</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>142</td>
<td>4.99</td>
<td>5.14</td>
<td>5.17</td>
<td>4.76</td>
<td>5.26</td>
</tr>
<tr>
<td>Management ambition</td>
<td>112</td>
<td>3.4</td>
<td>3.29</td>
<td>3.54</td>
<td>3.33</td>
<td>3.59</td>
</tr>
</tbody>
</table>

*Figures in parentheses are relative distribution of total according to number of respondents in the clusters.
Testing Managerial experience showed significant differences between the clusters ($F (3, 142) = 3.41, p = .02$, and $\eta^2 = .07$). Cluster 1 is significantly different (with low mean) from Cluster 2 ($p = .01$) and Cluster 3 ($p = .05$), but not Cluster 4. No significant difference exists between Cluster 4 and the other clusters.

The differences in previous university education between the clusters were not significant ($F (3, 142) = .421, p = .74$). Neither were differences in Industrial full-time experience ($F (3, 142) = .966, p = .41$) and full-time experience in other industries ($F (3, 142) = .85, p = .47$).

Differences in Self-efficacy between the clusters were significant ($F (3, 142) = 4.460, p = .01$, and $\eta^2 = .09$). Post hoc tests detected differences between Cluster 3 (low mean), Cluster 2 (high mean) ($p = .05$), and Cluster 4 (high mean) ($p = .02$).

Differences between the groups concerning Management ambitions were not found to be significant ($F (3, 142) = .37, p = .78$).

**DISCUSSION**

The rationale for this research is based on that freshman students have long experience with leadership/management and therefore preferences for management principles. Three dimensions, each with a dichotomy of principles, describe “How tasks are defined” (Functionalism-Idealism), “How decisions are reached” (Conflict-Harmony), and, “How resources are utilized” (Organic-Mechanic). One hundred and forty-eight freshman students at the Norwegian School of Hospitality Management, University of Stavanger, completed a questionnaire.

The analyses revealed large differences in the students’ overall preferences, where the preference for using Conflict as a method for reaching decisions got the lowest score. They were tested for differences explained by gender, work and managerial experience, holding a Trade License or not, whether a family member worked in the industry, whether parents hold management positions, and place of upbringing. There were no associations between gender and work experience and management principles. Holding a Trade License, place of upbringing, and parents’ knowledge of the industry explained differences significantly. Those with family members with knowledge of the industry had a significantly lower score on the Organic leadership principle. The test did not reveal what specific difference the place of upbringing and holding of a Trade License explained. Self-efficacy correlated positively and significantly with four principles: Functionalism, Harmony, Organic, and Mechanic, mostly on Harmony.
A cluster analysis gave four different clusters that were individually different from the others. By testing differences of members of the clusters, significant differences were found concerning Management experience and Self-efficacy.

Understanding how people think about leadership and the consequences this has in social contexts has received growing attention within the leadership research (see e.g., Lord & Brown, 2003; Lord & Maher, 1993), because people’s implicit theories about leadership also explain what kind of leadership styles work or not (e.g., Brodbeck et al., 2000; Engle & Lord, 1997; Fuller et al., 1996; Keller, 1999; Kenney et al., 1994; Kenney et al., 1996; Stewart, 2001). Gaining insight into students’ implicit theories about leadership and management could therefore have an impact on how teaching is arranged and performed. And the students’ preferences will presumably explain to what degree they absorb and make management theories and concepts a part of themselves.

The investigation of the students’ preferences for management principles revealed, on one hand, very interesting insight into what preferences the students actually have and differences between groups of students. On the other hand, investigations into what explained the differences gave rather skimpy indications. This might be explained by weak reliability or concept validity. However, this is most likely not a sole explanation, because reliability tests were satisfactory and a known reliable scale such as the one measuring Self-efficacy seems to work out well.

Previous research has indicated that students within hospitality and tourism management are unaware and insecure of their own futures (George, 1993; Hing & Lomo, 1997). If this is the case and has influenced this investigation, the students’ concepts of why, where, and how they should supposedly take advantage of the management principles are unclear to them. In connection with this, it is important to bear in mind that the population of this survey consists of freshman students who seek educational guidance in order to have a career in the future, and this can make them more open-minded and less persistent in a first class of the first semester context. Together, these conditions could have had the effect that the respondents are less inclined to expose their preferences.

It is remarkable that work experience and managerial experience did not explain any differences in preferences, because previous research
gives strong indications that practical experience should have an impact (Barron & Maxwell, 1993; Luzzo & Ward, 1995). However, whether a person held a Trade License or not gave a significant difference in preferences. In Norway, such an education includes several years of theoretical and vocational training, and there should be a large qualitative difference of this work experience compared with work experience in general. Unfortunately, the analysis was unable to reveal what specific difference in preferences having a Trade License gave.

A most interesting finding is the impact of having a family member that works in the industry. Such an effect is identified concerning implicit leadership theories by former studies (e.g., Keller, 1999). Especially interesting was that the significant difference appeared in lower scores on the Organic principle for those with a family member working in the industry. It has been noted in several connections that management in the hospitality industry is traditional and/or autocratic (Gjelsvik, 2002; Mok et al., 1998; Pittaway et al., 1998; Ross, 1995b; Tracey & Hinkin, 1994, 1996; Worsfold, 1989; Zacarelli, 1985), and it is tempting to interpret this indication to support such notions.

The level of Self-efficacy correlated significantly positively on preferences for Functionalism, Harmony, Organic, and Mechanic. Concerning Functionalism and Harmony, this may be a natural connection because Self-efficacy in a management context is, in a way, defined as being able to balance with the external claims and make others comfortable by: (1) A person’s belief in his or her capability to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in his or her life (Wood & Bandura, 1989), or (2) a person’s judgment of how well he or she can execute courses of action required to deal with prospective situations (Bandura, 1977). The fact that Self-efficacy correlates with both Organic and Mechanic confirms previous research (Marnburg & Ogaard, 2005; Ogaard et al., 2005), that is, people want a loose organization that opens for individuality, ad hoc problem solving and learning, and good rules and routines that make expectations clearer. Self-efficacy correlated positively to age and experience in accordance with expectations (Gist & Mitchell, 1992).

The variable “Managerial ambition” did not perform as expected in the analyses because no association to the management principles was discovered. This was very surprising and is difficult to understand. One explanation, however, might be found in the correlation between Self-efficacy and Management ambition (Pearson’s $r = .24$). Self-efficacy and Management ambition are, of course, not the same, but the correlations should supposedly be much higher. When this is not the case, the
explanation can perhaps be found in weak reliability or students’ lack of awareness of their future career as revealed in previous research (George, 1993; Hing & Lomo, 1997). If this is true, students just check off a position they want, perhaps without considering their abilities and the responsibility and expectations towards those who hold such positions. This could probably have been avoided by using a more detailed scale in order to find the students’ true ambitions.

The cluster analysis was based on sorting students into groups according to their preferences for management principles. The four groups represent significantly different preferences, and this gives possibilities for interpretation as shown in Table 7.

Overall, the interpretations of the clusters seem to have a certain face validity. Clusters 1 and 2 could be said to have some associations to convergent and divergent reasoning, respectively. Cluster 3, with its low scores, could possibly represent the same student group that has been identified in previous research (cf. George, 1993; Hing & Lomo, 1997) as being unaware of their own preferences and their future roles as managers in the hospitality or tourism industry. It is not possible to conclude that this is the same group because of substantial differences in measures, but this study “paints” the same picture: A large group of students seems to be more or less indifferent to preferences when considering work in their chosen lines of business.

In strong contrast to the laissez-faire attitude of Cluster 3, Cluster 4 seems to represent a group of students who are open-minded and aware of the complexity of management. Descriptively, it is unfortunate that this group is only half of the laissez-faire group.

As regards demographic and other characteristics of the clusters, it is fair to say that this investigation has not managed to give a proper description.

**Industrial Implications**

Previous research has indicated that many of the hospitality and tourism students are unaware about their own future in the industry. By choosing the particular study program, hospitality students have chosen a context (Hing & Lomo, 1997) rather than a career. In this study, such students will most likely belong to the laissez-faire cluster, representing over 40% (descriptively) of the students. In a way, these students offer their competence to the industry without knowing what they themselves want. Making these students interested in the industry, motivating them to search for a career therein and to focus
<table>
<thead>
<tr>
<th>Clusters</th>
<th>Characteristics</th>
<th>Interpretive description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1: <strong>Scan-and-make-rules</strong> $n = 20$</td>
<td>High score on Functionalism, low on Conflict and high on Mechanic. Low management experience, but not different from C4.</td>
<td>Observant in regard to external change, they interpret these stimuli as having a certain meaning and they want to make internal rules (routines) based on them.</td>
</tr>
<tr>
<td>C2: <strong>Clan-builders</strong> $n = 31$</td>
<td>Relatively low score on Functionalism and Mechanic, high on Harmony. Management experience higher than C1, Self-efficacy higher than C3.</td>
<td>Stress internal consensus and harmony created within the organization and without a strong focus on external environment and without a wish of making rigid routines.</td>
</tr>
<tr>
<td>C3: <strong>Low score laissez-faire</strong> $n = 64$</td>
<td>Low score on all principles, Relatively higher on Organic, lower on Mechanic and Harmony. Management experience higher than C1, Self-efficacy lower than 2 and 4.</td>
<td>Acknowledging differences in people. Management by “everyone does want they want”.</td>
</tr>
<tr>
<td>C4: <strong>Intensive problem shooters</strong> $n = 27$</td>
<td>High score on all principles, relatively high score on Conflict, low on Idealism and Mechanic Self-efficacy higher than C3.</td>
<td>Highly alert concerning all kind of issues, accept differences in opinions and is mentally ready to deal with whatever comes up.</td>
</tr>
</tbody>
</table>
on the industry’s current management issues will give the industries a great manager recruitment potential. The universities and colleges are probably unable to do this job in their classrooms, and the industry itself must take part in this process.

On the other hand, this research has also indicated that there are students in the programs that are highly alert and/or have strong preferences for which management principles work out best. This should be very comforting for the industry.

**Educational Implications**

In educational environments, it is well known that there are large differences in students’ attitudes and abilities. However, if the descriptive figures from this research are indicative, the groups of “indifferent” students are in the majority. This may be threatening to a good industrial business culture that is supposedly important among students in such programs. For these groups, it is not only necessary to teach them how to solve problems, but also why, where, and when such problems appear.

It is a comfort that this research indicates that all kinds of management principles are represented among the students. This points to an important message: The theory that is taught from the textbooks already exists in the student’s minds! Maybe this competence, as colorful and experience-based as it is, should be utilized much more than what is currently commonly done.

**Further Research**

This research project has managed to indicate difference in students’ preferences for management principles, but has not managed to identify predictors and explanations for why these differences exist. The reasons for this are already discussed. However, the analyses’ results indicate that Self-efficacy explains a lot more than the employed demographic variables. Taking this into account, one obvious research focus would be to focus more on psychological constructs (see e.g., research by Keller, 1999). In addition, independent variables such as grades from high school and better specifications of work experience will probably work out better when differences are to be explained. However, the most challenging research would be to study the changes in preferences that occurred during the students’ time of study.
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employee service quality ideals. International Journal of Hospitality Management,
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## APPENDIX: Overview over Dichotomy Management Principle Items

<table>
<thead>
<tr>
<th>Task Category</th>
<th>HOW TASKS ARE DEFINED</th>
<th>HOW DECISIONS ARE REACHED</th>
<th>HOW ORGANISATIONAL RESOURCES ARE UTILISED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Functionalistic–Idealistic Dimension</td>
<td>Conflict–Consensus Dimension</td>
<td>Organic–Mechanic Dimension</td>
</tr>
<tr>
<td><strong>Strategic system</strong> (defining business tasks)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Regardless what the customers want, the company should deliver what the customers want.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>A company should deliver the services it believes best serves the customers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>A company must have power in the market (e.g., to reduce the customers’ choices or force low prices from the suppliers) and this is achieved by being big or seeking alliances and making agreements with other companies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>It is important to collaborate with customers, suppliers and competitors such that everyone can agree about which services will be delivered and the quality of these.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>The company’s goals and the way people work should constantly change.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>It is management’s task to have exact plans for what is going to happen in the future.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social system</strong> (internal human environment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Good reward systems encourage subordinates to give their maximum performance for their leader and the company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>By giving people challenges and making their jobs meaningful, people will give their maximum performance for their leader and the company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Conflicts between employees about the company’s goals and how things should be done are very positive, and a leader should encourage such conflicts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>A leader should convince his/her subordinates such that everyone agrees about common goals and about how things should be done.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>A leader should emphasize that all employees are equally good and have the same right to express themselves.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>A leader must use his/her authority to create rules and routines in the company in order to avoid chaos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Production system</strong> (executing tasks)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>A company must always start using new technology gradually as it comes on the market.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>A company should be very aware of what kind of technology serves it best and seek such technological solutions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>If the employees have good arguments for it, it is OK that the same tasks are done differently (and with different use of technology) at different places in the company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Experts in different areas best decide how tasks should be done and what technology should be used.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>It is an advantage that as many people as possible in the company can do many tasks (=low specialization).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>High specialization among employees in the company contributes to professional and efficient job performance.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Administrative system (producing information)

19. A company must always pay close attention to what is happening in the market such that it can "seize" new opportunities.

20. The most important thing for the company is to have information about current and new customers such that the company itself can create new opportunities in the market.

21. A company must gather information about itself and its competitors. Such information can be important in negotiations with, for example, suppliers, but also shows that the company has a better work environment than its competitors.

22. The most important information the company has to acquire is information about how productive and efficient it is and if the employees are happy in the company.

23. Internally within the company, it is important to have data that show what the company is and is not succeeding with and that uncovers new opportunities for the company.

24. Internally within the company, it is important to have data that makes it possible to control the employees' input of labor.